Experience teaches?

How can the Orientations to Learning from Experience Framework be used by mentors and teachers to explore learning to teach on employment-based routes?

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Abstract

Recent changes within teacher education policy in England present a timely opportunity to consider the nature of teachers' learning through experience on employment-based routes. This thesis draws on the Orientations to Learning from Experience Framework ((OLEF) Hagger et al. 2008), which uses five dimensions to describe the dispositions of beginning teachers to learning from experience, as identified in a three-year longitudinal study. In this study I investigated if and how this research product could be used by mentors and beginning teachers to explicate and develop participant teachers' learning.

In the secondary school site of this qualitative study the majority of the teachers in their first or second years as teachers were undertaking, or had undertaken, 'employment based' routes of initial teacher education. Nine beginning teacher participants and their mentors were involved in data collection and analysis during their first years as teachers on School-Direct Salaried and Teach First routes. As a 'Close-to-Practice' study focussed on employment-based initial teacher education, it offers a fresh perspective on the complex, contextualised and idiosyncratic process of learning to teach.

The OLEF framework and other re-presentations of their practice stimulated rich data regarding the beginning teachers' learning, thereby demonstrating the potential for OLEF to act as second stimulus in formative interventions. Furthermore, I developed the conceptual framework of OLEF by drawing in contemporary research through citation analysis as well as cross- and within-case analysis of the conversational data. Intentionality, one of the socio-cultural concepts of OLEF is considered in relation to self-efficacy, professional agency, self-regulation, adaptive expertise and deliberate practice. Five conditions which support high levels of Intentionality were found.

Few research studies have captured conversations between beginning teachers and their mentors in the recent English context. These conversations were recorded and analysed by participants, opening up their semi-private world. The role of mentors as mediators in supporting self-regulation and the development of a broader Frame of Reference is explored. The data contributes to discussion about the nature of teachers' knowledge, learning, self-regulation and professional agency. Practical implications for beginning teachers and their mentors are offered.

Abbreviations and definitions of terms used

All abbreviations are introduced at the start of each chapter. Those listed here are those most commonly used for reference.

Abbreviations are underlined. Other terms provide definitions.

Afl: Assessment for Learning. Widely promoted by the Qualifications and Curriculum Authority (QCA), sponsored by the government Department for Children Schools and Families. Focused on effective feedback to students and teachers about student learning, in order to increase student self-regulation and teacher responsiveness.

Aspiration: where capitalised this refers to the dimensions of OLEF.

AtC: Attitude to Context, one of the dimensions of OLEF.

CHAT: Cultural Historical Activity Theory, a theoretical framework with origins in the work of Russian psychologists L. Vygotsky and A. Leontiev.

CUREE: Centre for the Use of Research and Evidence in Education, a commercial organisation which specialises in translating research into resources for teachers and policy makers.

Cycle 1-6: Data collection cycles.

D1-6: Recorded dialogues between a beginning teacher participant and mentor participant.

DEBT: The Developing Expertise of Beginning Teachers research programme, resulting in publications including Mutton et al. 2010; Burn et al. 1997; Mutton et al. 2008; Burn et al. 2015; Hagger et al. 2008.

DfE: Department for Education. The English government department with responsibility for Education. Prior to 2010 known as Department for Children, Schools and Families (DCSF) (2007-2010) and Department for Education and Skills (DfES) (2001-2007)

DWR: Developmental Work Research, an interventionist research methodology guided by CHAT.

EAL: English as an Additional Language.

Employment-based-Teachers on employment-based programmes (such as Teach First and School Direct Salaried) are employed by the school as an unqualified teacher.

ESCL: Enhanced School Centred Learning, a part of the Teach First Summer Institute programme spent in schools working with school-based teachers, as well as external programme based leads.

HEI: Higher education institute, often but not always, universities.

ITE: Initial Teacher Education. In this study this refers to the first year of the Teach First programme which resulted in QTS/ PGCE (defined below), and School Direct programme, leading to QTS.

FoR: Frame of Reference, one of the dimensions of OLEF.

Intentionality: Where capitalised this refers to one of the dimensions of OLEF.

LO: Lesson Observation. Usually a formal observation of a beginning teacher's lesson by a mentor or tutor, but also includes some peer observation.

MM 1-6: mirror meeting for research participants.

Mentor: A more experienced teacher who takes responsibility for supporting the teacher education for a beginning teacher. See also Subject Mentor and Professional Mentor.

Mirror data: data taken from practice which is chosen to support participants make sense of, and problematize their practice. The concept is taken from DWR.

NQT: Newly Qualified Teacher. Professional description of teachers who have recently gained QTS and are employed as teachers in their Induction year. This involves demonstrating they meet the Teachers Standards through termly assessment points. Teach First teachers are normally NQTs in year 2 of their programme.

OLEF: Orientations to Learning from Experience Framework, introduced in Mutton et al. 2008, as part of the DEBT project. 'OLE' refers to the orientations to learning from experience.

Ofsted: Office for Standards in Education. Ofsted inspects and regulates schools and education services and reports to parliament in England.

Phase 1 of data collection: Exploratory studies March year 1-July year 2.

Phase 2 of data collection: September year 2 – December year 3.

Participant: All participants within the research, including beginning teachers, mentors and author researcher.

PGCE: Postgraduate Certificate in Education. The academic award given to Teach First participants (but not School Direct Salaried) who successfully complete the programme, including a series of assessed Written Assignments (WA1-3) and Reflective Journal Assignments (RJA1-3).

Professional Mentor: A teacher, often senior leader, who takes overall responsibility for the Beginning Teachers. This involves organising the school-based programme of professional learning, lesson observations and assessment.

Professional Learning: See CPD.

Pupil: young person at the 11-18 secondary school. NB the author refers to this group as students. However, some participants use this term.

QTS: Qualified Teacher Status: The professional qualification awarded to Teach First teachers on successful completion of the first year and School Direct (Salaried) teachers on completion of their one-year programme.

RJA1-3: Reflective Journal Assignments 1-3 completed as part of the PGCE qualification on the Teach First programme.

RQs: Research Questions.

RtF: Response to Feedback, one of the dimensions of OLEF.

SEN(D): Special Educational Needs (and Disabilities).

SSP: Second School Placement. Refers to a period spent in a different school from the employing school. On the Teach First programme this lasts five days. In the School Direct programme this lasts one month.

Student: refers to the young people at the 11-18 secondary school. However, some participants use the term 'pupil' to describe this group.

Subject Mentor: A more experienced teacher who specialises in the beginning teacher's subject. They take a day to day responsibility for supporting the beginning teacher's learning, including regular observations (LOs) and weekly mentor meetings (M).

Summer Institute: Part of the Teach First programme includes an initial five to six weeks residential.

Teachers' Standards: The minimum standards for teachers' practice and conduct, as set out by the government's government's Department for Education.

Teach First: a charity which aims to address educational disadvantage in England and Wales. They coordinate the employment-based ITE route as part of their two-year programme.

Tutor: University based professional responsible for the beginning teacher's learning. Within most programmes (including Teach First) there are two kinds of tutor: Professional Tutors, with overall responsibility and general overview and Subject Tutors, with responsibility for development as a subject specific teacher.

WA1-3: Written Assignment 1-3 completed as part of the PGCE qualification on the Teach First programme.

Chapter 1 Introduction

1.1 Background and rationale for the research

This study was undertaken at a point when schools in England were gaining increasing autonomy, opportunity and responsibility to lead teacher education. In Year 1 of the study, government policy had extended a system of school-centred teacher education through the rapid expansion of employment-based initial-teacher education (ITE) and the creation of Teaching Schools (DfE, 2010; DfE, 2013; Furlong, 2013). As a senior leader in a secondary school leading on ITE at this time, I was grappling with these new opportunities and their practical implications. This study presents the research and learning undertaken, offering findings to support teacher learning at several levels. Firstly, I was very committed to ensuring the teacher participants involved in the study were learning through the research, and therefore adopted an action research approach, cycling through actions and reflections on our practice in order to improve it. Through 'Close-to-Practice' research (Wyse *et al*., 2018), I also wanted to develop richly contextualised findings about the learning of beginning teachers on employment-based routes, which in themselves are underexplored. As a participant researcher myself, the process was also intended to enrich my own understandings of both research and teacher learning, and their relationship to one another.

Despite the requirement for beginning teachers to spend the majority of their time in schools being set out more than two decades before I embarked on this study (DfE, 1992), research on the learning of teachers in this setting is under-developed with few examples of empirical studies using long-term data or research activities embedded in the field of study (Menter, 2011; Menter, Hulme and Menter, 2014). Furthermore, university education departments stretched between ITE provision and research activities have tended to focus on exploring the provision in their own university-led routes, whilst the complex processes of learning to teach in employment-based routes remain underexplored. Where School Direct has been investigated, researchers draw attention to the 'diversification of experience' within, as well as between, ITE routes (Brown, Rowley and Smith, 2015, p. 17), suggesting that contextualised attention to individuals within specific sites of learning may be important. In addition, although the large-scale longitudinal study 'Becoming a Teacher' provided a wealth of data, Hobson and his colleagues acknowledged that much of the evidence is based on teachers'

accounts of their practice through surveys and interviews, rather than direct observation (A. Hobson *et al*., 2009, p. 213). Therefore, the findings about teacher learning might be further developed by studies which capture school-based practices.

In addition to contributing new knowledge about teacher learning, I hoped that the research process itself would support participant teachers' own understanding and increase their opportunities to engage with and in research. The calls for an 'evidence - based profession' since 2013 have driven a plethora of activities by government, charities, universities and teachers (Department for Education, 2013a; Goldacre, 2013; BERA-RSA, 2014; Prince's Teaching Institute, 2014). Yet evaluations of the progress nationally have been cautious (Gu *et al*., 2014; Coldwell *et al*., 2017) and reflect concerns about the particular conceptions of research and 'evidence-based' practice that tend to be promoted. A recent Department for Education commissioned research report stated that a definition of

> *evidence informed teaching… emphasises that teaching as a complex, situated professional practice, draws on a range of evidence and professional judgement, rather than being based on a particular form of evidence* (Coldwell *et al*., 2017, p. 5).

Yet some forms of research in education, particularly quantitative, and larger scale randomised controlled trials (RCTs) have gained greater prominence in this period as the 'gold standard' (Wrigley, 2018). The Education Endowment Fund (EEF) claimed in 2018 that 10,000 schools have been involved in their RCTs since 2013 (2018), including the school site of the present study. Whilst participation in a large-scale trial may raise awareness of research findings and even research methods, few teachers were directly and actively engaged in the research activities. Furthermore, a paper commissioned as part of the Inquiry into Teacher Education and Research (led by the British Educational Research Association and the Royal Society of Arts (BERA-RSA)) argued that the 2010 White Paper's construction of teaching as a 'craft' best learnt through apprenticeship, showed a 'decisive shift' away from the idea of teaching as a critical, research-informed profession (Beauchamp *et al*., 2013, p. 1).

Teachers' engagement with research is challenging. Few teachers have access to research or are actively involved in its creation (Prince's Teaching Institute 2014; BERA-RSA 2014), although this is changing (The Royal Society & The British Academy, 2018). Claims have been made that practitioner research, necessarily small-scale and local in nature, has been maligned (McNiff, 2002; Menter, 2013) and is minimally represented in academic work (Menter, 2011). Brown and Zhang (2016)

have also argued that 'bottom-up' practitioner research in schools is challenged by external accountability cultures. As a result, there is a risk that the gap between teacher understanding and actions on the one hand, and research theories and evidence on the other, continues to widen. This research was intended to counter this tendency.

The study adopted an interventionist approach, using a research-informed framework as a Vygotskian double stimulus to support, and objectivise the learning of beginning teachers and their mentors. In effect, this meant constructing opportunities for teachers working together to use, and critically assess, a framework that characterises beginning teachers' approaches to learning. The framework was used to stimulate beginning teachers to make their learning more explicit, to enable analysis of the learning and to support participants to identify ways to develop their learning. The following sections begin to provide the context of the research, explaining how it was motivated by the particular landscape of increased 'school-led' teacher education and the desire to contribute to teacher education research.

1.2 School-led teacher learning

Within a teacher education system which the government claimed was increasingly 'school-led' (Department for Education, 2016), it is vital to gain greater understanding of the nature of 'on the job' (Department for Education, 2010, p. 19) learning, and in particular the role of experience within that learning. The 2010 White Paper outlined the government's vision for school-led teacher education, including ITE. For all the previous rhetoric of 'partnership' models (as discussed by Furlong et al. 1996; Smith et al. 2006; Mutton et al. 2018), the creation of School Direct was seen to mark a decisive shift (Whiting *et al*., 2018). The School Direct Salaried route offered schools the opportunity to directly recruit and employ beginning teachers, in 'partnership' with university providers, but importantly the funding was given to the schools who had been allocated the training places, rather than universities. In Year One of the study 44% of ITE places nationally were allocated to School Direct or School-Centred Initial Teach Training (SCITT) programme (DfE and NCTL, no date a). By Year 3 of the study 56% of postgraduate new entrants were on 'school-led' routes nationally, including 5% Teach First and 12% School Direct Salaried (DfE, n.d.) [1].

[1] Date withheld to support participant anonymity. The remainder of teachers on 'school-led routes' followed SCITTs or School Direct fee paying.

The employment-based route led by Teach First continued to grow with government support, bringing 1,375 teachers into classrooms in Year 3 of the study (ibid.) compared with 560 in 2010 (Teach First, 2014). In the secondary school site of this study, 66% of teachers in their initial or induction (NQT) year had undertaken or were undertaking an employment-based programme of ITE in Year 1 of the study. Changes within ITE policy in England have led a government-commissioned review to describe the system of ITE as 'complex' and 'confusing' (Carter, 2015) whilst researchers have questioned whether ITE in this period could even be accurately described as a 'system' (Whiting et al. 2018). In this confusing landscape, I suggest that close attention to specific sites and contexts is particularly important.

1.3 Education and research

Teachers, researchers and politicians have called for teaching to become an 'evidence-informed' profession (Reeves and Fox, 2008). Although some unions have opposed the addition of research-related activities to teacher workloads, many teachers are attracted to the prospect of being aligned with other traditional professions such as medicine, where practitioners engage with research activities (Breckon, Mthiyane and Shepherd, 2019). This could be indicated by the establishment of the Chartered College of Teaching in 2017, whose mission includes being a 'conduit to a more evidence-informed profession' (CCT, 2019).

Researchers no doubt have many motives for their work. In an increasingly competitive, market-orientated landscape (Furlong 2013), cynics might note that involvement in new forms of teacher education and research-engaged practice offers the potential for new audiences. For budget-aware university departments, this might be particularly important given the increasing importance of 'impact', described as a 'change or benefit beyond academia' measured in the Research Excellence Framework which determines future research funding (REF 2014, 2011, p. 4). Cain argues, for example, that the 'impact agenda' has led to increased numbers of university publications aimed at practitioners (Cain, 2015).

For governments, research activities are seen as instrumental in increasing teacher quality and student outcomes and thereby increasing international economic competitiveness (Ball, 2008). In the 2010 White Paper 'The Importance of Teaching', the Programme for International Student Assessment (PISA) league tables were

referenced eight times. Concerns about England 'slipping back' and 'standing still' were repeated and Prime Minister David Cameron declared that 'what really matters is how we're doing compared with our international competitors' (DfE 2010). Selective 'policy borrowing' (Beauchamp et al. 2013) from countries which performed highly in PISA, especially Finland, led to a flurry of policy decisions intended to raise the quality of teachers (Ball 2008; see for example DfE 2010).

Gough has argued that whilst the government 'espoused' an interest in evidence-informed practice, this 'has not been reflected in their actions' (Gough, 2013, p. 75). Previous structures intended to create, synthesize and disseminate evidence to inform policy, such as the Evidence for Policy Practice Information and Coordinating-Centre (EPPI Centre) and National Education Research Forum (NERF), have been wound down and funding shifted to the EEF charity, to offer a 'Teaching and Learning Toolkit' and fund Randomised Controlled Trials (RCTs). The 'toolkit' offers 'accessible summaries' of a narrow field of research presented in effect-size 'impact' scores,[2] although more detailed summaries do offer some informative analysis which could support teachers to understand the research evidence underpinning these recommendations. Supporting teachers to engage with research in ways that has discernible 'impact' on attainment is not straightforward. Evidence from two of the EEF-commissioned large-scale RCTs investigating the impact of disseminating research to schools through 'passive' (for example research summary distribution) and 'light-touch' 'active' methods (such as twilight workshops or conferences) showed no impact on children's attainment (Rose *et al*., 2017; Sharples, 2017; EEF/ NFER, 2020)[3].

The designation of Teaching Schools with a core focus on 'Research and Development' offered further potential for building research capacity, but the impact of this has yet to be established (Gu *et al*., 2014) and applications for new Teaching Schools have now closed. Research commissioned by the DfE into the progress in evidence-informed teaching concluded that 'schools were not becoming more engaged with research evidence' over the two year study period (Coldwell *et al*., 2017, p. 67). The network of research Schools, set up from 2016 and funded by the EEF and Institute for Evidence in

[2] see http://educationendowmentfoundation.org.uk/toolkit/

[3] Evaluation based on teacher self-reports however, did indicate more positive outcomes in terms of teachers' dispositions to research and their claims about being able to adapt their classroom practice. (Brown, 2017; Rose *et al*., 2017).

Education, has extended their evaluation period, describing a 'slow start'(Gu, Rea and Hodgen, 2018).

Paradoxically there are concerns that many Higher Education Institute (HEI) education departments lack the capacity to create high-quality research about teacher education and that this was further threatened by the policy context at the height of this study, which created the conditions for a 'perfect storm' (Christie *et al*., 2012, p. 9; Furlong, 2013; Murray, 2013). Citing Menter et al.'s 2010 review of 446 research studies in teacher education between 2000-2008, Murray concludes that:

> *Teacher Education may be characterized as a young and under-theorized field of research, with a paucity of high-quality research findings. Many of the fundamental aspects of pre- and in-service teacher education remain under-researched (Murray 2013, p.8).*

In part this can be explained by looking at the HEI teacher education workforce. Murray notes that 'because many teacher educators are also its researchers, research on teacher education is therefore also research in teacher education' (Murray 2013, p.3). Following the 'academic drift' of ITE into new universities after 1992, many of the HEI-based teacher educators lack research experience or opportunity, as they often come straight from school teaching backgrounds into university teaching roles (ibid). In the 2008 Research Assessment Exercise (RAE) only 40% of the staff in HEI education departments were registered as 'research active' (Christie *et al*., 2012). Just 27% of staff were selected for the 2014 REF exercise and only 40% of staff on research and teaching contracts have doctorates (Oancea, Mills and Robson, 2018, p. 4,11). Seventy-two per cent of HEI-based ITE places 2000-2008 were based in post-1992 universities and the majority of these had no core funding for research (Christie *et al*., 2012).There is a risk that this 'research poverty' (Murray 2013) has then been passed onto the next generation of teachers, the majority of whom trained in new universities.

In older university education departments with more research experience and funding, Gilroy and McNamara argue that teacher educators are 'still effectively excluded from traditional models of research engagement' (cited in Murray, 2013, p. 15). BERA & the University Council for the Education of Teachers (UCET) noted the 'increasing separation' between research and teaching (Christie *et al*., 2012, p. 17) and Ellis et al. go further by claiming that teacher educators were being proletarianized (2014).

Some HEI teacher educators oppose the school-led ITE routes, arguing that universities offer the best opportunities for research-informed teacher-education programmes. It is

perhaps ironic then that the evidence does not always provide a strong case for this. BERA and UCET analysis noted that examination of the RAE in 1997 showed the lowest performing research departments tended to submit work on the theme of Teacher Education and that by 2008 the amount of research in this area (as suggested by the number of submissions to RAE) was declining (Christie *et al*., 2012). Undoubtedly there are exceptions to this pattern and several HEI education departments have effectively combined their dual roles of research and ITE to create research-informed ITE programmes (for an overview of this, with a particular focus on clinical practice see Burn and Mutton, 2015a). The education department at the University of Oxford, with its long-standing engagement in an innovative 'internship' programme of ITE (Benton, 1990; McIntyre, 1997) is one such example of this, achieving both 'outstanding' in the recent Ofsted assessment of its ITE provision (Ofsted, 2018) and being recognised in the REF as having 65% of its submissions classed as 'world-leading' (HEFCE *et al*., 2014).

This study builds on research partly generated at this particular department, taking quality research into a school setting to create new knowledge. The study was conceived at the height of the changes caused by the introduction of School Direct and expansion of Teach First, as part of a professional enquiry as to how best to support beginning teachers on such routes, but also in the hope of offering a different perspective which identified the opportunities and possibilities for enhanced learning through experience. University-based researchers have made convincing claims of being silenced in the political sphere during this period of change (McIntyre, Youens and Stevenson, 2019). As a school leader having experienced an employment-based route and now excited by the opportunities to craft meaningful learning experiences for new teachers undertaking them, I felt that voices like mine, as an optimistic school-based professional, were very quiet at national research conferences during this period. In undertaking this DPhil my professional ambition was to become 'amphibious': to be able to live comfortably in both school and university settings, and to enjoy the possibilities of both. Straddling the two sites part-time over this period has enabled some critical distance, offering new understandings but also leading me to identify possibilities for greater partnership and enhancement of learning teaching through experience.

1.4 Developing Expertise of Beginning Teachers

At the heart of this study is the 'orientations to learning from experience framework' (OLEF) developed through research conducted within the education department at Oxford University. The Developing Expertise of Beginning Teachers project (DEBT) was a three-year longitudinal study of 25 beginning teachers, from their PGCE year into their first teaching jobs between1998 and 2001 (Burn *et al*., 2000). The teachers were drawn from English, Maths and Science ITE programmes at the Universities of Oxford and Cambridge, and the research focused initially on the practicum in the school setting.

The research methods drew on Brown and McIntyre (1993) employing a research interview after an observed (and filmed) lesson to explore teacher thinking and decision making and identify the contextual factors which were 'facilitating' and 'constraining' student teachers' learning. Participant teachers were observed and interviewed ten times over the three years. The analysis showed that 'experience' of planning and teaching accounted for 72% of the teachers' reported instances of learning (that were attributed to any particular source). Hagger and colleagues explored this further, eventually creating a framework of opposable orientations to learning through experience (OLEF) (Hagger et al. 2008) shown in Figure 1. The five dimensions range from personal attitudes such as the extent of their Aspiration, to the ways in which they relate to the varying potential sources of learning in their context: their Response to Feedback (RtF), the range of sources they draw on (Frame of Reference), their Attitude to Context (AtC) and the extent to which they adopt a deliberative approach to their learning (Intentionality).

Figure 1: The Orientations to Learning from Experience Framework (OLEF) Burn et al. 2015 p. 39, adapted from Hagger et al. 2008

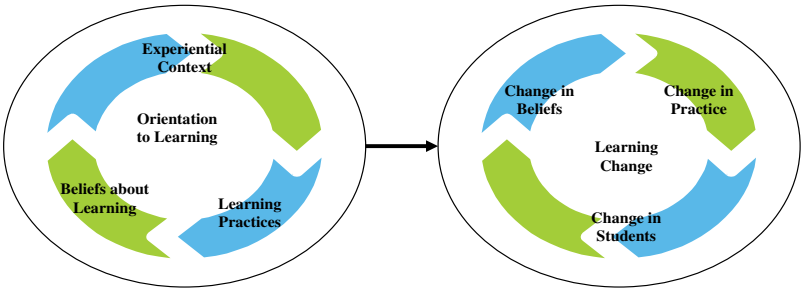
Dimension	Orientation			
Aspiration The extent of the trainee's aspirations for their own and their pupils' learning	Satisfaction with current level of achievement	←	→	Aspirational both as learners and teachers
Intentionality The extent to which the trainees' learning is planned	Reactive	←	→	Deliberative
Frame of reference The value that the trainee ascribes to looking beyond their experience in order to make sense of it	Exclusive reliance on the experience of classroom teaching	←	→	Drawing on a range of sources to shape and make sense of experience
Response to feedback The trainee's disposition towards receiving feedback and the value that they attribute to it	Tendency to be disabled by critical feedback	←	→	Effective use of feedback to further learning
Attitude to context Attitude to the positions in which trainees find themselves and the approaches that they take to the school context	Tendency to regard the context as constraining	←	→	Acceptance of the context and ability to capitalise on it

The DEBT authors initially introduced the concept of orientations to learning simply as attitudes or beliefs (Hagger et al. 2008). Opfer and her colleagues, including Pedder, who also worked on the DEBT project, define orientations as:

> *an integrated set of attitudes, beliefs and practices as well as the alignment of oneself and one's ideas to circumstances and context* (2011, p. 444).

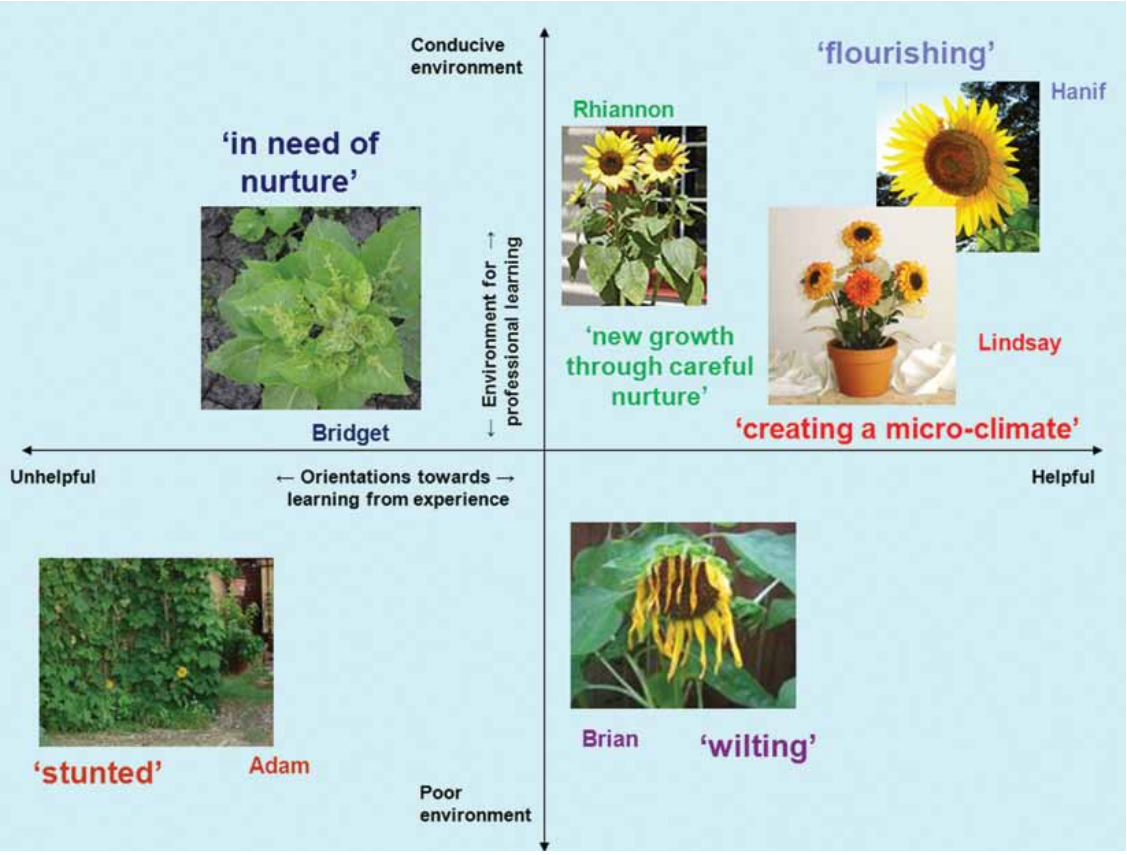
Their literature-based model of the dynamic interactions between orientations and change (illustrated below) is moderately supported by their secondary data from a large-scale representative sample of teachers in England. Figure 2 shows that 'Orientation to Learning' consists of beliefs about learning, learning practices and experiential context. These feed into 'Learning Change', which is conceived as change in beliefs, change in practice and change in students. They conclude that 'we cannot understand learning by separating features of activities from individual teachers' orientations to learning' (Opfer et al. 2011, p.451).

Figure 2:Teacher Orientations to learning (Opfer et al 2011 p. 451).



I was first introduced to the DEBT study through a *Teaching History* journal article (Burn, 2012) and the OLEF model intrigued me. I was interested to explore if and how this framework could support the learning of beginning teachers within my school. Whilst convinced by the richness of data gathered through a rare longitudinal study, I must admit to also being concerned about the participants involved and wondered how Brian could be left 'wilting,' and Adam 'stunted' (Figure 3). Naively, I felt uneasy about research methods that had not helped the participants to thrive. The researchers in this study positioned themselves as 'neutral' observers (Hagger et al. 2008: 163). However their concluding comments seemed to invite further, perhaps more participatory, research when they suggested 'the greatest scope for improvement [in ITE]... lies in addressing the student teachers' understanding of the learning process' (Mutton et al. 2010: 86). I was excited to explore the potential that the research itself could be a factor in supporting teachers to reflect critically on their learning. Upon reading the interview questions in these studies (Burn *et al*., 2003), I was struck by the extent to which they might also be used by a mentor to stimulate thinking and learning as promoted by reflective practitioner models (Zeichner 1994; Hagger & McIntryre 2006; Schön 1983). This led me to consider whether the 'natural setting' (Hammersley and Atkinson, 2007: 4) of mentor-teacher conversations might not only provide an insight into both teacher learning and mentor practice, but could also lead to a direct improvement in practice.

Figure 3:The effects of interplay between OLE and context. Burn 2012



The use of opposing orientations in OLEF to create continuums provides opportunities to explore the differences between various positions on these spectrums. As such it seemed to have potential to act, like Cultural Historical Activity Theory (CHAT) in Developmental Work Research (Engeström, 2005), as a Vygotskian double stimulus for participatory research discussion and learning. These methods are further described in Chapter 4.

1.5 Research Questions

This study thus arose from a personal professional ambition to explore how OLEF (Figure 1) could be used by mentors and beginning teachers to improve their learning. OLEF is used both as a stimulus for learning conversations between participants and a tool for the analysis of learning. In particular I investigate three main hypotheses. The first hypothesis suggests that the findings from the DEBT project, particularly OLEF, can be useful beyond the context of the original research (RQ1.1 & RQ 1.2 below). The second explores the extent to which the data used to inform OLEF can be accessed

using different, participatory methods (RQ 1.1 & 1.3). These hypotheses are further explored in Chapter 5.

The third hypothesis picks up a thread from the DEBT team's concluding remarks:

> *if... student teachers' orientations to learning from experience are amenable to change, we need to ensure that all student teachers have the space, time and encouragement to articulate and critically examine, their differing conceptions of the process of learning to teach...Mentors are the best placed to provide student teachers with individual attention of this kind. (Hagger et al. 2008: 175).*

The study created the time and space for mentors and beginning teachers to do this, i.e. to discuss the process of their learning, in relation to evidence they collected and OLEF. Analysis of this discussion provided the opportunity to examine the DEBT team's assertion more fully, and to explore how OLEF itself could be used as a double stimulus to support this critical examination of learning (RQ 3 and 4).

Whilst RQ 1 and 3 consider the methodological possibilities, RQ2 and 4 consider the substantive findings: that is to say the orientations of the beginning teachers on employment-based routes, and their claims about learning through the research process.

RQ1

Can the 'Orientations to Learning from Experience Framework' (OLEF) (Hagger et al. 2008) be applied beyond the scope of the original research context?

1.1 Can the 'orientations to learning' of beginning teachers on employment-based routes be described from mentor-teacher dialogue (rather than the DEBT interview)?

1.2 How does the specific context of the employment-based programme relate to the 'Frame of Reference' and 'Attitude to Context' continuums of OLEF?

1.3 Can mentors and beginning teachers examine and draw on audio-recordings of their dialogue to identify their own dispositions, and thereby locate themselves on OLEF?

RQ2

What are the orientations to learning from experience of beginning teachers on employment-based routes?'

RQ3

How do mentors and teachers use OLEF as a reflective tool to support the critical examination of, and reflection on the processes of learning teaching?

RQ4

What are the effects, if any, of beginning teachers and mentors exploring (their orientations to) learning by using OLEF?

4.1 In what ways, if any, do the beginning teachers' orientations to learning from experience appear to change during the research process?

4.2 How is this related to the use of OLEF?

4.3 To what extent and in what ways, if any, do the beginning teachers and mentors claim that the process enhances learning opportunities?

1.6 Thesis outline

In this introduction I have provided the personal and broader context and rationale for the study, by situating it within the shift towards schools and employment routes playing an increased role in ITE. I have argued that the study offers the opportunity to gain new insights into the learning of teachers in this specific context. Importantly, these insights are based on the beginning teachers' actions, by drawing on participatory methods, rather than relying on their accounts of their practice. The study therefore contributes to teacher learning both as an outcome of the study, and through the research process itself, which was rich in learning for participants.

In Chapter 2 the study's place within the field of research is further developed. It offers grounding within the secondary literature for the particular RQs, methodology and methods of this study. The chapter begins (2.1) with a brief historical survey of ITE, including an exploration of the relationships between universities and schools in the provision. This leads to an analysis (2.2) of the ways in which beginning teachers' learning has been conceptualised and outlines how the DEBT project and OLEF can be seen within Vygotskian socio-cultural understandings of learning. The next section (2.3) considers the role of the mentor in beginning teacher learning and in particular summarises research around the role of mentoring conversations. Chapter 3 then opens up the conceptual framework further by unpacking each of the five dimensions of OLEF as described in the DEBT research, and in relation to other research on these or similar constructs.

Chapter 4 presents the methodology and methods. It describes the study as an example of Close-to-Practice research (Wyse *et al*., 2018), working with participants following the action research tradition, using tools from Vygotskian interventionist methodologies. The chapter opens by considering the indicators of quality and rigour which I have used to evaluate it (4.1.1). Next, I present the ontological and

epistemological assumptions underpinning the study's approach, arguing that these align well with the focus of the study, and cohere with the methods used (4.1.2).

The subsequent part of Chapter 4 presents a description of the methods used (4.2). In order to provide a transparent and reflexive account, this section blends evaluation in terms of how well the methods align with the methodology and a reflexive discussion of ethical questions, particularly related to the extent of participation. Following a brief overview of the three years of study, section 4.2.5 outlines the methods of Phase 1, which were shorter exploratory studies, before describing the Phase 2 methods (4.4). The descriptions of methods include a full account of the participants involved and provide details of all the tools used and the activities undertaken in the six cycles of data collection.

Part 4.5 outlines the qualitative data analysis (QDA) methods, which were conducted at several stages, including throughout data collection. I used the five level QDA method (Woolf and Silver, 2018) to support me in translating the RQs, methodology and conceptual framework (Levels 1 and 2) into tools (Levels 4 and 5) on NVivo software. The role of cross-case and within-case memos and summary matrices are described.

Chapters 5-8 present the findings of the study. Chapter 5 addresses RQ1 which focusses primarily on the methods of study: exploring the extent to which data relevant to OLEF could be accessed using the participatory methods of this study. This chapter argues that Phase 1 clearly demonstrated that beginning teachers' orientations to learning can be described from mentor-teacher dialogue in ways that resonate with participants. The initial analysis of the Attitude to Context (AtC) and Frame of Reference (FoR) dimensions are also presented.

Chapters 6 and 7 address RQ2. Chapter 6 presents the analysis of the beginning teachers' learning using the OLEF framework. Taking each of the five dimensions in turn it offers a cross-participant description, drawing on rich data in order to develop and refine the OLEF framework. The analysis suggests that the participants on employment-based routes show very similar orientations to those on the DEBT study overall. However, the participants show particularly high levels of Intentionality and Aspiration. The participants identify their Frame of Reference as the weakest dimension, which they want to develop further. Less data is available for Attitude to Context, largely for methodological reasons explored in Chapters 4 and 5.

Chapter 7 builds on this initial outline to provide a more in-depth description of the ways the orientations vary within two Phase 2 participants, with a particular focus on two dimensions: Intentionality and FoR. The chapter opens with a portrait of each of the beginning teacher's approaches to learning, before focussing on issues of similarity and difference between participants; change and continuity over the research period, attending to both RQ2 and RQ4. This comparative analysis provides illuminating insights into the individual's approach to learning, within their broader context. Building on the concept of Intentionality I pay particular attention to the features of high intentionality, considering the opportunities for self-regulation and professional agency.

In the analysis of the FoR I explore how external sources, beyond beginning teachers' classroom experience, are used to make sense of their learning. I claim that models of reflective practice rarely consider what sources are drawn on in the process, concluding that McIntyre's (1995) concept of 'practical theorising' may be more helpful. Furthermore, I consider the role of the mentor in acting as a mediator of other sources.

Chapter 8 considers the findings related to the research process itself (RQ3 and 4) by presenting the claims made by participants. This chapter highlights the strengths of the participatory research design in opening up learning to participants engaged in the activities investigated. However, it also pays attention to the challenges of this process and limitations of the research, both as designed and as it happened. I argue that OLEF acts effectively not only as a 'what' artefact, describing orientations to learning, but can also be used as a 'why' 'how' and 'where-to' artefact to support action and develop learning.

The final chapter, Chapter 9, draws conclusions by offering implications for practice and further research. This study offers a methodological contribution, by showing ways that OLEF can be used as an effective double stimulus and inviting other researchers to consider the ways that other research-informed frameworks might similarly be used. Furthermore, the citation analysis (in Chapters 2 and 3) and empirical findings identify the ways that concepts such as self-regulation, self-efficacy, deliberate practice and professional agency can be aligned with the OLEF framework, opening up new avenues of research and learning.

In terms of professional implications, the study provides a model for mentor and beginning-teacher learning as a form of practice-developing research. The findings may

be starting points for further investigation by practitioners. Furthermore, factors which support increased Intentionality and a broader Frame of Reference are identified, which could inform programme design for the learning of beginning teachers and their mentors.

Chapter 2 A review of the literature: context setting

2.1 Employment-based initial teacher education

Initially I seek to offer a brief survey of employment-based Initial Teacher Education (ITE) in the policy history of England in order to locate this study within relevant policy development.[4] I will also outline some of the key debates pursued by researchers as to the extent of change and whether this should be seen as a peculiarly English or more global phenomenon. Teacher education policy from 2010 has been seen by some researchers as bringing 'radical' (Whitehead in Murray and Wishart, 2011) and disruptive change which threatened the system (McIntyre, Youens and Stevenson, 2019). Other researchers have conceived the changes as more 'symbolically significant' rather than fundamentally different (Mayer and Reid, 2016), or based on 'policy recycling' and 'amnesia' (Youens, Smethem and Simmons, 2018). The description of a 'practicum *turn*' (Conroy, Hulme and Menter, 2013) has been seen by others, taking a longer view, as a *(re)turn* to school-centred ITE (Beauchamp *et al*., 2013). England's approach is seen by UK researchers as an 'outlier' when comparing policy with other UK nations, particularly in relation to the extent that policy decisions are related to education research (Menter, Mutton and Burn, 2019). However others, having taken a more international perspective, see it as part of a pattern of global education reform (for example Jackson and Burch, 2015; Ellis, Steadman and Trippestad, 2018) and as a result of increased globalisation (Furlong, 2013).

Helpfully, Menter, Mutton and Burn (2019) have recently provided a periodisation of teacher education which I use to summarise changes in employment-based ITE:

> 'Phase 1 Institutionalisation 1800-1944' is characterised by an increasing move to create institutions for teacher education, including teacher training colleges.
>
> 'Phase 2 Academicization 1945-1972' saw a huge increase in teacher education colleges and increased involvement of universities following the 1944 Education Act.
>
> 'Phase 3 Professionalisation'. Following the James Report. the period from 1972 up to 1984 saw an increase in the 'professionalisation' of teaching as a graduate

[4] Fuller accounts of the developments in teacher education more broadly have recently been provided, for example, (Furlong, 2013; Menter, Mutton and Burn, 2019).

profession, with universities largely leading teacher education and advocating the 'reflective teacher' model.

'Phase 4 Diversification and Standardisation 1984-2010'. This period begins the first stage of standardisation through the introduction of the National Curriculum, the Teacher Training Agency and Ofsted. The dominance of universities in teacher education was challenged in this phase by the introduction of school-based routes including School-Centred Initial Teacher Training (SCITT) in 1993 and the Graduate Teacher Programme in 1997, which resulted in increased diversification of ITE routes. By 2007 around 20% of beginning teachers were on the Graduate Teacher Programme (Youens, Smethem and Simmons, 2018). Furthermore, the employment-based programme Teach First was set up in 2003, with the numbers of people involved increasing each year: by 2010 there were 560 teachers on their programme (Teach First, 2014).

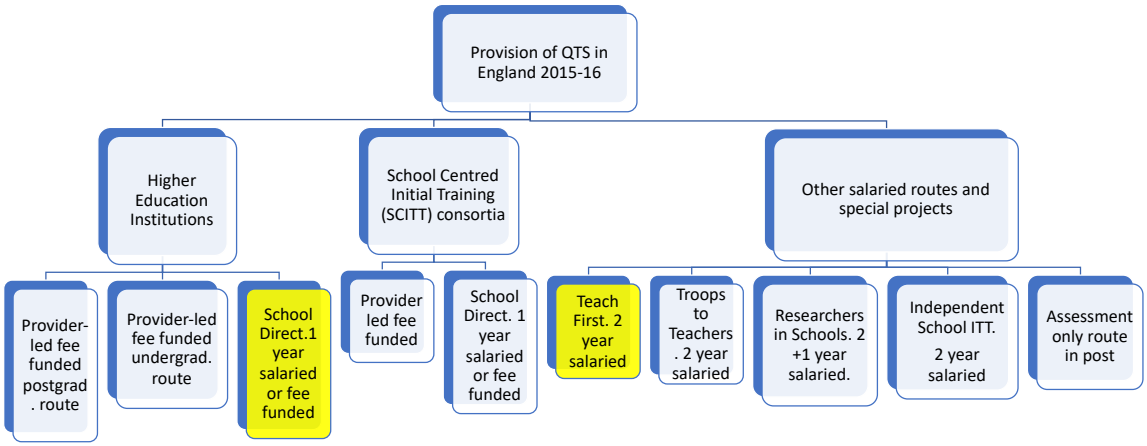
'Phase 5 Marketization'. This brings us up to the present time, beginning with the 2010 White Paper *The Importance of Teaching*. This White Paper led to the replacement of the Graduate Teacher Programme by two School Direct programmes (Salaried and non-Salaried) and the rapid expansion of Teach First. The authors characterise this period as one of 'marketization' as a range of ITE 'providers' compete to attract beginning teachers to their programmes. The diversity of routes on offer is compounded by the development of 'branded' and localised models of teaching (Menter, Mutton and Burn, 2019).

Contemporary employment-based routes in England tend to be seen as representing a seismic shift in the teacher-education landscape towards schools, following the 2010 White Paper. This is certainly how they have been presented politically (Whiting *et al*., 2018; McIntyre, Youens and Stevenson, 2019), but continuities and more subtle patterns can also be discerned. Taking the long view, employment-based routes can be historically traced to the early pupil-teacher apprenticeship models advocated by Kay Shuttleworth in the nineteenth century (Maguire, 2010). However, many researchers tend to look to 1989 with the introduction of the Articled Teacher Scheme, a two year school-based PGCE, and the Licensed Teacher Scheme which offered non-graduates a two year school-based programme towards Qualified Teacher Status (QTS) (Youens, Smethem and Simmons, 2018). The move towards ITE involving more practice in schools is usually associated with the Department for Education directive of 1992

which specified that two-thirds of a secondary PGCE course should be spent in schools (Whitehead in Murray and Wishart, 2011).

The particular employment-based routes studied in this thesis are School Direct Salaried and the Teach First programme[5]. These two feature among the plethora of ITE routes offered in England, as illustrated by the diagram below (Whiting *et al.*, 2018). The present system has been described by prospective beginning teachers as complicated and confusing (Carter, 2015) as a result of a 'fragmentation' of the system (Whiting *et al.*, 2018). This can be illustrated by comparing the options available for prospective post-graduate maths teachers: 90 course options were available before 2010, but 977 options were recorded on the Graduate Teacher Training Registry by 2018 (Ellis, Steadman and Trippestad, 2018). In 2014-15 just 10% of ITE places were allocated to providers with more than 10 places per course, with 3570 places allocated to single person 'routes' (Whiting *et al.*, 2018). An example of such a route might be a History beginning teacher on School Direct route at a particular school, working in partnership with a university which brings together all of its School Direct beginning teachers into a cohort for a programme of activities, possibly even with other teachers on other routes such as a 'university-led' PGCE.

Figure 4:Provision of QTS in 2015-16. Adapted from Whiting (2018 Figure 4).



[5] Appendix A provides a summary of the main ITE routes featured in the study for reference.

The learning experience of the particular beginning teacher will be an individual one, contextualised by the particular classes and school setting in which they spend the majority of their time as well as their own individual orientations, beliefs and values. However, the extent of the diversity of routes is exaggerated by the deliberate focus on the 'lead schools', which in the case of School Direct routes are itemised at school-level. This enabled the government to claim in a heading of the census that by 2015 the 'majority' of *courses* were 'school-led,' and then confusingly in the text following state that 51% of *entrants* followed 'school-led' — that is to say school-funded routes (SCITT, School Direct or Teach First) (Department for Education, 2015). In fact, the vast majority of beginning teachers were still on routes which were 'led' by higher education institutes (HEIs) (57.1%) and even more involved HEIs as accrediting bodies and partners (Whiting *et al*., 2018).

Several themes are revealed by the survey above which have interested researchers. Firstly, the ITE routes themselves have been the focus of studies, including quantitative analysis of allocation and placement numbers (Whiting *et al*., 2018) and cost analyses (Allen *et al*., 2014). Further research has considered the teaching practices of participants (Chapman and Armstrong, 2014) and attempted to untangle a range of factors to make claims about their impact on educational outcomes (Muijs *et al*., 2010; Allen and Allnutt, 2013). The destinations of Teach First teachers, including examination of retention figures, are the focus of The Education Lab report commissioned by Teach First (Allen, Parameshwaran and Nye, 2016). Studies with a sociological and policy focus are also popular (Bailey, 2015; Ellis *et al*., 2015; Rauschenberger, 2017; Elliott, 2018; McIntyre, Youens and Stevenson, 2019; Ellis and Spendlove, 2020).

One of the challenges in researching English employment-based routes is that they tend to be conflated with each other, particularly in the case of Teach First which is often unhelpfully subsumed within broader studies of the Teach For All network in any one of the 53 countries it works in (Rice, Volkoff and Dulfer, 2015). Teach First differs distinctly from Teach for America, for example, in its partnership with HEIs to offer an academic qualification (Mcconney, Price and Woods-Mcconney, 2012; Blandford, 2014). The works cited in the previous paragraph, in contrast, pay careful attention to the specifics of the programme and its context, with Rauschenberger especially convincingly reconstructing the events leading up to the creation of Teach First through elite interviews to demonstrate how particularly located it was in an English (and

specifically London) education system, rather than being an example of direct 'policy borrowing' of Teach For America (2017).

Furthermore, research on the School Direct programme, as experienced by educators and beginning teachers emphasised the 'diversification of experience' *within* the route (Brown, Rowley and Smith, 2015), which reinforces the need for careful attention to specific programme experiences and enactments, rather than broader generalisations. Ellis and Spendlove identify 'surprisingly little research' about School Direct, citing only 11 studies, two of which are qualitative (Ellis and Spendlove, 2020). Further research on the experiences of beginning teachers on employment-based routes are found in two doctorates – one focussed on the School Direct Salaried route (Hyde, 2018) and another on Teach First teachers' and their mentors' experiences of mentoring (Cameron, 2014). Both of these studies use beginning teacher and mentor accounts of their practice through self-reports, surveys, interviews and focus groups, rather than focussing on classroom, learning practices or more participatory research methods. Their findings are outlined, along with other relevant literature, in the sections 2.2 and 2.3 which follow this, but for now I continue with the more general overview.

Ellis and Spendlove argue that the majority of the research on School Direct is 'broadly policy-sociological analyses' (Ellis and Spendlove, 2020). Following Cochran-Smith's analysis of the way that teacher education in the United States has been positioned as a 'policy problem' to increase global economic competitiveness (Cochran-Smith, 2009), researchers have identified similar trends in other countries, including England (Mayer and Reid, 2016; Ellis, Steadman and Trippestad, 2018; McIntyre, Youens and Stevenson, 2019). Political discourse analysis has been used to show the ways that universities have been presented as part of the problem, 'systematically marginalised and in some cases silenced' from debates and shifted towards a school-led system which is presented as the solution (McIntyre, Youens and Stevenson, 2019, p. 154). In the few years following the White Paper's announcement, as School Direct began to be implemented, a sense of anxiety pervaded university schools of education and research bodies (Mansell, 2013; Ford, 2015; Whitehead in Murray and Mutton, 2016).

The greatest shift after 2010 is arguably one of recruitment and funding – the 'market problem' (Tatto, 2019) – rather than university involvement. In both School Direct routes schools gained greater control of funding, but particularly in School Direct Salaried. School Direct Salaried 'lead schools' recruited beginning teachers with at

least three years ‘in industry’ onto their employment-based programme. Lead schools received the funding from government (in 2015 this was £22,600-£34,000 in inner London) and had to identify an ITE provider for the accreditation, which could be the professional qualification (QTS) only or could include a postgraduate academic award (PGCE/ PGDE). This funding paid the salary of the teacher on an unqualified teacher scale (in inner London from £20,496 in 2015). ‘Lead schools,’ as the holders of the purse and in light of a breadth of market options, were able to choose those HEI providers that best suited them. Whilst their decisions about which HEI to choose may have been based on previous ITE partnership experience, geographic location or pedagogical values, there is some evidence that university leaders felt that decisions were made on cost alone (Ellis and Spendlove, 2020). As an indicative cost to schools, in 2015-16 the School Direct History route at the Institute for Education (now part of University College London) was £5,100 and led to a QTS qualification.

The funding for, and cost of Teach First has also interested researchers. The Teach First Programme is led by a charity, which receives a direct grant from government for the ITE aspect of the programme (Allen *et al*., 2014). In 2014 schools paid a ‘recruitment fee’ of £3,800 or £4,100 to Teach First for each Teach First participant they employed. Schools were given £2,500 as a mentoring grant from Teach First (Cameron, 2014). Teach First teachers are paid by schools on at least point 2 of the unqualified teacher scale (in 2014 this was £24,735 for inner London), whilst HEI partners were paid by Teach First.

A report by the Institute for Fiscal Studies attempted to calculate the relative cost effectiveness of each route, taking into account not only central government costs, but also the indirect costs for schools for activities such as mentoring, assessment paper-work, lesson-planning support and so forth. These indirect costs were identified through surveys to schools, with large variance in reported costs within routes (i.e. at school reporting level). Overall, Teach First was reported to be the lowest mean cost to schools (£138 per week at secondary), with School Direct Salaried being the most expensive (£187.60 per week at secondary. By way of comparison, the HEI Led PGCE route mean cost was £185.60 per week (Allen *et al*., 2014, p. 36 Table 4.6).

Schools were also asked to identify whether the benefits were greater than the costs. Again there was large variation in perspective, with 51% of ITE coordinators claiming that the benefits were greater than the costs of School Direct Salaried (as opposed to

33% claiming that the costs outweighed the benefits). In relation to Teach First 61% claimed that the benefits were greater than the costs, with a much smaller proportion (12%) claiming that the benefits were less than costs (ibid., Table 4.411). At a departmental level the second highest percentage of subject leaders claimed that that benefits were greater than costs for Teach First (61%, after the Graduate Teacher Programme. Table 4.14). In comparing routes however, the subject leaders were less positive with regards to School Direct Salaried and Teach First than the school leaders: Subject leaders claimed that Teach First was equal (in terms of relative benefits) to School Direct Salaried and HEI Led PGCE, whilst School Direct Salaried was worse than HEI PGCE routes (Table 4.14 p47). This may reflect the extent to which the department takes on the additional workload associated with beginning teachers. Overall, the report found that whilst the Teach First route was relatively expensive centrally, the benefits perceived by schools were 'proportionately larger than other routes' (ibid. p. 63). Whilst the weighing up by school and departmental leaders is not an analysis at system level (which might consider issues of longer-term retention in the system) it gives some insight into the nature of the 'bargaining' between providers and schools described by Ellis and Spendlove (2020).

Tatto (2019) claims that that teacher education internationally is a 'market problem', rather than a policy problem is supported by examination of the English system. Furlong presents universities as 'market-sensitive' making it

> *extremely easy for successive ministers of education particularly in England and Wales, to take more and more control of the TE system: to define the nature of the curriculum; to define the structure of the courses & relationships with schools; to define the professional qualifications of those allowed to teach on those courses…Simply by issuing a revised government circular and by issuing a new Ofsted inspection framework, between them, ministers of England and Wales were able to fundamentally to change course up and down the land if not overnight, then in the course of one year. It was a command and control system that many less democratic governments than our own would have been envious of* (2013, p. 119)

Discourse analysis adds further support for this claim with authors concluding that the 'school-led' discourse was masking an aggressive market environment (McIntyre, Youens and Stevenson, 2019). Analysis of university application pages and promotional materials shows how institutions aligned themselves with the government discourse, which further weakened their resistant voice (ibid.). The actions that course leaders took to mitigate risks and minimise disruption in a period of uncertainty – such as attaching School Direct teachers to traditional PGCE cohort programmes – meant

there was no radical or ‘fundamental change’ or ‘reconceptualization’ of learning through experience (Ellis and Spendlove, 2020).

Furthermore, whilst the numbers of teachers allocated to ‘school-led’ routes destabilised university-based programmes for a short period, the actual number of teachers on employment-based routes has remained relatively low in comparison with other routes (Whiting *et al*., 2018), and in relation to previous share of teachers on the Graduate Teacher Programme numbers (Youens, Smethem and Simmons, 2018). The short-term instability was keenly felt by PGCE course leads between 2013-2015 (Mansell, 2013; Ford, 2015). In the longer term however, the census for 2019-20 shows that 6% of beginning teachers (new entrants to ITE) were on the Teach First programme and 8% on School Direct Salaried routes. This was a 1% increase on the previous year on the Teach First programme, but the same as their percentage share in 2015-16. The School Direct Salaried route share has decreased from 2015-16 when it was 11% (Department for Education, 2015, 2019b).

With the benefit of hindsight and as the new system becomes more familiar, other teacher educators have voiced some sense of opportunities to transform practice-based learning having been missed in the School Direct programme (Ellis and Spendlove, 2020), or lost with closure of the Graduate Teacher Programme (Youens, Smethem and Simmons, 2018). Although the main theme reported by university-based leaders of School Direct programmes was one of emotional uncertainty, at least four participants (of 10) expressed retrospectively a ‘recognition of lost potential for transformation’ (Ellis and Spendlove, 2020). The sense of loss is strongly pronounced too in Youens and colleagues’ account, which argues that ‘an immersive teacher preparation programme, nested within a mature partnership, offers the potential for a transformative approach to teacher education' (p.863).

Others, such as Jackson and Burch took a more proactive approach, outlining in 2015 their vision for ‘a principled pedagogical path’ for their work as university-based educators on the School Direct programme, drawing on Davis and Sumara’s concepts of using ‘enabling constraints’ to identify future actions (Jackson and Burch, 2016, 2019). Like others, Jackson and Burch have identified the potential role for universities in employment-based programme in supporting mentor (or teacher educator) learning (2018). The Oxford Education Deanery has similarly ‘reimagined’ ways to collaborate

with schools, strengthening existing partnerships (Fancourt, Edwards and Menter, 2015; Mutton *et al*., 2018)

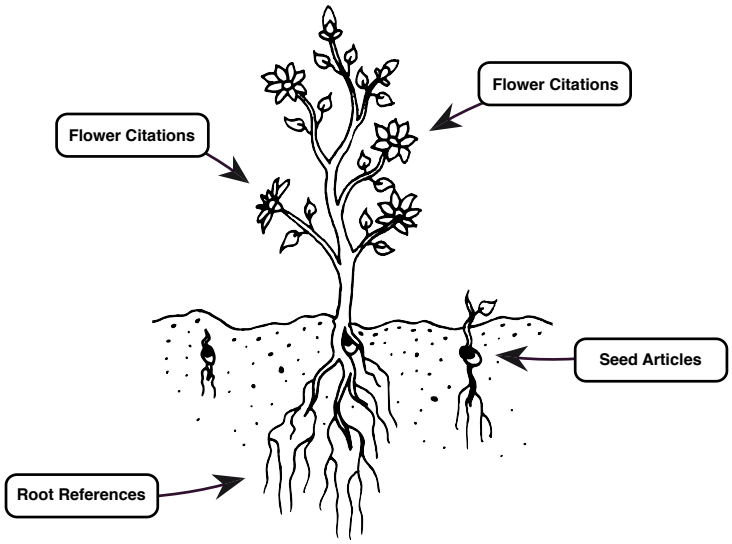
Like teacher education research in the USA, research studies on Teach First and School Direct Salaried routes can too often be delineated into those who seek to 'defend, reform or transform'(Kretchmar and Zeichner, 2016) the ITE and broader education system. In reviewing the literature, I have sought to challenge some of the dominant narratives by asking 'How new? How school-led? How disruptive? How international?' In doing so, I hope to draw attention to the importance of a more nuanced account and of examining the specific experience of beginning teachers on these specific routes, nested in particular places and time.

2.2 Teacher as professional learner: Situating OLEF in the field of socio-cultural understandings of learning teaching

Within the context of employment-based initial teacher education, the research focuses primarily on the framework of orientations to learning from experience (OLEF) first introduced by Hagger et al. in 2008 and developed further in 2010. By taking these papers as the 'seed' articles (Lecy and Beatty, 2012) and identifying their references and the articles which subsequently cite them[6], I have situated the work within a broader field. By exploring the second level of references used in the citations, the seed articles can be seen to be nurtured by a rich, albeit recent, bed of research exploring beginning teacher learning and work-placed learning which draw on the socio-cultural tradition. As such, the work of the DEBT team can be seen as part of a movement in the last fifteen years to take a Vygotskian perspective and to draw on socio-cultural and cultural-historical theories which recognise the social, relational and context-specific aspects of beginning teacher learning (Ellis et al. 2010; Oers et al. 2008)

[6] I have colour-coded the references to show whether they are **references** used by the seed papers or **citations** of the seed papers. Please note this does not include literature referenced in the forthcoming/ unpublished papers. Articles identified as being part of the 'DEBT' series of papers (i.e. papers written by the authors) have not been included. The initial citation search (2015) was done using Web of Science. Google Scholar identified a further four citations which were published. A second level of search identified the **references of the citations.** In May 2019 I updated the citations analysis using google scholar, including identifying where OLEF dimensions were used in citations.

Figure 5: An illustration of the literature review process



Whilst the DEBT research team did not explicitly set out to explore beginning teacher learning following this tradition, analysis of the references they draw on to inform the construction and explanation of the framework suggests that it is embedded within it. In particular, three of the framework's dimensions – Attitude to Context (AtC); Response to Feeedback (RtF) and Frame of Reference (FoR) (Figure 1) – recognise that learning is not a purely internal, cognitive process within an individual learner, but, following socio-cultural theory, is seen to occur within and in relation to a community of learners in a complex relationship with the context (Kelly, 2006). Unlike research which focuses specifically on the site and setting, OLEF brings attention to the beginning teacher herself: her attitudes, orientations and responses. In this section I identify some of the key concepts and tools on which the DEBT authors draw.

2.2.1 Learning and professional knowledge: textured professional judgement

A core theme of research around teacher learning is the value the participants report in learning that is practical and based on experience in classrooms and schools (Hobson 2003; Hobson et al. 2009). Far too much research energy has been spent on polarising the university and school contributions to teacher education and this remains tempting in the current policy context. Cairns and Malloch, for example, highlight the unhelpful 'binaries that bind' between work and learning, theory and practice (2013). The BERA-RSA Inquiry similarly 'demands an end to the false dichotomy' of school and university approaches (BERA-RSA, 2014, p. 2). Whilst the DEBT research was based

in ITE programmes which more successfully integrated university and school-based learning, the value of school-based 'experience' for learning is similarly highlighted.

By exploring employment-based ITE routes, I have investigated the nature of 'experience' based learning and knowledge. In particular, analysis of the 'Frame of Reference' dimension of OLEF contributes to the literature exploring the different contributions of, and the relationship between, the university and school components of the programme. These are analysed to consider which sources teachers draw on to inform their developing professional knowledge. Whilst teachers report that 'experience' helps them learn, we are less clear about how teachers are able to draw on other sources such as the experience of their colleagues or broader reading, for example, to inform their thinking (or reflection) 'in action' and 'on action' (Schön, 1984). Research on various English ITE routes, and that focussed specifically on the early Teach First programme, has found that teachers who have *more* experience in the classroom valued the contribution of 'theory' more (Malderez *et al*., 2005; Hutchings *et al*., 2006).

The knowledge of teachers has been conceptualised in a myriad of ways, all of which seek to recognise its practical nature and context. The DEBT research draws on definitions of professional knowledge used by Eraut (1994) which bring together 'codified knowledge' and experience (pp. 19-20 cited by Hagger et al. 2008, p.166) and on Buchmann's (1984) idea of professional knowledge as knowledge for action. Like Furlong and Maynard's idea of 'practical professional knowledge' (1995), this brings together the ideas of 'practical knowledge' (Elbaz, 1983) or 'craft knowledge' (Brown and McIntyre, 1993), the personal, situated or 'tacit' understandings of a teacher, with more formally recognised and easily communicated or codified forms of knowledge.

In a recent philosophical (rather than empirical) survey of the forms of teachers' professional knowledge, Winch et al. argue that they should not be seen in terms of competing models, but rather that

> *a textured notion of* ***professional judgment*** *encompasses a complementary and mutually enriching relationship*

between situated understanding, technical knowledge and critical reflection (2013, pp.1–2 emphasis in original).

Winch et al.'s appeal to 'professional judgment' can be seen in the context of a paper, commissioned as part of the BERA/ RSA inquiry, which seeks to defend the need for

evidence-informed and research-active teachers, as opposed to the authors' perceived views of the current government's drive towards a workforce of 'technicist' teachers. The description of knowledge as 'judgement' furthermore echoes the ongoing conversation about the 'new professionalism' of teachers (Reeves and Fox, 2008). In Chapter 3 the role of judgement and professional decision making is returned to in the consideration of Intentionality (3.1).

The nature of teacher knowledge has implications for the researcher trying to understand it, because if we accept that it is in part tacit and situated, efforts need to be made to access it more creatively than through questionnaires or one-off interviews. Ethnographers argue that people act 'without reflecting on it and without an active awareness that it is actually something they *do*' (Bloomaert & Jie, 2010: 3). Long-term or embedded observation therefore offers the researcher an opportunity to identify and describe processes that the participants themselves might not be able to articulate. Furthermore active sense-making, for example, through participant action research or double-stimulation research (Engeström, 2007; Ellis, 2008), can support participants to begin to articulate or create language to describe their understandings.

2.2.2 Learning to *be* a teacher through participation and interaction

Learning within this paradigm is often conceptualised, following Wenger, as an active process which occurs through increasing participation in activities within 'communities of practice' (Wenger, 1998). The Vygotskian concept of learning occurring through peripheral participation has been widely promoted by Wenger, working alongside the anthropologist Jean Lave (1991). For Wenger, learning was as much about 'becoming' and 'being' as 'doing' and 'experiencing'. These ideas have flourished in the literature related to work-place learning in contexts other than teaching, such as Eraut (2007) and Billet (2008; 2010; 2004; 2001). In terms of learning to teach, these ideas have been exploited in considering the participative nature of the school practicum, including the ideas of teacher learning as socialisation (Lacey, 1977; Caires and Almeida, 2005) or enculturation (Calderhead and Shorrock, 1997, p. 11; Putnam and Borko, 2002).

In the most recent handbook on Research on Teacher Education teacher learning has also been conceived *as* identity development (Vermunt *et al.*, 2017). In a previous edition Feiman-Nemser classified teacher learning as learning to 'feel like' 'know like' 'think like' and 'act like' a teacher, emphasising the relationship between learning and identity (Feiman-Nemser, 2008). In her review of empirical studies of beginning

teachers' identity, Izadinia claims that few studies explicitly report student teacher identity as a construct in itself, but focus on changes in six components, which she argues are interrelated components of beginning teacher identity. She concludes by defining beginning teacher identity as:

> *perception of their cognitive knowledge, sense of agency, self-awareness, voice, confidence and relationships with colleagues, pupils and parents, as shaped by their educational contexts, prior experiences and learning communities* (Izadinia, 2013, p. 708).

A key aspect of teacher identity is that it is not a fixed concept, but one under development, being shaped through their work. Any study involving beginning teachers needs to be particularly alert to the extent to which participants' professional identity is emergent, and that this is tied to their broader personal identity. Hobson, for example describes beginning teachers as 'vulnerable learners'(Hobson, 2016, p. 88).

Teacher identity is linked to a sense of teacher professionalism. The 'new professionalism' has been seen as something 'demanded' and 'prescribed' by governments since the 1980s with a 'lop-sided' focus on behavioural descriptions, rather than attitudes or intellectual knowledge (Evans, 2011). Some academics have seen this as a form of 'deprofessionalisation' as teachers' work is reduced to competency models (Beck, 2008, 2009; Hordern and Tatto, 2018). However, Evans calls attention to the way that professionalism is 'enacted' arguing that practitioners 'mediate demanded or required professionalism with their own agentic modification of it and within differing contexts' (ibid. p. 862), reminding us that teachers are not passive.

The mediation to which Evans refers is a form of interaction between the learner and their social situation. In socio-cultural models learning occurs through interaction between the learner and the new information, whether this is presented through informal conversation with colleagues, through the experience of a new event which challenges existing understandings or through more formal learning opportunities (Feiman-Nemser, 2008). Bloomer & Hodkinson (2000: 589[7]) explain that:

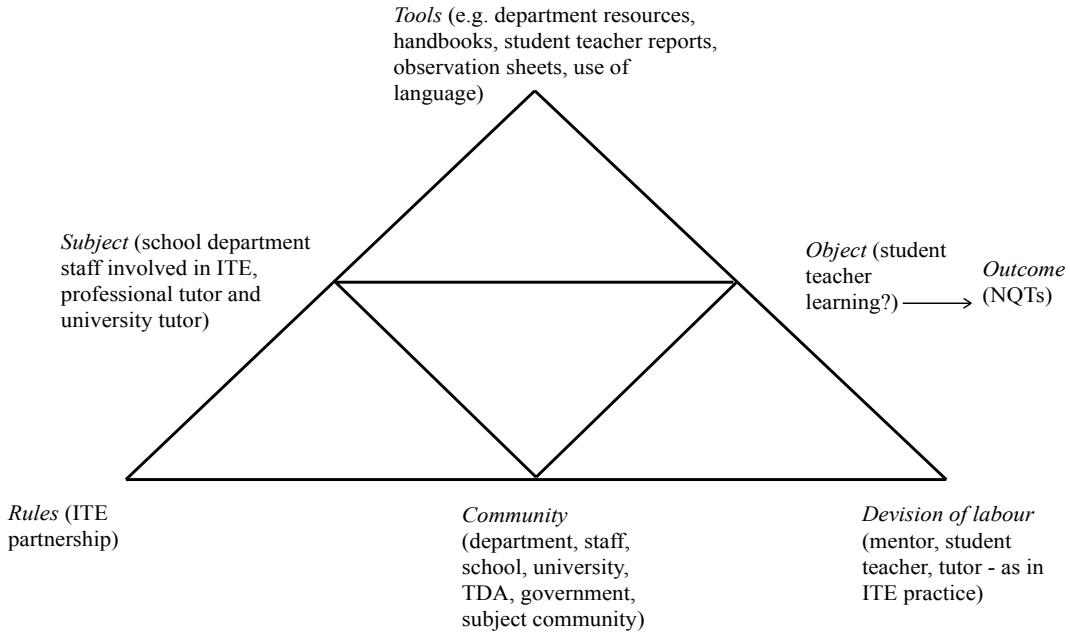
> *individuals act according to the meanings which they attribute to their experiences; that meanings are generated through processes of social interaction; and that they are continually reinterpreted and modified as the result of further social interaction. It is through processes of social interaction*

[7] Referenced in an unpublished article by the DEBT authors: Mutton, Burn, Hagger (n.d.)

> *that actions are constructed 'by actors out of what they take into account' (Blumer, 1969, p. 74) and through which learning takes place.*

The concept of interaction has been employed by the second wave of activity theory (Engeström, 2009), which takes the *tools* which *mediate* the *Subject's* interaction with the *Object* as the unit of analysis. In applying this to student teachers' learning in secondary school subject departments Douglas (2012: 288) presents the following model:

Figure 6 A subject department activity system (Douglas 2012: 288)



It should be noted that the relationship within interactions is not one-way, but has been identified as being *interdependent* (Billet, 2001, 2008); *reciprocal* with each *co-constructing* the other (Billet, Barker and Bernie, 2004) and *negotiated* (Billet, 2008). These important ideas will be discussed further below.

2.2.3 Learning is complex, situated and contextualised

The research of Caires and Almeida is cited by the DEBT authors as an example of work which highlights the:

> *complex, interactive, dynamic and idiosyncratic nature of the process of learning to teach [which] is largely influenced by the interplay between individual and contextual variables* (Caires and Almeida, 2005, p. 112).

Flores (2001) similarly explores the relationship between biographical factors and the contexts within which beginning teachers learn. Like Lortie (1975), Lacey (1977) and Smylie (1995) before her, Flores' longitudinal data from semi-structured questionnaires and interviews in a range of schools, shows the important role of teachers' own schooling experience: their 'apprenticeship of observation' (Lortie 1975). Flores argues that the specific setting – the quality and nature of leadership, workplace conditions and opportunities for professional development – 're-frame' and 'redefine' previous conceptions and identities.

The DEBT research draws on Calderhead and Shorrock's question: 'How do particular student teachers learn X in context Y?' (1997, p. 193 cited in Hagger 2008, p 163), paying careful attention to the role of context in teacher learning (particularly in Mutton 2010). Drawing on Lave and Wenger (1991), learning is seen to be *situated* in a particular context which not only defines the place and nature of the learning activity, but also acts to promote and constrain particular learning opportunities.

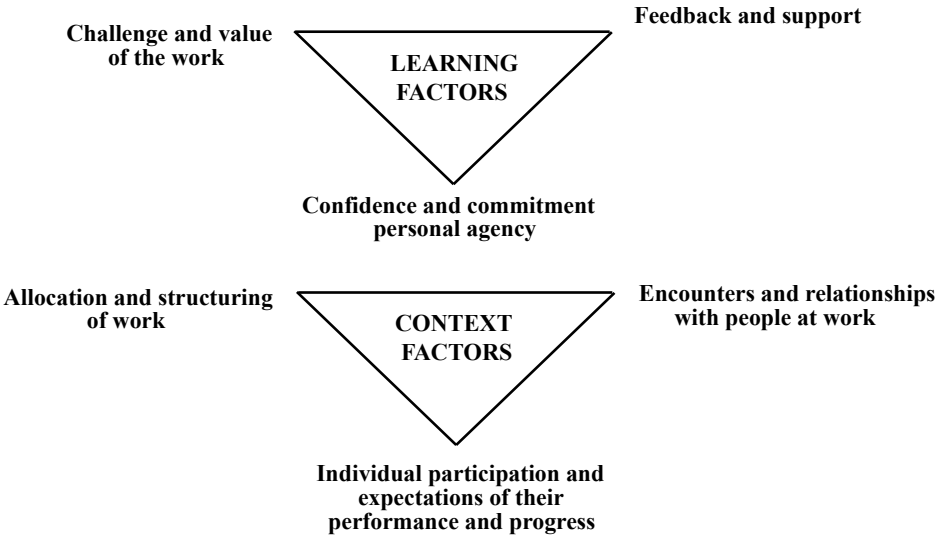
Theories of situated learning dispute the idea of decontextualized practice and rather than taking a formalist view that context is like a bowl containing soup (McDermott 1993 cited in Lave 1993), they instead 'insist that persons acting and the social world cannot be separated' (Lave, 1993, p. 5). Following Lave, instead of asking,

> *what is the constitutive relationship between persons acting and the contexts with which they act? The question becomes, what are the relationships between local practices that contextualize the ways people act together, both in and across contexts?* (Lave, 1993, p. 22)

Eraut et al. (2004), for example, identified three context factors (the allocation and structuring of work; individual participation and expectations of their performance and progress, encounters and relationships with people at work) which influence three learning factors (challenge and value of the work; feedback and support; confidence and commitment). See Figure 7 below.

Although the DEBT works do not use the triangular models of Eraut and his colleagues (2004), this body of work(Eraut, 2000), alongside others cited above, highlights the complex interplay between factors and illustrates them through individual case-studies which allow cross-case analysis.

Figure 7 Learning and Context factors Eraut et al. 2004



2.2.4 Learning can be afforded or constrained and is subjective and negotiated

Scholars' approach to the relationship between teachers and their context varies from one in which teachers are largely subject to the constraints of the learning environment, to a recognition that teachers actively construct and participate in this interrelationship in more complex ways. Traditionally, work-place learning was seen to be an inevitable process determined only by the '*affordances*' (Gibson, 1979 cited in Burn, Childs and McNicholl, 2008) for learning of the particular context. This has led to a range of descriptive and explanatory models of which I will describe two. Valsiner (1994) for example, extended Vygotsky's model of the *zone of proximal development* to include zones for *promoted* and *permitted activities,* which Goos has developed further in her research on Maths teachers (Goos, 2014). Secondly, drawing on Engeström's work (2001) and on Fuller and Unwin's model for apprentices (2003), Hodkinson & Hodkinson (2005) present a continuum of *expansive-restrictive* learning environments for teachers in their exploration of how to improve teacher learning in the workplace.

In both of these models the opportunities that teachers have to learn are shaped by the types of allowed, promoted or available activities within a particular context. Similarly, use of these models prompts researchers to call for variety, choice and collaboration for

teacher learning. The implications are that the teacher plays an active part in identifying, creating and participating in these opportunities. In the words of Edwards:

> *Vygotsky's learners are therefore not merely passive recipients of culturally valued concepts, but are actors in and on their cultures, being both shaped by and shaping the social situations of their development* (2010a, p. 64).

Hodkinson & Hodkinson (2003), for example, argue that learning opportunities are not necessarily 'objective', but can be *'subjective'*, depending on the learners' perceptions of the conditions in which they work and learn. Eraut's model of work-place learning highlights the importance of personal choice and *agency* as factors affecting learning, although these are not represented in the triangles (Eraut 2007: 418).

The OLEF continuums recognise the extent to which teachers perceive the opportunities available to them through the concept of 'AtC'. Furthermore the degree of 'Intentionality' provides a way to analyse the extent to which the beginning teachers are able to plan and *enact* (Kennedy 1999 cited in Bronkhorst *et al*., 2011) their learning. In unpublished analysis, Mutton and his colleagues show the interplay between perceptions of context and degrees of Intentionality (Mutton, Burn and Hagger, n.d.).

Similarly, Bloomer and Hodkinson (2000) argue that the nature of the interaction is determined by the disposition or orientation to practice: the extent to which the learner can link action and meaning through participation. Meaning, in this argument, rests on the perceived, subjective worthwhileness of the activity. Billet (2001), drawing on Valsiner (1994) similarly highlights the importance of the individual beliefs, value and norms (*subjectivities)* being viewed to have *relatedness* to the learning interaction. His presentation of the interdependence between activity and individual learner shifts from one which is seen to be *reciprocal* and *co-constructed* (2004) to one which is *negotiated (2008)*, based on his argument that the relationship between individuals and their workplace (context of learning) is not evenly distributed or symmetric, but relational. Put simply, individuals will make their own sense and create their own opportunities or constraints, in relation to those around them.

Following Bourdieu, Billet (2004) also recognises, like Bloomer and Hodkinson (2000) the extent to which *position* acts to determine the nature of the interaction. Cultural-historical models make the power structures particularly explicit. For example, Van Huizen and his colleagues (2005) propose a nested structure from the macro, or policy, level, through the meso – school or establishment – level to a micro-level of individuals developing personal meanings through social participation. Tatto and colleagues,

including Burn, used the same macro- meso- micro- level framing to examine the alignment or contradictions across and within these levels in the learning of beginning teachers in both England and the USA, demonstrating the multi-level social situation of development (Tatto *et al*., 2018) .

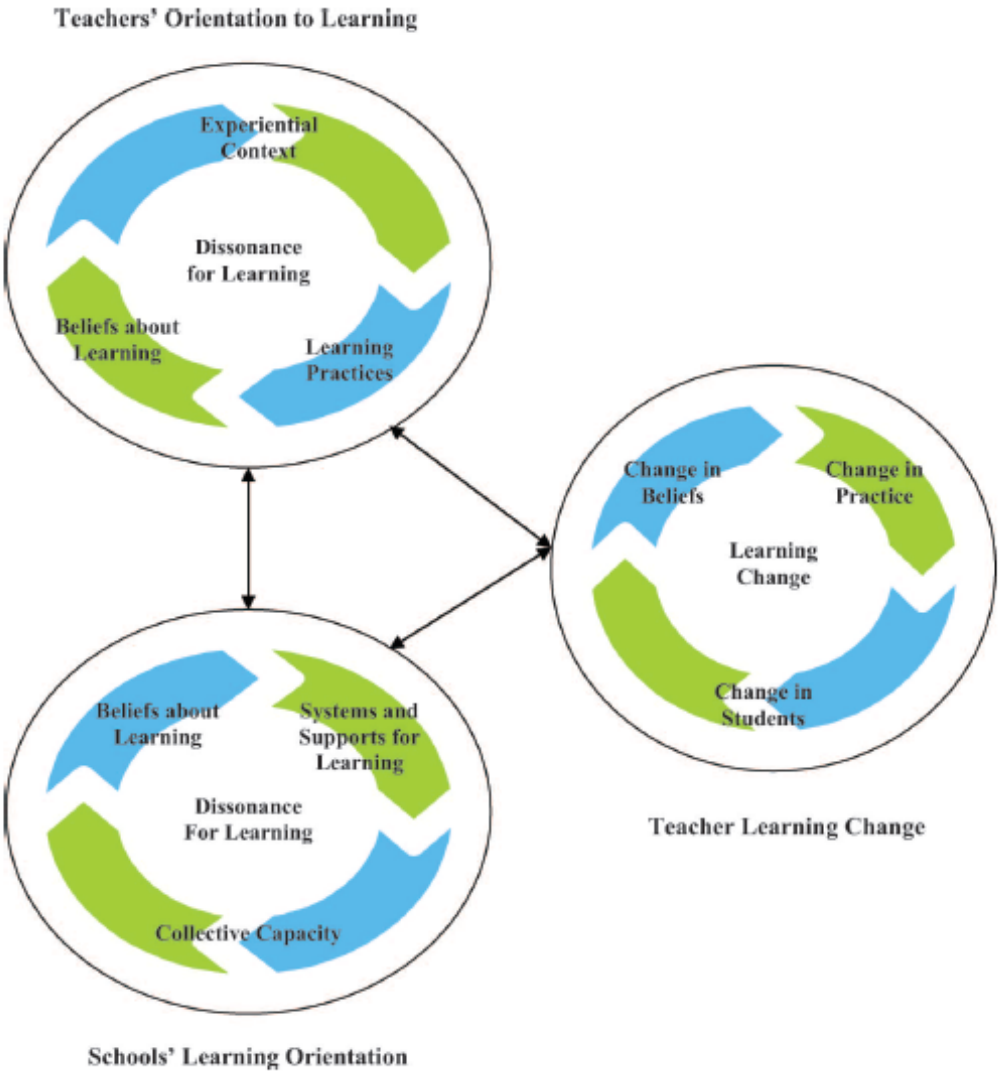
The roles of positioning, power and agency will be important to consider in any research in which training teachers are asked to open up their practices. This will be especially important when we consider the performative element of work-based learning in which the training teacher is both learning and performing a role (Edwards, 1998; Wilson, 2005).

2.2.5 Idiosyncratic learning trajectories

The findings of the DEBT research forcefully reject those stage models of learning which have presented learning teaching in terms of linear development (such as Furlong and Maynard 1995), or those models of concerns radiating out from a focus on the beginning teacher towards their learners (Burn *et al*., 2000, 2003). Instead the DEBT research recognised that learning is idiosyncratic (Hagger *et al*., 2008; Mutton, Burn and Hagger, 2010). The attention to individual learning patterns is enabled by a view of learning as identity construction in particular times and places, a perspective supported by socio-cultural approaches, which often take a qualitative small-scale approach.

Learning patterns and orientations have also been considered in larger scale quantitative designs. For example, Pedder who worked on the original DEBT project explicitly refers to 'orientations to learning', conceived as a vital aspect of teacher learning in his analysis, with Opfer, of large data sets in England using structural equation modelling (Opfer and Pedder, 2011). The authors present three nested and interacting sub-systems: the teacher, the school and the learning activity system. This model is included in the review of five models which 'have been, or are potentially, powerful in supporting the research, evaluation and design of professional learning' (Boylan *et al*., 2018, p. 121). Whilst Boylan and colleagues suggest they do not offer a diagrammatic relationship, visual illustrations are in fact published in related papers, as, for example, in Figure 8 below (Pedder *et al*., 2010; Opfer, Pedder and Lavicza, 2011).

Figure 8: A dynamic model of teacher learning (Pedder et al. 2010 p. 390)



Learning patterns have also been considered by educational psychologists in cross-sectional, repeated measures or longitudinal quantitative approaches (Vermunt *et al.*, 2017). In Chapter 3.1 below I show that by following patterns in co-authorship, supervision and citation networks across the loose research group a range of very relevant concepts and constructs can be identified, including different aspects of regulation and deliberate practice. Two recent publications have brought these works together more coherently (Gijbels *et al.*, 2014; Vermunt and Donche, 2017). In addition, Endedijk's thesis provides a helpful survey of research on learning patterns specifically focussed on teacher education (2010).

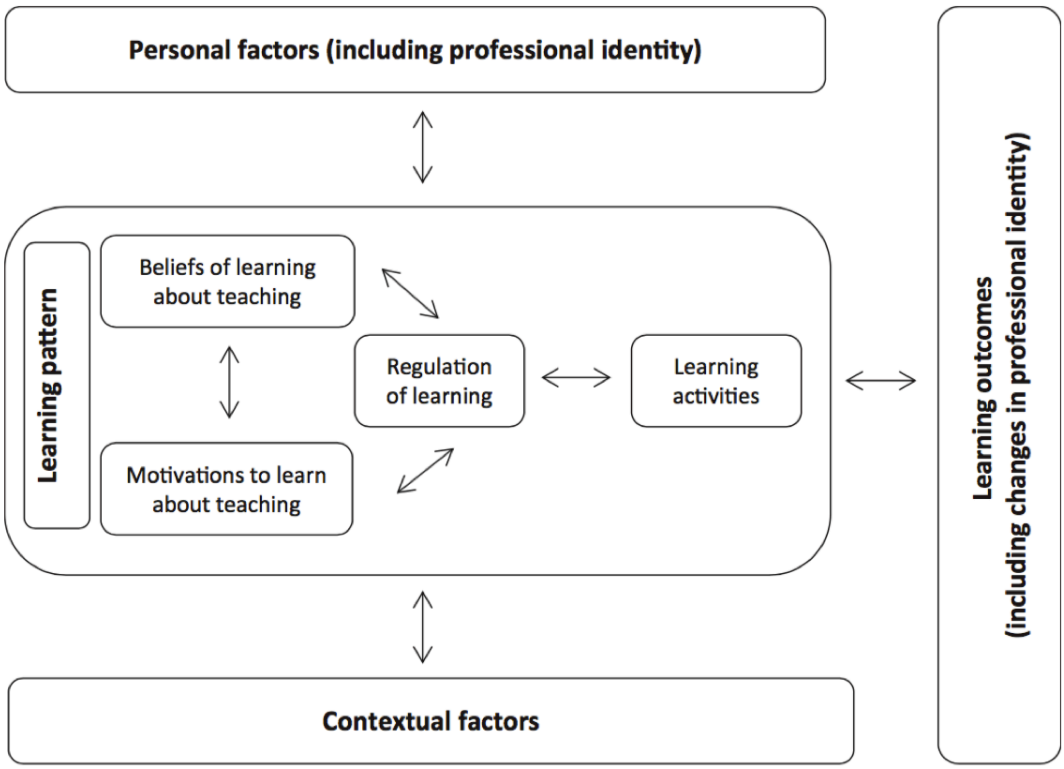
Vermunt and Donche recently provided a review article on learning patterns in higher education in which they state that

> *A learning pattern is conceptualized as a coherent whole of learning activities that learners usually employ, their beliefs about learning motivation, a whole that is characteristic of them in a certain period of time. It is a coordinating concept, in which the interrelationships between cognitive, affective, and regulative learning activities, beliefs about learning and learning motivations are united* (Vermunt and Donche, 2017, p. 270).

The visual model of the framework (Figure 9) shows how the conception of learning; learning motivation (sometimes referred to as orientation); regulation strategies and processing strategies interrelate with each other, and personal and contextual factors. All of these produce, and are seen to be a product of, the learning outcomes. The 'dynamic,' fluid nature of the relationships is stressed and the authors clearly assert that it should not be seen as a 'hard to change human trait, but as the result of the interplay between personal and contextual influences.' (Vermunt and Donche, 2017, p. 271).

Traditionally some aspects of this model have been conceptualised as being more stable, and others more subject to temporal and contextual shifts (Endedijk, 2010). Endedijk, for example suggests that 'learning orientations' which she defines as the 'combination of [student teachers'] general learning conceptions and preferences for certain learning and regulation activities' are more stable, whereas self-regulation is seen to be more dynamic (ibid., p. 21). However, the fluid nature of all aspects is increasingly understood. For example, Endedijk's study of 90 student teachers found no relationship between the general learning orientation and their regulation of learning (Chapter 4 Endedijk, 2010). As a result the task-specific, domain-specific and context-specific aspects of learning patterns warrant further exploration (Vermunt and Donche, 2017).

Figure 9: A Learning Patterns Model of Student Learning (Vermunt and Donche 2017 p. 272)



Like the DEBT authors, Oosterheert and Vermunt suggest that beginning teachers' approaches to learning may change, and moreover they were interested in the possibilities that ITE could support positive changes (Oosterheert and Vermunt, 2001; Hagger *et al*., 2008).

Subsequent research has explored these predictions with some interesting outcomes. A cross-sectional design which compared first-year ITE students with those in the third year of the course in Belgium, and a longitudinal design tracking change across the three year period, demonstrated that the amount of 'meaning-oriented' learning increased over time (Donche, Peter and Petegem, 2009). 'Meaning-oriented' learners seek new understanding as well as how to improve their practice (as performance), rather than aiming to 'reproduce' strongly pre-defined models of practice without changes in understanding. In the longitudinal study there were significant changes in the self-regulation strategies for all patterns of learning, particularly the reproductive orientation (ibid). A subsequent study found that students were more 'meaning oriented' by the end of their six week teaching placement, leading the authors to suggest introducing teaching opportunities earlier in the course as a lever for motioning

survival oriented students to change their orientation (Donche, Endedijk and Van Daal, 2015).

However, the authors did caution that these changes may not be permanent and that changes in other orientations (such as those of meaning-orientated learners) were not as clear. Similarly, Endedijk's longitudinal study across one academic year found no change over time in the learning patterns model overall. Only two aspects showed growth. In fact, teachers seemed to become more 'passive' during their ITE programme, with only one third becoming more 'meaning-oriented' (and 19% moving away from it) (Endedijk *et al*., 2014).

It is therefore far from clear if learning patterns do change through ITE in ways that support beginning teacher learning. There seem to be important differences depending on the initial learning patterns and also the particular ITE route taken. In one study, students who were also employed as teachers (employment-based route) did show increased growth, compared to those students who followed a university-based programme (Endedijk 2010). However, Endedijk notes that there were other contextual and personal differences that may have influenced these results.

Overall whilst these larger scale studies provide helpful conceptual patterns, the small-scale longitudinal research project of this thesis provided opportunities to investigate the role of individual biographical factors in teacher learning more fully. Like the 'elegant example' of interpretive research cited in Borko et al.'s review, this enables cross-case analyses to identify

> *patterns and trends along with individual variation; more importantly, …contextual factors that help[ed] [to] explain both patterns and variation (Borko, Whitcomb and Burnes, 2009, p. 1027).*

Opfer and her colleagues identify that the role of context and experiences, specific to time, cannot be explored using their cross-sectional data. Similarly, in a recent review of educational psychology Alexander claims that whilst

> *there are discernible, non-random patterns in the ways individuals and groups strategically engage in learning…*
>
> *learning is ultimately a complex multifaceted and dynamic process that cannot be fully represented by any one theoretical framework, set of beliefs, or clusters of processes* (Alexander, 2018).

This encourages an examination which draws on a range of theoretical frameworks, bringing together research from diverse traditions to support the examination of learning teaching.

2.3 The role of the mentor in learning teaching

The mentor is widely considered to play an important, if not the most important role, in beginning teacher learning through practical experience (Hobson et al., 2009). The role has been considered using various terms, including 'cooperating teacher' (Clarke, Triggs and Nielsen, 2014; Hoffman *et al*., 2015) and 'teacher educator'(Feiman-Nemser, 2001). Each of these terms reflects particular historical and policy contexts and expectations around their role. The term 'mentor' used throughout this study, has its origin in Homer's Odyssey where Mentor 'was a wise and faithful advisor' to Telemachus (Ragins and Kram, 2007, p. 3), but I will go on to explain that it has a much broader role than only advising.

The role of the 'mentor' in providing support, supervision and guidance has been aligned with 'traditional' models of mentoring, in contrast to more 'transitional' and 'transformative' paradigms of mentoring (Garza *et al*., 2019). The 'transitional' mentoring paradigm focusses far more on facilitating learning through a collaborative relationship focussed on reflection. The 'transformative' paradigm positions the relationship between beginning teacher and more experienced teacher as co-learners focussed on enquiring together (ibid.). These paradigms can be seen to align respectively with the English government-sponsored national framework definitions of mentoring, coaching and co-coaching widely shared in the English context (CUREE, 2005). Here the coach 'enables professional learners to take control of their own learning through non-judgemental questioning and support' (ibid.).

Educative mentoring, a term developed from the work of Feiman-Nemser and Cochran-Smith and Lytle (Langdon, 2017), combines aspects of the 'transitional' and 'transformative' paradigms. Garza and colleagues present it within the transformative paradigm, as being like the co-coaching model, since it describes a collaborative inquiry approach to building knowledge of practice (Garza *et al*., 2019). However, Feiman- Nemser's early descriptions of educative mentoring reinforce some traditional dynamics:

> *Mentors who share this orientation attend to beginning teachers' present concerns, questions and purposes without losing sight of the long-term goals*

> *for teacher development. They interact with novices in ways that foster an inquiring stance. They cultivate skills and habits that enable novices to learn in and from their practice. They use their knowledge and expertise to assess the directions novices are heading and to create opportunities and conditions that support meaningful teacher learning in the service of student learning* (Feiman-Nemser, 2001, p. 17).

In this description there is a clear sense of the mentor being in a position of power and drawing on their experience, to actively shape the beginning teacher's experience, making judgements - assessments - to inform their decisions.

Mentors take an active pedagogical role in supporting the learning of beginning teachers. A study using 700 beginning teacher self-reports in Germany claims most beginning teachers experienced a 'constructivist-oriented' model, as opposed to 'transmissive' model of mentoring during their teaching practice and that this led to higher levels of 'efficacy, teaching enthusiasm, job satisfaction and lower levels of emotional exhaustion'(Richter *et al*., 2013, p. 174). An examination of mentoring conversations in the Netherlands found that the knowledge inferred from experience by beginning teachers themselves was low, with mentors eliciting 70% of the knowledge in the conversation (Mena, Hennissen and Loughran, 2017, p. 56).

Therefore the *Educative Mentoring* model has implications for the mentors who are required to be 'skilled facilitators and expert teacher educators, rather than simply experienced teachers' (Langdon and Ward, 2014, p. 243; Stanulis. Randi *et al*., 2018). The term 'teacher educator' could refer simply to their role in supporting teacher learning. However, when used to refer to a school-based teacher, the term 'teacher educator' can disrupt traditional conceptions of the nature of knowledge, learning and power dynamics, raising the status and skills of the school-based teacher educator and placing them on a par with those of the university-based tutor. Jackson and Burch, for example, draw on hybridisation and third-space theory to consider the potential role for a 'new breed' of school-based teacher educator, who are able to 'boundary-cross' and whose

> *expertise means that every moment is potentially a teachable moment out of which relevant theories can be drawn, as and when they are relevant…[requires an] ability to articulate practice from a range of perspectives*. (Jackson and Burch, 2016, pp. 516–7).

This focus on a range of perspectives reminds us of the discontinuities between the spaces of school and university. McIntyre (1995) for example, argued that whilst the

people may be the same across schools and universities, they hold different 'roles' and value different criteria when making judgements.

Overall, it is clear that there is huge variation in the ways the mentoring role is conceived and enacted, as reflected in the 11 different ways mentors can participate in teacher education identified by Clarke, Triggs and Nielson in their review (Clarke, Triggs and Nielsen, 2014). The ways in which they participate occur in a variety of activities including informal interactions as well as more formal aspects including observation, feedback and mentoring meetings (Jones, Tones and Foulkes, 2019). Mentoring conversations are seen to be a very important part of this, within which their pedagogical approaches are visible to the researcher.

2.3.1 Mentoring conversations

This research study focusses specifically on the role of the mentor within mentoring conversations with beginning teachers. As formal weekly timetabled events, these conversations are the central activity of mentoring and have been the subject of some empirical study. Hoffman and colleagues' 2015 review, which is the most recent I found, focuses specifically on the 'coaching interactions' between mentors and beginning teachers. Subsequent empirical studies not included in this review but considered here include Hudson, 2014; Donaghue, 2015; Soslau, 2015; Dobrowolska and Balslev, 2017; Mena, Hennissen and Loughran, 2017; Sheridan and Young, 2017; Beek, El Zuiker and Zwart, 2019a; Jones, Tones and Foulkes, 2019; Roberts, 2019. In this section I summarise the literature related to the nature of the mentoring conversation, presenting an argument that these conversations have the potential to reveal data relevant to the OLEF framework, and offer the opportunity for transformative learning for the beginning teacher.

By considering the questions used in the original research schedule below (Figure 10, from Burn, Hagger, Mutton, & Everton, 2003) we can see that many such questions would be just as appropriate to a review of an observed lesson focused on the learning of the beginning teacher, as they were to the original research interviews. There are marked similarities, for example between this interview schedule and the protocol Soslau developed for her post-observation conversations following five years of self-study, drawing on models of adaptive teaching expertise and Korthagen's model of core reflection (2015). The questions highlighted on Figure 10 (2 a, b, 4, 6 and 7), offer familiar opportunities for the teacher to evaluate the lesson before identifying possible

improvements and encouraging more generalised learning (or 'practical theorising' (Hagger and McIntyre, 2006)). In this way they follow the 'deconstruct' and 'construct' pattern of beginning-teacher —mentor conversations described by Harrison (2004) in her analysis of 18 mentor-teacher conversations.

Figure 10:Interview Schedule, Following Observed Teaching on each Occasion (Burn, Hagger, Mutton, & Everton, 2003)

1. If you could just start by identifying what you see as the different phases of the lesson.

2. The following questions are asked in relation to each phase identified by the student teacher: Taking the (first) phase, which you said was…, could you just describe what happened in that phase?

   a) Were you pleased with the way it went? (probe: What were you pleased/displeased with? Why?)

   b) Did it work out the way you had expected? (probe: Why do you think that was?)

3. Tell me about the thinking behind the planning of the whole lesson. (probe: Why did you plan it like that? Where did you get the ideas from?)

4. If you were doing the lesson again, is there anything you would change?

5. Is there anything else you'd like to say about this particular lesson, your planning of it, or your thinking about it that I haven't given you a chance to say?

6. Are there any issues about your teaching more generally that are raised by this lesson?

7. Do you think you have learned anything new about teaching from that lesson?

Other questions invite the teacher to reconstruct the lesson or to explain the thinking and decision-making at the planning and teaching stages, enabling the research team to make sense of their emergent understandings about learning and planning and support adaptive expertise (Soslau, 2012). The insight offered by these questions would also be

helpful to a mentor who can use this diagnostically to identify how they might move the teacher's learning on (Beek, El Zuiker and Zwart, 2019). These questions can therefore be seen as powerful ways to engage the teacher in the types of evaluative, and self-regulatory thinking advocated by the reflective practitioner model of teacher learning, in line with the claims of the majority of ITE courses (Furlong *et al.*, 2000). Furthermore, in the next chapter I will argue that this form of evaluative regulation also aligns with models of teacher learning which emphasise the importance of Intentionality (see 3.1).

One of the greatest challenges to the potential of mentoring conversations to act as transformative learning opportunities is that, whilst ITE courses and mentors may espouse powerful models and processes of learning, the limited empirical evidence available about what mentors actually do suggests otherwise (Orland-Barak and Klein, 2005; Donaghue, 2015). Hobson and colleagues' review notes that much of the scholarship around mentoring is based on mentors' accounts of their own practice (2009). In empirical studies of mentoring conversations concerns have been raised that many mentors tend to dominate the conversations by sharing their own experience and insights; directing the conversations and acting as an 'imperator.' (Crasborn *et al.*, 2011). Crasbourn, Hennisson and colleagues draw on a review of research which identified five aspects of mentoring dialogues:

1. the content and topics discussed;
2. style of the mentoring (or supervision as termed by the authors);
3. the degree of input – who introduces topics and the extent of participation;
4. time spent discussing and the relative speaking time of the beginning teacher and mentor;
5. Phases of the dialogue which considered the structure of the conversation (Hennissen *et al.*, 2008).

Three of these aspects were then incorporated into the 'MEntor Roles in Dialogue' (MERID) model, which has two dimensions comprised of a horizontal axis representing the directedness of the mentor, and a vertical axis representing the degree of input from the mentor. The four quadrants created present four mentor teacher roles: imperator, initiator, advisor and encourager (ibid.). Researchers in 2019 have combined this 'macro' model with another 'micro' model of feedback to explore mentoring dialogues (Beek, El Zuiker and Zwart, 2019). All of the research using these models has tended to find high levels of directedness and input from the mentors (Crasborn *et al.*, 2011; Mena, Hennissen and Loughran, 2017; Beek, El Zuiker and Zwart, 2019).

Hobson and Malderez go as far as to describe this as 'judgementoring,' whereby a mentor is quick to share their own judgements, arguing that it is a threat to school-based teacher learning (2013). Roberts' recent thesis, based on research in an English university-school partnership, demonstrates how evaluative language reproduces positions of power in the mentoring relationship (2019).

Hoffman's 2015 review of mentoring conversations included two findings relevant here. Finding 3 asserted that debriefing conferences focussed more on planning or the instructional actions, rather than on 'reflective' mentoring conversations. Finding 4 stated that cooperating teachers used more speaking time and initiated more topics to discuss than their preservice teachers (Hoffman *et al*., 2015). Although the data reviewed in Hoffman et al. is based on direct observation (or recordings) of mentor-teacher conversations, only four are based in the UK (Haggarty, 1995; Dunne and Bennett, 1997; Edwards and Ogden, 1998; Douglas, 2011). Of these, three studies were published in 1995-1998, at the early stage of school-based mentoring. The one more recent UK study, Douglas 2011, was undertaken in one school setting. Whilst this ethnographic study is based on long-term immersion in the site, which enabled rich and contextualised detail, its findings may not be generalisable.

In another review of 400 contributions to the literature related to the role of the 'cooperating teacher', Clarke and his colleagues conclude that:

> *feedback [to beginning teachers] tends to be narrow, particularistic, and technical. Feedback that promotes deep and substantive reflection on practice by student teachers is rare* (Clarke, Triggs and Nielsen, 2014).

Like Hoffman, the evidence underpinning Clarke's et al.'s conclusions is refutable, given the very small-scale, indirect and outdated nature of many of the empirical studies cited. By taking the references made in the article (as an indicator of the wider literature they have considered), we can see that in only three of the studies had mentors' practice been observed directly or captured using audio or video recordings (Table 1). Furthermore, with three exceptions (Kahan *et al*., 1998; John, 2001; Chaliè *et al*., 2010), all of these data are based on studies which are at least 15 years old, at an early stage of the shift to practicum-centred learning (Conroy, Hulme and Menter, 2013). Indeed John's study focuses solely on the practice of one university-based tutor who is just about to retire (2001).

Table 1: References used by Clarke et al. to conclude that feedback is low-level and directive (2014)

Study	Number of mentors	Country of study	Method of studying mentor-teacher conversations
Haggarty 1998	5	UK	Recordings
Williams et al. 1998	8	UK	Recordings
Richardson et al. 1988	14	USA	Interview
Grimmet & Ratzlatti 1986	637	Canada	Questionnaire
John 2001	1 Uni. Tutor	UK	Recordings
Kagen 1988	N/A	N/A	Review of literature
Charlies 2004	7	France	Recordings
Kahan 2003	6	USA	Recordings of 'Think Aloud' responses to observing a lesson (not the mentoring conversation)

There is a sense too that many of the articles, coming from university-based researchers, are concerned about the shift in teacher education towards school-based teachers, and question the extent to which school mentors can have the same critical role as university tutors (For example see Dunne and Bennett, 1997).

Whilst some researchers might consider beginning teacher-mentor conversations to be 'naturally occurring' this research recognises that these conversations are performative, with mentors actively shaping the conversation in order to support beginning teacher learning (Coffey *et al*., 1996; Drewery, 2005). By introducing the OLEF framework and involving participants in exploring their conversation using this analytic tool, the research creates a further purpose for the conversation, because it is likely that participants will be mindful of OLEF in their conversations as the research progresses.

Other researchers who have engaged in more participatory ways with school mentors have found that mentors can lead conversations that go beyond short-term practical concerns and foster learning (Hawkey, 1998; Harrison, Lawson and Wortley, 2005; Stanulis. Randi et al., 2018). Hoffman's review (citing two articles) claims that bringing mentors together to discuss their practice 'has positive results on their professional development' (2015, p. 106 Finding 6). My own MSc research with three mentors found support for this by capturing conversations where mentors actively

Table 2: Mentor Interactions based on Hawkey (1998), Williams (1998), Blair (2013) and Hennison et al. (2008)

Mentor Interactions				**MERID**
Hawkey 1998	**Williams (1998)**	**Blair (2013)**	**Example**	**Hennissen et al. (2008)**
Elicits	Elicits Information	Elicits Information	What were the learning objectives?	**Non-directive:** Initiator and Encourager
		Reconstruction (of the lesson)	What happened with the PEE bit?	
	Elicits judgement		How did it go?	
	Elicits reflection	Alternative practice- what if?	What could you have said...?	
		Next-steps (in practice)	So if I came back in a couple of week's time, what might that look like? What would I see?	
		Why (did it work or not?)	Why did she...?	
		Transfer (to another lesson)	How could you carry that over to other lessons?	
Directs	Directs the discussion agenda		N/A	**Directive:** Imperator or Advisor
	Directs future action with reference to pupils' learning		N/A	
	Directs further action with reference to students' learning	Directs future action- next steps	What I think the next step for you would be...	
Informs	Provides information		All of them should have been able to do that.	
		Reconstruction (of the lesson)	There were points when...	
		Pedagogy and practice	Proximity praise is...	
	Provides justification		It would be worth seeing sometime because...	
	Provides feedback/ evaluation		I haven't really talked about the strengths...	
		Praise and reinforcement	The other thing I really loved...because...	

	Provides reassurance	(or accepts)	Ok so that was a really good hook [paraphrasing teacher]	
	Provides access to own professional thinking/ expertise	modelling	Maybe "Sam I'm really looking forward to reading your work"	
		Suggestion (about practice)	One thing they could have done...	
		experience	Sestellita is sometimes...in my experience...	

resisted 'telling', informing or directing beginning teachers, instead seeking to elicit their own views, judgements and suggestions for future improvements using an analytical framework developed from work by Williams (1998) and Hawkey (1998) to categorise mentoring interactions (Blair, 2013). Table 2 (above) outlines the categories of mentoring interactions used, aligning them with the MERID roles described by Hennisson and colleagues (2008).

A review of mentor education for NQT mentors 'stresses' the importance that it is

> *research-informed, long-term and develops mentors' (self) understanding of teaching and mentoring. A mentor education that in different ways incorporates and pays attention to the different layers of contextual, theoretical-analytical and relational dimensions found* (Aspfors and Oran Fransson, 2015, p. 85).

The process of mentor development, like teacher learning, is not straightforward. Langdon's intensive and long-term work in a government supported programme of mentor development demonstrated the challenges in changing mentor behaviours. Whilst all of the mentors who engaged in the two-year, twenty hour programme of learning showed development, only five of the thirteen mentors' practice changed in ways that showed understanding and enactment (Langdon, 2014). This raises questions about the potential impact of shorter-term, or less involved learning opportunities.

By exploring the nature of the conversations, the research 'intervenes' in the process of learning. Whilst in other paradigms this could raise issues for researchers who consider they are capturing 'natural' data, an action research or interventionist approach blurs the 'action' investigated and the 'research' and takes a reflexive position in exploring the action of the research process itself. The OLEF framework acts as a Vygotskian 'double stimulus' (Engeström 2007; Ellis 2008). Phase 1 of the data collection period

offers an opportunity to examine the mentoring conversations carefully, in order to consider if OLEF can be a useful analytic tool and stimulus.

2.4 Chapter summary

This chapter has provided an overview of the research field, locating it within studies of English employment-based ITE, mentoring and beginning teacher learning. I have shown that there is little peer-reviewed research which considers the experiences of beginning teachers on School Direct Salaried and Teach First employment-based routes. Furthermore, conclusions made about mentoring conversations between beginning teachers and their mentors (on all routes) are too often based on self-reports of practice, with very few examples of recent English evidence based on analysis of the actual conversations. The two most recent reviews of mentoring conversations (Clarke et al. 2014; Hoffman 2015) draw on only one English study in the last ten years, which is based in one school context.

In Section 2.2 I have situated OLEF within socio-cultural conceptions of learning teaching. As such beginning teachers seek to develop *professional judgement* (Winch et al. 2013), recognising that their knowledge is for action and must be made in relation to highly specific situations. Learning to teach is seen as identity (re)development as conceptions of themselves are intimately tied to an emerging professional identity. Beginning teachers *negotiate* their learning *relationally* (Billet 2008) between the person and their social situation, its affordances and constraints. Each learner's 'pattern,' their motivations, regulation, emotions, cognition, attitudes and beliefs, will be idiosyncratic and contingent, varying over time and within each person - (i.e it is intrapsychological) – although broader generalisations can be discerned (Alexander 2018).

Chapter 3 The conceptual framework — the flowers of DEBT

Chapter 2 has shown how the seeds of the Developing Expertise of Experienced Teachers (DEBT) project can be situated in a blooming field of socio-cultural and cultural-historical studies which explore teacher and other professionals' work-place learning (Figure 5). The key ideas have contributed to green shoots, particularly by further exploring the role of Intentionality in learning through deliberate practice and self-regulated learning. (See Bronkhurst et al. 2011; Bronkhurst et al. 2013; Endedijk et al. 2012 for example).[8] The other OLEF dimensions remain less explored and therefore provide rich, untilled ground for the researcher.

The following chapter will unpack the five dimensions of OLEF further. Firstly, I outline the original definitions as presented by the DEBT authors, in relation to the literature in the broader field at the time. Next, I explore how the dimensions have been used subsequently by those researchers who have cited the DEBT studies, as well as considering other aligned concepts, constructs and tools which are relevant to this study. As previously, I have colour-coded references to show where they were used by the original seed articles or are subsequent publications which cite the seed articles. I have not colour-coded articles which are references of the citations from this point onwards, but have detailed these relationships where they seem relevant. The first two dimensions, Intentionality and Frame of Reference (FoR), are outlined in more detail than the remaining three. This reflects the relative attention to these dimensions in the subsequent findings and analysis.

3.1 Intentionality

The DEBT authors drew on Eraut's typology of informal learning in their construction of the Intentionality dimension (Eraut, 2000). Eraut's continuum moves from implicit learning, which is unplanned and where the knowledge is not explicit,

[8] A series of further citations have used the DEBT literature to inform work which evaluates how well ITE provision prepares teachers (Grundoff, 2011; Albasheer et al. 2008; Giannakaki et al 2011) including Anthony et al. (2011) which applies CHAT theories to show how the variety of 'objects' of teacher induction influences teacher induction outcomes. This research does not take an evaluative stance to ITE.

through reactive 'on the spot' learning, to deliberative non-formal learning (Figure 11).

Figure 11: Typology of Informal Learning (Eraut 2000 p. 116)

Table 1. A typology of informal learning

Time of focus	Implicit learning	Reactive learning	Deliberative learning
Past episode(s)	Implicit linkage of past memories with current experience	Brief near-spontaneous *reflection* on past episodes, events, incidents, experiences	*Discussion* and *review* of past actions, communications, events, experiences
Current experience	A selection from experience enters episodic memory	*Noting* facts, ideas, opinions, impressions; *asking* questions; *observing* effects of actions	*Engagement* in decision making, problem solving, planned informal learning
Future behaviour	Unconscious expectations	*Recognition of* possible future learning opportunities	*Planning* learning opportunities; *rehearsing* for future events

According to Eraut's definition, deliberative learning includes 'deliberate' learning

> *where there is a definite learning goal and time set aside for acquiring new knowledge, and engagement in deliberative activities such as planning and problem solving, for which there is a clear work-based goal with learning as probably a by-product*. (Eraut, 2004, p. 251).

This suggests that teachers learning to teach might engage in deliberative learning not only in formal learning opportunities – such as mentoring conversations or the professional learning programme – but also in the thoughtful activities of a teacher such as planning, assessment or evaluation of lessons.

The DEBT authors' definitions of deliberative intentionality focus on explicit learning, rather than learning as a 'by product.' They suggest the deliberative end of their Intentionality continuum is

> *represented by a* ***commitment to determining what needs to be learnt*** *as well as the means by which the* ***desired learning outcomes*** *could be brought about. This orientation is characterised by a* ***proactive approach to creating opportunities for learning*** (Hagger *et al*., 2008, p. 168 My emphasis.)

This description focuses on a determined approach to planned learning based on the 'teachers' consciousness of their own learning'(Burn, Mutton and Hagger, 2010, p. 645), rather than more tacit learning arising from deliberative activities.

It is important to note that Eraut's model does not privilege deliberative learning or cognition, recognising that this depends on the time available, the demands of the situation, the affordances of the context, the availability of evidence (or propositional knowledge), and the professionals' level of experience (or skill). However, he does warn of the risks of relying on intuitive, implicit learning without deliberation.

The focus, or target of the deliberate action warrants some consideration here. Research on work-place learning tends to claim that professionals focus on their work-related outcomes, rather than learning in itself (Eraut, 2004). In the case of beginning teachers they are more focussed on the achievement of the students they teach, than their own explicit learning (Endedjik *et al*., 2012). Similarly, Bronkhorst and colleagues claimed that beginning teachers 'do not make this distinction between their own learning and their pupils' learning, at least not explicitly' (Bronkhorst *et al*., 2013). The DEBT team's findings about the highest category of the student teachers' aims centred on the learning of the students, rather than their own learning (Burn *et al*., 2000).

This focus on the students' needs in the early stages of a beginning teachers' learning challenges traditional stage theory models of teacher learning, such as Fuller and Brown's (1975) model of teacher progression broadening from concerns of themselves as teachers, outwards to student learning (Burn *et al*., 2000). However, there remains evidence that some teachers, at particular points, do continue to focus on their own sense of self as a teacher, rather than the learners they teach (Cheng, Tang and Cheng, 2013).

Several of the concepts discussed by Eraut in his work around deliberative informal workplace learning are discussed (2004) in relation to research which is subsequently referenced in DEBT papers (Eraut, 2000). In particular the role of self-efficacy, personal agency and metacognitive monitoring in practice. The following five sections outline these three concepts in relation to the literature related to DEBT publications, and other work which has been published subsequently. Firstly, the literature focussed on self-efficacy in learning teaching is reviewed. Second, the concept of individual agency is considered and extended, presenting the case for a more relational view of agency. Third, the concept of metacognition is related to the broader area of self-regulation. In addition, two further concepts are introduced. In the fourth section I outline research which presents teaching as being a thoughtfully

adaptive profession, as presented by models of adaptive expertise. The fifth concept is deliberate practice, which I argue is sometimes seen as a logical requirement for intentional learning.

3.1.1 Self-efficacy

There is growing international evidence that a person's confidence, beliefs and expectations in their own ability to achieve a goal influence their behaviour in identifying and pursuing goals (Zimmerman, 2000). Bandura defined his concept of self-efficacy as the 'beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments.' (Bandura, 1977 p. 3 cited in Pfitzner-Eden, 2016). Bandura identified four sources of self-efficacy: mastery experiences (success or failure); vicarious experiences (including observation); verbal persuasion (such as positive feedback from a mentor) and physiological and affective states, all of which Pfitzner-Eden has aligned to the teaching experience opportunities for beginning teachers (ibid. see also Malmberg and Hagger, 2009). There is some evidence that self-efficacy increases during ITE (see for example (Marušić, Jugović and Lončarić, 2016)), although some studies have shown a dip or plateau in the first year of employment (equivalent to the NQT year) on non-employment-based programmes (Mintz, 2019). A recent thesis compared the self-reported self-efficacy on the School Direct Salaried programme with a PGCE route, finding little difference between them (Hyde, 2018). In relation to Teach First, the mean sample of teachers on the second year of the Teach First programme in 2008-9 (as NQTs) claimed higher self-efficacy scores than other international teachers at the same career stage (Muijs, Chapman and Armstrong, 2012).

Self-efficacy has been linked to a variety of outcomes for teachers including higher levels of retention, job satisfaction and seeking support where needed in studies of teachers in the Netherlands (Runhaar, Sanders and Yang, 2010), Norway (Skaalvik and Skaalvik, 2014), Sweden (Lindqvist, 2019) and Canada (Wang, Hall and Rahimi, 2015), and to openness to theory and enjoyment in teaching in a study of beginning teachers in Austria (Hascher and Hagenauer, 2016).

Although the DEBT authors do not refer to self-efficacy in the seed articles or broader publications, it is discussed in an unpublished article about Intentionality with reference to the work of Paris and Lung (2008)(Mutton, Burn and Hagger, n.d.). Paris

and Lung identify intentionality, self-regulation and self-efficacy as relevant elements of the literature around agency (which will be discussed in the section below). The concept of self-efficacy is also used by Eraut in his papers around early-career professional learning in England (Eraut, 2000). Eraut identifies three 'learning factors' which influence learning, which are depicted as a triangle (as discussed earlier in section 2.2.3 including Figure 7). Eraut suggests that two of the apexes: challenge and value of the work, and confidence and commitment, are close to Bandura's (1982) concept of self-efficacy (Eraut, 2004, p. 269).

Research by Day and colleagues on variations in teachers also considered self-efficacy, arguing that the first three years of a teacher's career were focused on developing a sense of efficacy in the classroom (Day *et al.*, 2006). Positive self-efficacy, and a sense of positive, stable identity were linked to their agency: 'their belief they could make a difference in the learning and achievement of the students they taught' (Day *et al.*, 2006, p. xii).

3.1.2 Professional Agency

In their review of literature exploring teacher identity, Beauchamp and Thomas claim agency is 'critical' to understanding identity (2009). The relationship between agency and identity has been seen to be reciprocal and mutually constituting (Buchanan, 2015). However, the concept of agency does not have a universal definition and has been operationalised in various ways in relation to teaching (Edwards, 2015). Like self-efficacy the term 'agency' is not explicitly used in the DEBT seed articles, but is part of discussions which are linked to these articles through references or citations (Billet, Barker and Bernie, 2004; Eraut, 2007; Paris and Lung, 2008)[9]

Following their review of literature on teacher agency, Paris and Lung argue that:

> *teachers who act with agency might demonstrate particular qualities. Among them are the ability to see possibilities, as well as a willingness to act, to take initiative, and to do so mindfully and intentionally* (Paris and Lung, 2008, p. 255).

[9] In Eraut's paper published in 2007, which reports on the same studies referenced by DEBT, he adds 'personal agency' to the 'confidence and commitment' apex suggesting that this was important in sustaining motivation. (Eraut, 2007, p. 418). Paris and Lung (2008) is referenced in the unpublished article (Mutton, Burn and Hagger, n.d.)

The roots of their definition in Bandura's work are explicit. Bandura identifies four core features of agency: intentionality, forethought, self-reactiveness and self-reflectiveness. The first two of these are concerned with the proactive commitment to making something happen, through anticipating and creating courses of action, which corresponds with the partial definition of intentionality by Eraut which was adopted by the DEBT team discussed above. The second two relate to concepts of metacognitive self-regulation discussed below.

Agency can be seen as being highly personalised, since it is through determining how individuals interpret and engage in social practices that they exercise their agency. However, according to socio-cultural theory, this is interdependent with the affordances of the context (Billet, Barker and Bernie, 2004). Engeström and colleagues note that whilst the concept of agency was not used by Vygotsky and his contemporaries, it aligns with their concepts of volitional action and will (Engeström, Sannino and Virkkunen, 2014b).

Both Bandura and Edwards draw attention to forms of agency, which go beyond individual intentional action. Bandura claims there are three forms of agency: personal, proxy and collective (Bandura, 2001). Proxy agency describes the process of an agent seeking outcomes, over which they have no direct control, through another person. Collective agency recognises socially interdependent effort, based on shared beliefs in collective power.

Within small groups of beginning teachers, both personal and proxy agency might be most relevant, for example when teachers draw on their mentors or colleagues to achieve particular goals. It seems unlikely that collective agency would be realised. Edwards' concept of relational agency may be more useful (Edwards and D'arcy Carmen, 2004; Edwards, 2005, 2010b). Unlike Bandura's concept of collective agency, relational agency is not about collaborative action on a particular object (in CHAT terms), but refers instead to the capacity to recognise and use the support of others in order to transform the object (Edwards and D'arcy Carmen, 2004). This seems more similar to proxy agency than collective agency. Proxy agency and relational agency both connect the Intentionality dimension with two other dimensions of OLEF, those of Frame of Reference (FoR) and Attitude to Context

(AtC), in their acknowledgement of the ways that other individuals, sources or resources in the context may be drawn on to achieve particular goals.

In formative interventions, a form of cultural-historical methodology, Engeström suggests that transformative agency is expressed in several ways: through resistance; criticism; explicating new possibilities or potentials; envisioning new patterns or models for the activity; committing to take concrete action or taking consequential actions (Engeström, Sannino and Virkkunen, 2014b, p. 125). These six types of transformative agency provide a helpful way to classify agentic responses.

Resistance as a form of agency is picked up by several researchers including Paris and Lung (2008) who considered how beginning teachers resisted prescriptive demands and instead are responsive to their students (See also Buchanan, 2015). Similarly, Roberts and Graham consider agency as a form of resistance or 'self-direction' for beginning teachers in school cultures of 'conformity and centralisation' through 'tactical compliance' and taking 'opportunistic agentic actions' or 'self-initiated action'. They also draw attention to the ways beginning teachers 'control their personal diet of experiences' through selection and interpretation (Roberts and Graham, 2008, pp. 1401, 1409).

Edwards (2015), following Taylor's definition of agency, draws attention to the importance of self-evaluation in making judgements about the worth of our intentions when taking action. She argues that in studying agency, researchers should focus on the actor's

> *actions in activities in practices and trying to access their judgements, intentions and evaluations as they interpret and act (*ibid. p. 781).

Munk's (2018) recent work picks up the recommendations made by Edwards and draws on Hedegaard's work to present micro-level shifts in an experienced teacher's motives and the actions taken. Whilst this moment-by-moment analysis represents an extreme narrowing of the focus, it attends to several important aspects of Intentionality.

A recent definition (in an article which cites the seed articles) integrates several of the ideas presented above into a concept of professional agency, which

> *refers to a capacity that prepares the way for* ***intentional and responsible management*** *of new learning, at individual, classroom and community level...comprises motivation to learn,* ***efficacy beliefs*** *about learning and*

> *intentional activities for facilitating and managing learning in every day pedagogical practices...**entails using others, both colleagues and students, intentionally, as a resource for learning**, and equally, acting as a support for them...becoming an active professional agent involves **perceiving oneself as an active learner, who is able to act intentionally, make decisions and reflect on their impact**. It also requires motivation to implement and develop one's own expertise ...professional agency is **highly relational and embedded** in the interactions between teachers, students and other members of the school community* (Soini, Pietarinen and Pyhältö, 2016, p. 382 my emphasis.)

Although the authors use this initial definition to focus their study on experienced teachers' classroom learning and teacher burnout, rather than beginning teacher learning, it is helpful because it brings four key elements of Intentionality identified in this review together. Firstly, a focus on intentional, motivated and deliberate action which is planned and self-evaluated in terms of the learning for students, and the learning teacher. Secondly, recognising that this might be achieved through others relationally, through proxy agency or by drawing on a broader range of sources (FoR/RtF). All of this is embedded within the particular contextual affordances and constraints, although these may be resisted. Thirdly, it is supported by a strong beliefs or self-efficacy in their ability to act (linked to Aspiration). Fourthly it recognises the importance of regulation within this process, through reflection and in order to take responsibility for the teacher's learning.

In terms of Intentionality, it is important when determining deliberate action that beginning teachers are aware of their own preferences, current skills (and those of others around them), along with the appropriateness of the actions in relation to the effects on the students they teach. Beginning teachers also need to be able to evaluate the effects of their actions on the learning of the students and themselves. This definition connects to metacognition and self-regulated learning which are discussed next.

3.1.3 Metacognition and Self-regulated learning

In 2014 a 'state of the art' review on Teacher effectiveness and Professional Learning claimed that Self-Regulated Learning was 'one of the most important new aims of education' (Muijs *et al.*, 2014, p. 238). The terms Self-Regulated Learning, metacognition and self-regulation are often ill-defined, with the constructs 'nesting' within each other in varying ways (Dinsmore, Alexander and Loughlin, 2008). In a review of 255 studies which referred to these terms, only 49% provided explicit

definitions and they were often used interchangeably. The authors concluded that despite their distinct histories there was an

> *undeniable conceptual core binding the three constructs, namely that individuals make efforts to monitor their thoughts and actions and to act accordingly to gain some control over them. It is, in effect a marriage between self-awareness and intention to act that aligns these bodies of work* (Dinsmore, Alexander and Loughlin, 2008, p. 404).

In a review of the instruments used in studies of Self-Regulated Learning, Roth, Ogrin and Schmitz suggest that although there is no universal definition, Zimmerman's is the most generally accepted (2016). Zimmerman claims that

> *Self-Regulated Learning can be understood as a process comprised of metacognitive, motivational and behavioural strategies that students use to acquire academic skills* (Zimmerman 1986, 2008 Cited in Roth, Ogrin and Schmitz, 2016, p. 227).

Here metacognitive strategies are nested within Self-Regulated Learning. A recent professional document, which draws on Zimmerman's definition, similarly argues that metacognition is one of three components alongside cognition and motivation within Self-Regulated Learning (Quigley, Muijs and Stringer, 2018).

The focus on students and academic skills in Zimmerman's definition above reminds us that research on Self-Regulated Learning usually attends to the formal learning of young people, rather than adult professional learning. However, there are important developments in considering adult academic learning (in higher education), including professional preparation courses such as ITE (Endedijk, 2010, 2014; Endedijk *et al.*, 2012, 2014; Roth, Ogrin and Schmitz, 2016; Vermunt and Donche, 2017; Fryer and Vermunt, 2018), and the role of mentors and tutors in supporting its development (Mullen and Schunk, 2013; McDonald, 2016).

Whilst the terms metacognition or self-regulation are not used in the seed articles, or broader DEBT publications, metacognition is considered in referenced studies. Metacognition is one of the four key elements of early-career practice according to Eraut (2004, 2007). Within this process, Eraut presents three modes of cognition suggesting that metacognition ranges from instant situational awareness; to short, reactive reflections; through to 'deliberative' conscious monitoring, self-management and evaluation (2004, p. 260). Furthermore, Oosterheert and Vermunt's article (2001), which explores the individual differences between beginning teachers according to their regulation and other components of their learning, is referenced both by one of

the articles to which the DEBT team refer (i.e. it is a second-level reference) and in their unpublished work on Intentionality (Mutton, Burn and Hagger, n.d.; Oosterheert and Vermunt, 2001; Caires and Almeida, 2005). In her doctoral thesis, Endedjik (2010) (whose supervisors include Vermunt) cites both a seed article (Hagger *et al*., 2008) and Oosterheert and Vermunt's article (Oosterheert and Vermunt, 2001) together.

Oosterheert and Vermunt's 2001 article is part of an important body of work which can loosely be defined around the theme of 'learning patterns', which regularly cites the seed articles and attends to the concept of regulation discussed above (Chapter 2.2.5). The Learning Patterns framework draws on two research traditions known as the Student Approaches to Learning tradition and metacognition and Self-Regulated Learning. The four components of learning are seen to be cognitive processing strategies (such as memorisation); metacognitive regulation strategies, (metacognitive) conceptions of learning, and learning motivations or orientations. It should be noted that 'learning orientations' are not the same as the orientations to learning in the OLEF framework, and focus on aims, goals, motives and worries of students; that is, on the motivational-affective aspects of learning only.

Of particular relevance here is the second strand focussed on regulation. Although rooted in the tradition of Self-Regulated Learning, The Learning Patterns framework presents three forms of regulation- self-regulation; external regulation; and lack of regulation. Vermunt and Donche (2017) argue that the Learning Patterns perspective offers a broader perspective of regulation grounded in empirical evidence of learning in normal study settings, rather than the 'top-down' approach based on psychological constructs and theories used by self-regulated learning (Endedijk, 2010, p. 15). Vermunt's Inventory of Learning Styles was constructed from initial interviews which were analysed using a phenomenographic approach to construct a quantitative instrument (Vermunt, 1996, 1998).

Work within learning patterns in teacher education often uses self-reports based on the Inventory Learning to Teach Process questionnaire (Endedjik, Donche and Oosterheert, 2014) which, like Vermunt's Inventory of Learning Styles, was derived from a phenomenographic study using interviews. Oosterheert and Vermunt's early work identified four learning patterns for student teachers: inactive or survival-oriented; reproduction-oriented; dependent meaning-oriented; and independent

meaning-oriented learning (Oosterheert, Vermunt and Denessen, 2002). A decade later, Endedijk and Vermunt (2013) demonstrated that there was a relationship between the concrete activities teachers undertook and their learning pattern. According to this study, the largest group followed a survival pattern (29.8%) which involved trying to improve through more practice. Within this group there is little deliberation over the strategies for learning, because in their view experience is the only way to learn. Learning is not planned. The second and third largest groups were meaning-oriented, in that they wanted to develop and understand, as well as improve their practice (as performance) with 28.4% of them highly dependent on others' support (dependent-meaning pattern) and 22.7% more independent and self-regulative in their use of external sources. The smallest group followed a reproduction pattern (19.1%) in which they want to improve their performance, but not necessarily their understanding. They relied on rules of thumb, had strong pre-existing ideas about teaching and resisted change in their understanding.

Interestingly in terms of regulation, some academics, including Endedijk and Vermunt, claim that intentional, pre-planned learning is not a pre-requisite to powerful learning experiences or the only means of regulation. In Edendijk's study of the relationship between learning patterns and regulation, the number of intentional and unintentional learning experiences was not related to the learning patterns: all teachers learn in unplanned and planned ways (Endedijk and Vermunt, 2013). In another study of beginning teachers' self-reported learning episodes, 88 of 133 were described as intentional (Endedijk *et al*., 2012). Similarly, research with experienced teachers has shown that when learning experiences are only classified as self-regulated when looking at pre-set goals, less than a third of experienced teachers' learning can be classified as self-regulated (Van Eelkelen et al 2005 cited in Endedjik *et al*., 2012)). This echoes Eraut's (2004) study of informal early career learning, which recognised the importance of deliberation, as well as deliberate learning. Following Pintrich, Endedijk's work on beginning teachers' Self-regulated Learning claims that self-regulation happens not only at the planning, or goal setting stage of learning, but at three other phases. Phase two involves monitoring and metacognitive awareness; phase three are the efforts to control or regulate self, task or the context, and phase 4 represents reactions and reflections.

In her study of 28 beginning teachers, Endedijk identified two dimensions of self-regulation: passive versus active, and prospective versus retrospective (Endedjik *et al.*, 2012). Regulation activities described as passive required external regulation or showed a lack of regulation, whereas active regulation involved the student teacher reflecting 'more deeply on the learning outcome, the learning process, and his or her own role in this'(Endedijk *et al.*, 2012, p. 483). Prospective regulation focusses on the planning of learning, whilst retrospective regulation focusses on the reflective part. Endedijk and colleagues conclude that

> *learning experiences starting as reactive and non-deliberative, lacking a learning goal, can still involve deliberate, active regulation activities, though in more retrospective ways. Therefore we argue that for this context, setting goals is not always a pre-requisite for active regulation of learning.*(Endedjik *et al.*, 2012, p. 487).

Endedijk concludes her thesis by claiming that beginning teachers can be described as self-regulated learners if they:

- *acknowledge their responsibility to steer their development as a teacher*
- *are open and able to discuss and reflect on ideas of good teaching and translate this into learning experiences for themselves*
- *can regulate their learning in an active and prospective way by setting learning goals and choosing deliberately appropriate learning strategies to reach them*
- *can regulate their behaviour in an active prospective way by engaging in deliberate practice to enhance the change (sic) to learn from experimenting in the classroom*
- *can regulate their reactive learning experiences in retrospective ways by connecting them to their ideas of good teaching, reflecting and evaluating them also on the level of learning process, and reach new forethought on learning*
- *situate retrospective and passively regulated learning experiences in their own process of development leading to new learning experiences; and*
- *use the environment and external sources to feed their learning and in this way to transform the working environment with experiences distracting themselves from their learning process to a learning environment with experiences in which they recognise the learning potential* (Endedijk, 2010, p. 158 Emphasis in original.)

These criteria relate closely to the definitions of Intentionality but can also be tied to other OLEF dimensions including FoR, RtF and AtC, particularly in the last bullet point.

It is important to emphasise that the 'self' in self-regulation does not imply solo efforts. Endedijk suggests that self-regulation and external-regulation are false dichotomies, leading to misconceptions that self-regulated learning happens without any external support (Endedijk, 2010).

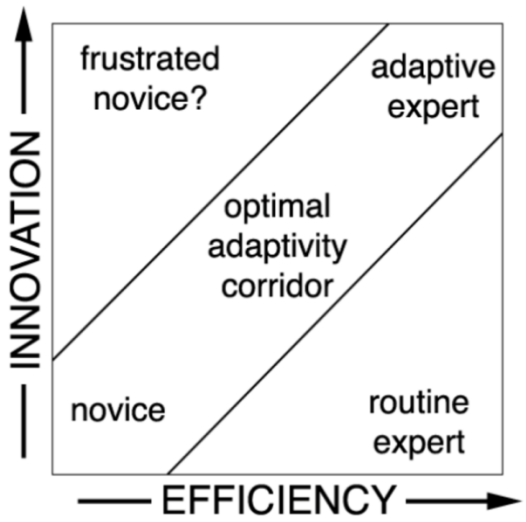
> *The self in Self-Regulated Learning refers primarily to the active role that (student) teachers have in their learning. That they are able to direct their learning when necessary, but that they are also able to seek help, search and use external sources to feed their learning, learn in cooperation with others and use their environment for feedback* (Endedijk, 2010, p. 156).

Just as OLEF includes the FoR and RtF dimensions, and professional agency includes a relational component, so Endedijk recognises the importance of drawing on wider resources to support individual learning. Furthermore, the role that mentors and teacher educators can play in supporting self-regulation has been considered theoretically in relation to academic mentoring (Mullen and Schunk, 2013) and empirically with regards to university-based teacher educators in New Zealand (McDonald, 2016).

3.1.4 Thoughtfully adaptive decision-makers: adaptive expertise and clinical practice

Metacognition has been connected to adaptive expertise, requiring high levels of thinking and decision making (Soslau, 2012). Unlike routine experts who 'conduct a core set of instructional routines fluently and efficiently', adaptive expert teachers recognise the complex, highly contextualised nature of learning and 'go beyond routine competencies to solve new problems in flexible ways'(Von Esch and Kavanagh, 2018, p. 241). The two dimensions of adaptive expertise have been conceived as innovation and efficiency, as Figure 12 illustrates (Bransford *et al*., 2005, p. 49). It should be noted that adaptive expertise is generally seen to develop from routine expertise and is not relevant to novices (Carbonell *et al*., 2014).

Figure 12:Dimensions of Adaptive Expertise (Bransford et al. 2005, 49)



Soslau draws out the cognitive implications of this:

> *Adaptive teaching experts are pedagogical experts that engage in a process of **assessing** and strategically adjusting their **decision making** before, during and after teaching episodes… excel **at analysing** their decisions because they think deeply about their justifications for decision making; notice pupils' needs in real time, are capable of making adjustments to their **planned decisions**, in action, and for future action and are able to **balance** their own experimentation with potential risks to their pupils*. (2012, pp. 768–770 My emphasis.)

The levels of intentional, deliberative thought in assessing, deciding, analysing, planning and judging are clear.

Adaptive expertise might not be an appropriate goal in itself for ITE while beginning teachers are conceived as novices. However, if preparation for future adaptive expertise is the ambition for ITE (Burn and Mutton, 2019), should beginning teachers be offered opportunities to engage in these decision-making activities at the novice stage? Following a review of 21 studies of adaptive expertise (of which none were in ITE), Bohle and colleagues recommend that

> *novelty, in the form of unfamiliar tasks can be introduced after an initial level of efficiency in the domain has been achieved. Learners should be stimulated to explore these tasks, solve them with limited scaffolding and reflect on their errors'*(Carbonell *et al*., 2014).

Any form of teaching practice, but particularly employment-based ITE, cannot fail to encounter 'novelty' at the earliest stages, given the complex nature of children's learning. Perhaps more realistic is the recommendation for a supportive environment,

although envisaging a 'risk free' context with little summative assessment would be challenging in the current landscape of education, including ITE.

Despite these challenges to creating ideal conditions for adaptive expertise, researchers in ITE advocate the inclusion of early judgement and decision-making in ITE through, for example, inquiry focussed classroom practice (Anthony, Hunter and Hunter, 2015), engagement in practical theorising (Burn and Mutton, 2019), and mentoring conversations which probe beginning teachers to: consider 'why?'; unpick their underlying assumptions; balance the learning of themselves and their students and recognise the complexity of classroom contexts (Soslau, 2012).

These activities might all be seen to be part of 'clinical practice,' which Kriewaldt and colleagues argue has three core components:

> *1) a focus on student learning and development; 2) evidence-informed practice; and 3) processes of reasoning that lead to decision-making. (Kriewaldt et al., 2017, p. 155)*

The third aspect is clearly strongly related to Intentionality, with its focus on decision-making which the authors align with hypothesis-testing, problem solving and reflective practice in order to arrive at a 'best judged ethical response'(Kriewaldt *et al.*, 2017, p. 163). The focus on students aligns with models of professional learning in which the client – the student – is the priority. The second aspect above promotes an enquiry focus with 'responsibility to analyse, synthesise and make decisions about the relevance of the data they have collected'(Kriewaldt *et al.*, 2017, p. 157). The range of data involved will be discussed further in relation to FoR below (3.2).

Drawing together several constructs and dimensions of Intentionality, Fairbanks and colleagues (2010) argue that how 'thoughtfully adaptive' a beginning teacher is may depend more on their self-knowledge, their agency, vision and intent than traditional forms of teacher knowledge. Furthermore, correlational studies of expertise beyond ITE have found moderate positive relationships between self-efficacy and adaptive expertise (Carbonell *et al.*, 2014). Overall, I suggest that the concept of adaptive expertise, or Fairbank's (2010) concept of 'thoughtfully adaptive' beginning teachers, alongside self-efficacy and agency, may be helpful in relation to Intentionality for beginning teachers, even if the underlying relationships have not yet been fully demonstrated.

3.1.5 Deliberate practice

Perhaps the most logical development of a focus on intentional planning and action is 'deliberate practice'. Ericsson's work on general expertise development through deliberate practice has been employed in a variety of quite different approaches in ITE, including breaking teaching actions down into discrete, observable techniques (Lemov, 2015) or 'approximations of practice' (Grossman, Hammerness and Mcdonald, 2009), which some critics have aligned with the 'routine expertise' described above.

However, there have also been more sophisticated approaches which aim to balance the innovation and efficiency dimensions of adaptive expertise (Bransford *et al.*, 2005). Margaret Lampert (2013), for example argues that teacher educators can 'keep it complex' when using rehearsals, through intervening in the action or the questioning of beginning teachers. Similarly in order to support adaptive expertise, Von Esch and Kavanagh (2018) use strategies of deliberate practice models such as rehearsals and small-scale or shorter teaching episodes, whilst also encouraging innovation and problem-solving in relation to problems of practice. Indeed Kavanagh and colleagues (2019) have explored how 'approximations' of teaching could be used to develop beginning teachers' responsiveness to their students.

Deliberate practice in ITE has also been seen by some scholars not as repeated practice with feedback from a trainer, as conceptualised by Lemov for example, but as a 'continuous progressive refinement'(Bronkhorst *et al.*, 2013). Bronkhorst, another doctoral student of Vermunt (alongside Meijer), has explored learning patterns in design-based formative interventions (Bronkhorst, 2013; Bronkhorst *et al.*, 2013; Bronkhorst and De Kleijn, 2016). In her first study, Bronkhorst interviewed expert teacher educators to identify pedagogies to encourage meaning-oriented learning and deliberate practice. Her findings are presented as twelve 'design principles', which she organised into three groups: meaning-oriented learning, enactment of deliberate practice and regulation of deliberate practice (Bronkhorst *et al.*, 2011).

In a follow-up study Bronkhurst used Endedijk's learning log instrument (Endedjik *et al.*, 2012), on account of the similarity between the constructs of self-regulation and deliberate practice. This study explored the way in which beginning teachers' learning activities could be characterised as deliberate practice (Bronkhorst *et al.*, 2013).

According to Bronkhorst and colleagues (Bronkhorst *et al.*, 2013) the four characteristics of deliberate practice are:

1. Practice is designed for self-improvement (or pupil learning and development).
2. Practice is repeated to enable successive refinement.
3. Practice is followed by immediate, informative feedback.
4. It requires significant effort and concentration or motivation, as it is not inherently enjoyable.

Bronkhorst's conception of deliberate practice differs from the incremental coaching model of repeated practice aimed at self-improvement with feedback from a trainer. It is important to note that the feedback provided may not be formal feedback from a mentor or other colleague, but may include teachers' observations of their pupils' response, or 'any information that the student teacher meaningfully interprets in relation to their own performance' (Bronkhorst *et al.*, 2013).

3.1.6 Reflection: Agentic retrospection and anticipatory reflection

Although much of the focus of this section on Intentionality has been on planning future actions, there is a retrospective aspect. In defining Intentionality the DEBT authors draw attention to the beginning teachers' claims about their previous learning. As discussed above, research around regulation includes taking responsibility for their current experience and 'retrospective regulation', in addition to future-oriented prospective regulation (Endedijk, 2010). This draws us into the discussion around the nature of learning to teach as a reflective process, as advocated by the 'reflective practitioner' movement which is discussed in further detail with relation to FoR below (3.2.4).

The term reflection has been used so ubiquitously and with so little precision as to make it unhelpful, and yet it is hard to avoid as it becomes a catch-all for thinking about actions. At this point I want to identify the terms that inform the analysis of Intentionality. Overall, in my analysis of various frameworks of reflection (discussed in 3.2.4) I have found Nelson and Sadler's description of 'deliberative reflection' (2013), drawing on Valli (1993), aligned best with the focus on decision making and personal judgement in Intentionality. Later I argue that despite the DEBT authors not acknowledging this specifically, McIntyre's concept of practical theorising is closest to the expansive vision of reflection described in the FoR dimension.

In terms of distinguishing between the different times frames for Intentionality, Schön's identification of reflection 'in-action' and 'on-action' provides a helpful distinction between the 'action experiment on the spot' and a later retrospective episode of thinking and decision making (1987). The future-oriented form of reflection is rarely included in discussion of reflection, but two terms that capture this are 'transformative' reflection described by Alsina (2017) and Bronkhorst's description of 'anticipatory reflection' (2013), which includes beginning teachers setting and envisaging challenging goals to show self-regulation in their learning.

3.1.7 Intentionality summarised in terms of relevant constructs and concepts

The Intentionality dimension is multi-faceted and can be seen to operate in three time periods in relation to a number of important constructs and concepts. Table 3 below has summarised the discussion above to provide the key concepts by time period.

Table 3: Intentionality Constructs summarised

<table>
<tr><td>Time</td><td>Past episode</td><td>Current experience</td><td>Future behaviour</td></tr>
<tr><td>Deliberative Learning (Eraut 2004)</td><td>Discussion and review of past actions, communications, events, experiences</td><td>Engagement in decision making, problem solving, planned informal learning</td><td>Planning learning opportunities; rehearsing for future events</td></tr>
<tr><td rowspan="2">Agency</td><td></td><td colspan="2">Transformative Agency (Engeström et al. 2014)</td></tr>
<tr><td colspan="3">Professional Agency (Soini et al. 2016)</td></tr>
<tr><td>Self-regulation (Endedijk 2010)</td><td>Retrospective regulation</td><td>Regulation/ metacognitive monitoring</td><td>Prospective regulation</td></tr>
<tr><td>Design principles for Deliberate Practice and Meaning-oriented learning.
(Bronkhorst et al. 2011).</td><td>Challenge assumptions.
Decontextualize practice including diverging perspectives.
Explicate theories of practice.</td><td>Require teachers to draw on pupils for feedback.</td><td rowspan="2">Anticipatory reflection.

Transformation (Alsina 2017).</td></tr>
<tr><td>Reflection</td><td>Reflection-on-action.
Deliberative Reflection (Nelson and Sadler 2013).</td><td>Reflection-in-action (Schön 1983).</td></tr>
</table>

Clinical Practice (Burn and Mutton, 2015b)**.**	Evaluate the outcomes on particular learners.	A process of enquiry 'judgement in action'; 'clinical reasoning'	Formulate and implement particular pedagogical actions.

In summary, a review of the literature suggests that learning that is highly deliberative can be described as not just intent on explicit learning goals, but also work-based goals, including their students' outcomes (Eraut, 2004; Endedijk *et al*., 2012). It can occur in the past (*retrospective regulation)* as well as the present and be future oriented (Endedijk, 2010)). It requires beginning teachers to show personal responsibility and *self-regulation* (Endedijk, 2010), which includes *professional agency* (Soini, Pietarinen and Pyhältö, 2016) to draw on others, and external sources as resources.

Activities which promote intentionality may include those which encourage enquiry and evaluation of outcomes on particular learners as promoted by *deliberate* and *clinical practice*. This requires judgement which may nurture *adaptive expertise*.

3.2 Frame of Reference

The Frame of Reference (FoR) dimension is concerned with the 'range of sources on which beginning teachers draw in making sense of their experience' (Burn, Hagger and Mutton, 2015, p. 42). At one end of the continuum is an 'exclusive reliance on the experience of classroom teaching', whilst at the other end 'a range of sources shape and make sense of experience' (Hagger *et al*., 2008). The sources identified in the seed articles include: wider reading, discussion with mentors and university tutors, research findings, textbooks, schemes of work, and the pupils (Hagger *et al*., 2008; Burn, Mutton and Hagger, 2010; Mutton, Burn and Hagger, 2010). In 2015 observations of others' practice was added to this list (Burn, Hagger and Mutton, 2015). Importantly these sources are not just to be collected by beginning teachers, but to be used actively: 'to shape and make sense' of their experience. The two processes – shaping experience and making sense of experience – are related but can also be seen to have two different temporal associations. Shaping experience suggests an active future orientation, whilst making sense attends more to the processing of previous experiences.

The role of sources in ITE has interested a number of researchers, especially in relation to the particular role that research may play. This is often related to defences of learning to teach as an intellectual and professional activity in which forms of cognition (including reflection) are vital, and in which universities play an important role. In 2015 the DEBT authors explicitly related FoR to reflection, arguing that one end of the dimension

> *implies a narrow vision of reflective practice, based on simply looking in the mirror at one's own actions. On the other, it implies a much more expansive notion of reflection: critical examination of that practice from a range of different angles, illuminated by different sources* (Burn, Hagger and Mutton, 2015, pp. 42–3).

In the following section I will outline the role of sources as tools in mediation and their role in the regulation of learning. I will also consider the relation of FoR to conceptions of reflection.

3.2.1 Sources as tools in mediation

Following cultural-historical approaches, sources can be understood as tools in mediation. Anne Edwards relates Vygotskian mediation to teacher learning, arguing that

> *resourceful learners are therefore those who recognise how tools such as ideas and artefacts can strengthen their own impact and are able to access and use them to turbo-charge their actions* (Edwards, 2010, p. 72).

An example of detailed work which examines this is Douglas' doctoral work (2014), which used third-generation Cultural Historical Activity Theory (CHAT) to explore the tools used in ITE learning in secondary school subject departments (discussed earlier 2.2 Figure 6). Douglas (2012) identified that the ways the tools were used, and the opportunities for the beginning teachers' learning, reflected differences in the 'object' (the problem being worked on) and the extent to which this was clearly defined and understood. Similarly, Anthony and colleagues (2011) identified four different objects in the induction of NQTs in New Zealand, ranging from meeting assessment requirements to becoming a professional enquirer. In considering tools then, we need to also consider motives and intentions.

Ideas and artefacts however are not the only resources available and attention is paid to the expertise of others as a resource. This is developed in relation to a range of

professionals, including teachers in the concept of relational agency, which Edwards and D'arcy describe as

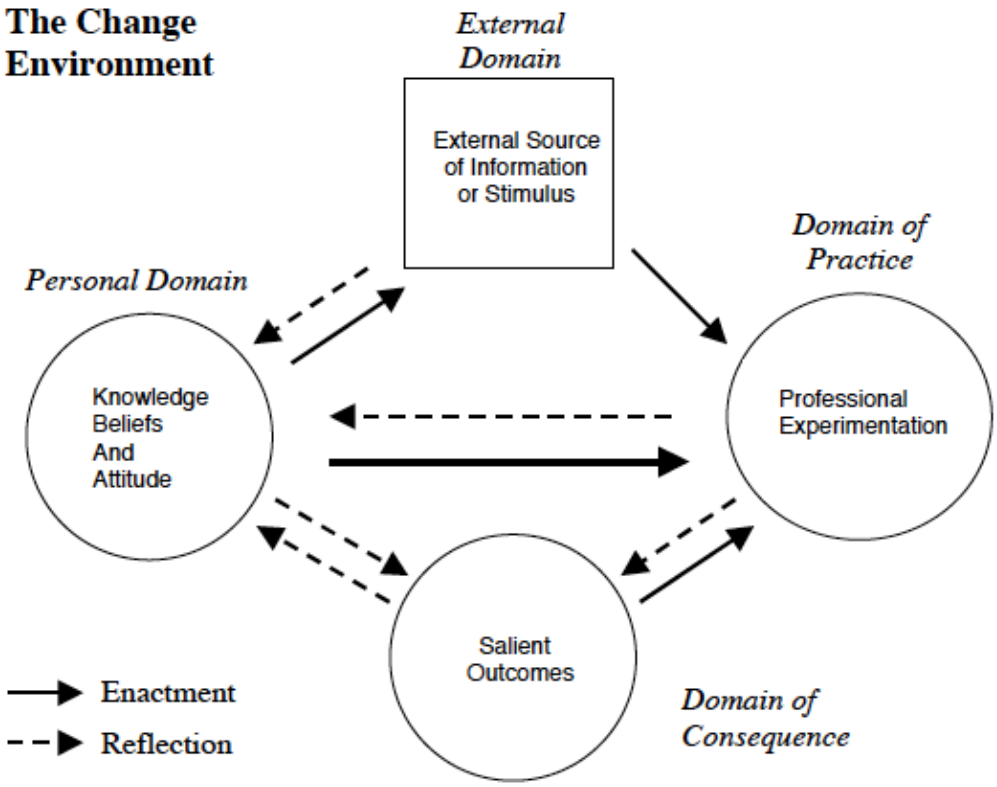
> *A capacity to recognize and use the support of others in order to transform the object*[10]*. It is an ability to seek out and use others as a resource for action and equally to be able to respond to the need for support from others.*
> (Edwards and D'arcy Carmen, 2004, pp. 149–50)

Drawing on this, and other socio-cultural tools, McIntosh's doctoral thesis argues that learning to teach should be 'reframed as a social and relational process' in which beginning teachers work together with their mentors to solve problems of practice (2015).

In relation to broader teacher development, a social-constructivist model offer helpful perspectives on the ways external sources interact with teachers' internal beliefs, knowledge and attitudes. Clarke and Hollingsworth's (2002) model of professional growth for teachers includes an 'external domain' which constitutes an 'external source of information or stimulus' in relation to the 'personal domain' (knowledge, beliefs and attitudes) and 'domain of practice' (professional experimentation). This widely cited empirical model (Boylan *et al*., 2018) depicts the relationship between these domains occurring through the mediating processes of 'enactment' and 'reflection' (See Figure 13).

[10] A reminder: the 'Object' in CHAT terms relates to the problem which is being addressed in the activity. Why are they doing it?

Figure 13: An interconnected model of Professional Growth, Clarke and Hollingsworth 2002 p. 957



The term enactment rejects the ideas of a direct translation of 'theory into practice', but suggests that 'each action represents the enactment of something a teacher knows, believes or has experienced' (Clarke and Hollingsworth, 2002, p. 951). The term 'reflection' follows Dewey's definition of 'active persistent and careful consideration' (1910 p.6 cited in Clarke and Hollingsworth, 2002, p. 954). The authors suggest that the model itself can serve as three forms of tool: analytical, predictive and interrogatory. In a review of this model along with four other similar models, Boylan and colleagues claim that its strength lies in the acknowledgement of the 'individual teacher in her agency to influence her own professional learning,' and the inclusion of informal interactions in the external stimuli (2018, p. 125). These features are important aspects of learning in relation to the concept of Intentionality as discussed above.

Boylan et al. however criticises the model on account of the relationships between the domains not being fully developed and the processes (reflection and enactment) not being fully theorised (2018). In terms of this thesis the model provides a helpful, albeit partial, way to describe the mediating process by which external sources are

brought into the personal and practice domains through change sequences, recognising the non-linear, idiosyncratic and interactional nature of learning. 'Reflection' could be seen as the 'make sense of experience' component of the FoR dimension, whilst 'enactment' corresponds to the ways sources 'shape' experience. Further attention to the mediating process of reflection is given below (3.2.4).

3.2.2 Sources feeding regulation

Oosterhert and Vermunt describe teacher knowledge

> *as a frame of reference consisting of **beliefs, images, and procedural and conceptual knowledge**, all of which guide student teachers' deliberate thinking about teaching and learning, and their deliberate and non-deliberate perception, decision-taking and action during teaching* (Oosterheert and Vermunt, 2003).

This definition recognises the breadth of teacher knowledge and aligns with Winch, Orchard and Oanccea's (2013) conception of 'textured' professional judgement guiding decision-making and action.

Oosterheert and colleagues suggest that external information, including teacher educators, mentors, own experiences and books should be used to 'feed' this process (2002, p. 43). However, they argue that this may be avoided by some teachers for whom it may be 'emotionally risky…to change their perceptions of classroom knowledge'(ibid.). Here we are reminded of the ways that the dimensions of Intentionality and FoR relate to affective states and feelings of agency and self-efficacy.

Four clusters of beginning teachers are identified in relation to their view of learning to teach using data from a self-report questionnaire (ibid.). The largest cluster (Cluster 2, n=51 of 169) 'actively interact with all available sources and relate the information from different sources intentionally and to a lesser extent non-intentionally. When evaluating their teaching they are pupil oriented'. This is similar to the open meaning oriented learners described in their previous study (Oosterheert and Vermunt, 2001). Clusters 1 and 4 (n=51+42) disagreed most with this view and did not use external sources intentionally, aligning with the survival and close-reproduction oriented learning patterns. Cluster 3 take a more moderate position in line with the closed meaning oriented beginning teachers. These three positions can clearly be aligned with the FoR dimension (as discussed in relation to Table 4 below).

A limitation of this research is its reliance on self-reporting, rather than direct observation of teacher action. Whilst the authors adopt very different methods from the DEBT authors, they are similar in moving beyond a purely cognitive approach to recognising the involvement of the environment in beginning teacher learning. This work is helpful because it brings the two dimensions of Intentionality and FoR together, emphasising the importance of non-deliberate (or dynamic) regulation and intentional (active) regulation, as well as the importance of external sources in feeding both of these processes (Oosterheert and Vermunt, 2003).

3.2.3 Research as a source

Research has often been positioned as a particularly important external source in learning to teach. In the wake of the 2010 Coalition Government's White Paper announcement of the shift to a school-led system of education, the defensive clarion call for the role of university-based educational research and teacher education grew louder (Beauchamp *et al*., 2013; Furlong, 2013; Winch, Oancea and Orchard, 2013; Orchard and Winch, 2015; Hordern and Tatto, 2018). As Chapter 1 outlined, the call for 'evidence based' or 'evidence informed' education has been articulated by governments; government-funded charities such as the EEF and 'teacher-led' organisations such as the Chartered College for Teaching. However, philosophers such as Oanccea (2014) have shown that this is part of a longer story, throughout the history of state-funded teacher education. Building on the initial contextual introduction in Chapter 1, this section will explore the ways in which evidence and research have been seen to play a role as a special source in learning to teach.

If the FoR guides decision making (Oosterheert and Vermunt, 2003; Kriewaldt *et al*., 2017), it is important that this is not just based on a beginning teacher's limited experience and intuition, but draws more widely from the available sources. The model of 'clinical practice' advocated by Kriewaldt and colleagues places special emphasis on 'research-informed practice' (2017). They present four levels of evidence that may be used: classroom-based evidence; para-classroom evidence (about students' out of school life); external assessment evidence; and research evidence. Importantly, these different forms of evidence should be 'constantly in play' *informing*, rather than *driving* decisions (Kriewaldt *et al*., 2017, p. 158). The

role of judgement here resonates with teacher knowledge as a form of 'professional judgement'(Winch, Oancea and Orchard, 2013).

In a model of teacher knowledge as 'textured' professional judgement, research plays a role in all three dimensions of situated understanding, critical reflection and technical knowledge (Winch, Oancea and Orchard, 2013). Firstly in terms of situated understanding (phronesis or practical wisdom) research is seen to 'contribute to the richness of reflection' and 'feed into' practical judgement by supporting teachers to 'discern the salient features, frame concrete problems and challenge and authenticate their unfolding understanding of the situation in which they find themselves' (Winch, Oancea and Orchard, 2013, p. 6). In a subsequent paper the authors make their claim for the role that research plays as 'conceptual framework': the framing concepts being the values, aims, curricula, pedagogy, resources and assessments (Orchard and Winch, 2015, p. 16). Research is also seen to act as a 'body of theory' to support critical reflection (Winch, Oancea and Orchard, 2013, p. 6). Critical reflection may also be involved in teachers undertaking systematic enquiry (as a form of research) although the authors are sceptical about the demands on beginning teachers acting as researchers (ibid.).

The main role for research particularly in a culture promoting 'what works', is often conceived as informing and improving technical knowledge, including offering 'immediate practical toolboxes' (Winch, Oancea and Orchard, 2013, p. 6). This has led to politicians and researchers considering how to 'mobilise', 'disseminate' and 'transfer' knowledge, whilst what might be more appropriate is a form of 'knowledge transformation' from research knowledge to context-specific pedagogical knowledge (Cain, 2015). To avoid the teacher being only seen in terms of an 'executive technician', the other forms of knowledge, both situated knowledge and critical reflection, are vital. This enables a model of a 'professional teacher'

> *who draws on a well-thought- through and coherent conceptual framework, on knowledge of well-substantiated empirical research, and on considered ethical principles, to arrive at decisions in the classroom context* (Orchard and Winch, 2015, p. 14).

In similarity with Orchard and Winch's model for professional teacher education (2015), clinical models of teacher education include strong school-university partnerships and professional conversations between beginning teachers and their

mentors that focus on questions that elicit reasoning (see also Burn and Mutton, 2015b; Kriewaldt *et al*., 2017).

Burn's doctoral work provides an insight into the 'distinctive contribution' of university tutors' contributions, through her empirical analysis of conversations between beginning teachers and their school-based mentors and tutors in the Oxford internship model of ITE (Burn, 2006). Whilst dismissing doubts raised about the ability of mentors to act as 'teacher educators', and noting the overall 'high level of consistency' between mentors and tutors in terms of their recommendations for practice, Burn finds that tutors spend more time offering procedural guidance (how to do things) in recognition of the beginning teachers' need for explicit guidance, and that tutors based more of their advice on research-informed literature (Burn, 2006). Of the references made by curriculum tutors to sources of knowledge which they claimed informed their recommendation, 54% were made were to literature (Burn, 2006). In comparison the mean average for the mentors across four schools was 6.75%. This suggests that at least at this time within this particular ITE partnership, university-based tutors' distinctive role may be in providing and modelling the use of research literature as a source of knowledge. More recently, Burn and colleagues have acknowledged some of the distinctive advantages that Winch and Orchard claim for universities as places for teacher learning, can also be made for some schools (Burn *et al*., 2017; Burn and Mutton, 2018).

3.2.4 Expansive reflection and practical theorising

One of the important aspects of the tutor's role captured in Burn's doctoral study (Burn, 2006) was their explicit acknowledgement of the limitations of the research which guided their recommendations. Whilst both mentors and tutors drew on a range of sources, this 'critical distinction'(ibid.) might be seen as an important aspect of the FoR dimension. Indeed the 2015 exemplification of FoR requires an

> *expansive notion of reflection:* ***critical examination*** *of that practice from a range of different angles, illuminated by different sources* (Burn, Hagger and Mutton, 2015, pp. 42–3 My emphasis).

This definition provides a helpful qualifier for the term reflection, which has been defined in so many ways as to render it slippery and unhelpful[11]. Like Khan's

[11] For a survey of different conceptualisations see for example Khan, 2012

description of 'dialogic reflection' (Khan, 2012), an 'expansive' view of reflection goes beyond the 'monologic' inward looking self-study but requires multiple sources and *critical examination*.

The process of reflection has been operationalised as a tool to describe the processes of beginning teacher learning in many ways. In my own attempts to understand the various approaches I explored over ten rubrics, taxonomies and heuristics for reflection (La Boskey, 1993; Hatton and Smith, 1995; Valli, 1997; Ward and McCotter, 2004; Harrison and Lee, 2011; Nelson and Sadler, 2013; Thorsen and Devore, 2013; Alsina *et al*., 2017). Both Thorsen and Devore (2013), and Nelson and Sadler (2013) draw attention to the outward-facing nature of definitions of critical reflection, following Van Manen (1977): for example, taking into account the historical, socio-political, ethical and moral context, often with the aim of improving the situation for those most marginalised. This is seen to be of a higher level than reflection aimed at a 'technical' application of knowledge to achieve particular goals, or a 'practical' concern with unpicking assumptions and dispositions in relation to actions (Thorsen and Devore, 2013).

However, few of the models examined make explicit reference to drawing on other sources, instead presenting a narrower monological view of reflection. Only Ward and McCotter's description of 'dialogic' and 'transformative' reflection (2004), further adapted by Harrison and Lee (2011), makes reference to 'others' perspectives', while Nelson and Sadler's description of a 'deliberative' orientation includes 'multiple sources of knowledge' (2013), drawing on Valli's description (1997). All of these models privilege academic (epistemic) thinking and, in the case of Ward and McCottter (2004), Harrison and Lee (2011), Thorsen and DeVore (2013) and Alsina et al. (2017) are explicitly designed to provide an assessment rubric.

Instead, the DEBT authors descriptions of 'expansive reflection' might best be aligned to McIntyre's concept of 'practical theorising' which, as a cornerstone of the Oxford Internship model, is part of both their teaching and research repertoires (Burn *et al*., 2017; Burn and Mutton, 2019). The decision not to use this term in the seed articles may be on account of the DEBT team including researchers from both the universities of Oxford and Cambridge and not wanting to privilege a particular model. However, by unpacking the concept of practical theorising, it becomes clear that this fully aligns with the ambition of the FoR dimension.

The concept of practical theorising was popularized by McIntyre as a fundamental aspect of the Oxford Internship model (1990, 1991, 1993, 1995, 2006). The most succinct definition claims

> *Practical Theorising means both looking for attractive ideas for practice and subjecting these ideas to critical examination* (Hagger and McIntyre, 2006, p. 58).

There are five underlying principles in this approach. Firstly it recognises diverse sources of knowledge or ideas, including the 'craft knowledge and practical wisdom of practising teachers and also the more systematised and abstract knowledge of university tutors' (McIntyre, 1990, p. 31). Secondly, the ideas derived from these varied sources should be seen as 'hypothetical', requiring continual testing against a range of criteria (McIntyre, 1991). Thirdly there is an explicit acknowledgement that the criteria may differ between schools and universities and this requires an encouragement for beginning teachers to develop their own criteria in time. Fourth is a recognition that the process of theorising should be *practical*:

> *'The focus must be on what will help student teachers themselves to think critically and productively about how to teach, and more generally, how to engage in the practice of schooling.'* (McIntyre, 1995, p. 377)
>
> *'Theory-based ideas used to guide practice and to theorise about practice, justify themselves through the benefits which they bring.'* (McIntyre, 1995, pp. 377–8)

In acknowledging the practical nature of theorizing, McIntyre (1993) notes that practical theorising will engage with all three of Van Manen's levels: technical, practical and critical. The critical perspective is gained through theorising on others' practice. Here McIntyre asserts that teaching should be seen as a practice and, like Cochran-Smith and Lyte, suggests that the knowledge is *for*, *in* and *of* practice (1999).

Fifth, reflection, conceived as bringing actively to consciousness in order to examine, is only a part of theorising. Reflection is seen to be less relevant to beginning teachers whose knowledge is less tacit and habituated, which means that they do not need to reflect 'in order to be conscious of what they are trying to do and know' because 'every halting step that they take needs conscious deliberation and planning' (McIntyre, 1993). The purpose of reflection in ITE therefore is two-fold: 1) 'immediate understanding of their own problems and needs, in order give direction and purpose to their search for helpful ideas from other sources and their theorizing about these ideas'; 2) 'guided *practice* in the skills and habits of reflection' which

become more useful as they become more experienced (McIntyre, 1993, p. 44 Emphasis in original).

3.2.5 Practicalising theory

A community of researchers in Hong Kong use Tsui's (2009) concept of 'practicalising theoretical knowledge' in relation to the study of beginning teachers in articles which cite the DEBT seed articles (Cheng, Tang and Cheng, 2013, 2016; Tang *et al*., 2019). If practical theorising attends to the cognitive process of integrating a variety of different sources of knowledge with practice (including 'reflection'), 'practicalising theory' might be seen as the enactment process. Indeed the authors explain that:

> *Practicalizing theoretical knowledge involves enacting it in authentic teaching contexts where student teachers work with students in class settings* (Tang *et al*., 2019, p. 132).

In a study of ten beginning teachers on a four-year full-time BEd programme, Cheng and colleagues identified three approaches to practicalising theory. The 'procedural approach' is characterised by directly applying principles to 'find out if they are workable'(Cheng, Tang and Cheng, 2012). In contrast, the 'reflective-adaptive' approach involves personal interpretation and adaptation based on testing out approaches and refining them. The 'reflective-theorising' approach involves not only trying out and adapting pedagogies but stimulates further reflection, including the development of a 'personal theoretical framework' based on investigation (ibid.).

This final level – 'reflective-theorising' – demonstrates the extent to which reflection and enactment are entwined, and practical theorising includes the same recognition of this complex relationship. Teacher knowledge is not only epistemic (or theoretical), nor is it solely technical, but rather 'textured' with situated understanding (phronesis). Given the overlap in the concepts of practical theorising and practicalising theory, I will use practical theorising. The three levels offered by Cheng and colleagues provide helpful constructs for analysis and align well with the approaches towards external sources defined by Vermunt and Oosterheert (2003) as shown on Table 4 below.

Table 4: Key constructs and definitions and their relationship to the FoR dimension

DEBT (2015)	'Exclusive reliance on the experience of classroom teaching' 'narrow vision of reflective practice, simply based on simply looking in the mirror at the one's own actions.'	⟷		'drawing on a range of sources to shape and make sense of experience' 'expansive notion of reflection: critical examination from a range of different angles, illuminated by different sources.'
McIntyre (1990)	Practical theorizing			
Cheng (2012)		Procedural	Reflective-adaptive	Reflective-theorising
Vermunt & Oosterheert (2003)	Cluster 1 and 4: did not use externally sources intentionally	Cluster 3		Cluster 2: 'actively interact with all available sources and relate the information from different sources'

3.2.6 Frame of Reference summarised in terms of concepts and constructs

The FoR dimension is concerned with the range of sources used and the ways these support beginning teachers to make sense of their experience. In analysis attention will need to be paid to which sources are used (as tools), including the ways other people (such as the mentors) are used proximally, and the purpose of using them (object), although a full CHAT analysis is not the intention.

The two-way mediational processes of 'reflection' and 'enactment' (Clarke and Hollingsworth, 2002) are brought together in the concept of 'practical theorising' (McIntyre, 1995), which is a helpful concept for the 'expansive reflection' description which characterises one end of the FoR dimension. The definition of practical theorising in this study is provided in the five principles above (p.3-84).

Given that teacher knowledge is 'textured' (Winch, Oancea and Orchard, 2013), theorisation is 'practical': of, in and for practice (McIntyre, 1993; Cochran-Smith and Lytle, 1999). Since regulation can often be 'dynamic' with understandings occurring

seemingly spontaneously (Oosterheert and Vermunt, 2003), researchers can expect that explicit reference to the full range of sources informing thinking and decision making are unlikely be made by participants, although, the use of the OLEF as a form of double stimulus may provoke more explicit references. Concern about the origin of the source, and inferences about the relative offerings of university and school partners in the programme will not be the focus, given the complex 'textured' nature of teacher knowledge.

3.3 Response to Feedback

The Response to Feedback dimension (RtF) concerns the extent to which beginning teachers can use feedback helpfully to support their learning. The two opposing orientations are 'effective use of feedback to further learning' and a 'tendency to be disabled by critical feedback' (Burn, Hagger and Mutton, 2015, p. 43). The DEBT authors suggest that this dimension relates to the 'value' attributed to the feedback by the beginning teachers and their 'attitude' towards it (Hagger *et al*., 2008). Therefore, the emphasis is on the beginning teachers' perceptions, although the authors acknowledge that these will be determined to some extent by the quality of the feedback given and also to the particular context in which the beginning teachers are learning.

The RtF dimension relates to the 'sense of responsibility' dimension in Bullough and colleagues' work (2004), which the DEBT authors drew on in their use of opposing orientations as an analytical tool. The 'sense of responsibility' orientation goes between the beginning teacher expressing an 'uncritical attribution of responsibility outside of oneself' – that is being 'defensive' – and an 'equally uncritical tendency to blame oneself for outcomes with complex and multiple contributing causes' (Bullough, Jr, Young and Draper, 2004, p. 386). A more helpful orientation, somewhere in the middle, was one in which they were

> *'justifiably responsible', a position where, in seeking to understand events, they located points of action rather than targets for blame*. (Bullough, Jr, Young and Draper, 2004, p. 387).

We can see the overlap here with the RtF dimension as both extreme orientations of the 'sense of responsibility' dimension lead to the beginning teacher being disabled by criticism or lacking agency.

This sense of powerlessness relates to Intentionality as discussed above. The DEBT authors in particular identify the potential for beginning teachers to identify themselves as a failure and to find it hard to separate the need for professional development (learning) from negative feelings of self-worth. 'Perfectionism' and self-deprecation can be equally disabling (Burn, Hagger and Mutton, 2015). Beginning teachers who have enjoyed previous academic success, as have the participants in this study, might find the challenges of learning teaching unexpectedly difficult. Alternatively, a stronger self-esteem may buffer the negative blows of the obstacles they face (Mullen and Schunk, 2013). The 'Becoming a Teacher' project, cited by the DEBT researchers, drew attention to the importance of recognising the emotional charge of learning teaching (Ashby *et al*., 2008). Furthermore, the links between the affective aspects of learning, sense of agency and confidence and the development of a beginning teacher's professional identity have been written about earlier (Beauchamp and Thomas, 2009; Izadinia, 2013).

In terms of reviewing other literature which has influenced this dimension, or which has cited it, this dimension is not explicitly embedded in a rich secondary literature. Unlike Intentionality and FoR, the RtF construct is not used by researchers who cite the DEBT articles. However, the dimension clearly relates to the broader field of mentoring as discussed in 2.3, where I demonstrated that this literature largely relates to the nature of the feedback given by mentors, rather than the response of the beginning teacher.

Overall, most researchers report that beginning teachers value the contribution of their mentors highly (Hobson et al., 2009). A small scale study of Maths and Science beginning teachers on the Teach First route found that the observation and feedback from the mentor was the third most highly rated aspect of the programme (following reflection in and on practice) (Hardman *et al*., 2011). Another PhD thesis concerned with mentoring on the Teach First programme found that 68% of 243 beginning teachers surveyed agreed that meetings with their mentors were 'focussed and supportive' (Cameron, 2014), although we should note that this comment is not made specifically in relation to 'feedback'.

Cameron's study highlights the variance between individuals' responses to the support offered by their mentors. Valsiner's concept of relatedness' – the extent to which a person can link meaning and action – can be helpful here (Valsiner 1994

cited in Billet, 2008). Beginning teachers are exposed to many different ideas, but only relate to particular ones. This phenomenon has been considered by some teacher education designers as they have questioned why some beginning teachers seem to be 'resistant' to the programme messages, and whether this should always been seen in negative terms (Bronkhorst *et al*., 2014). However, it is also important to note the importance that beginning teachers generally attribute to feedback from their mentor, which, given the mentors' role in assessment, is often seen in terms of a form of evaluation or judgement (Hobson and Malderez, 2013).

In summary, the RtF dimension focusses on the extent to which the beginning teacher values the feedback given to them on account of being able to link it to the actions they can take. The beginning teachers' response is shaped by their developing identity, including self-concept, sense of agency and their emotions.

3.4 Attitude to Context

Attitude to Context (AtC) concerns the beginning teacher's approach to the particular school, subject department and classes of students they teach. It also considers their attitude towards their own role and status as a beginning teacher (Hagger *et al*., 2008). At one end of the continuum the beginning teacher expresses an 'acceptance of the context and an ability to capitalise on it', whilst at the other end there is a 'tendency to regard the context as constraining' (ibid., p. 167). Like RtF, the AtC dimension draws on the 'sense of responsibility' dimension constructed by Bullough and colleagues (2004). The differences in both the AtC and 'sense of responsibility' dimensions lie in the extent to which the beginning teacher senses opportunity versus constraint, and the extent to which they take personal responsibility to capitalise on those opportunities versus blaming other factors for their own difficulties. The literature which considers the role that context plays has been discussed in a previous section (2.3.4) in which, following Billet, I conclude that whilst the context can both 'afford' and 'constrain' learning opportunities, importantly beginning teachers differ in the ways they 'negotiate' these parameters (2008).

In order to capitalise on learning opportunities, beginning teachers would need both the will (or Aspiration) and wherewithal (Intentionality) to achieve this, reminding us once again of the extent of interrelationships between the OLEF dimensions. This was illustrated clearly by the DEBT team in the case-studies of Lyndsay and Ed (2008;

2010). Whilst Lyndsay's high aspirations and deliberative approach supported her in creating learning opportunities, even within a context which might be described as 'restrictive' (Engeström 2009), Ed's complacent and negative attitudes to learning only changed when he formed a new mentoring relationship (Mutton et al. 2010).

In the second year of their teaching posts (Year 3 of the DEBT project) the effects of context seem to have an even stronger relationship with the teachers' dispositions, leading the DEBT authors to claim that the environment can 'exert some influence on a teacher's own dispositions' or 'change them' (Burn, Mutton and Hagger, 2010, p. 651). In employment-based ITE, where the teacher is employed by the school, there is some evidence that 'socialisation' effects could be even more powerful. For example, research examining the practices of teachers on the Teach First programme in 2008 found that schools 'accultured' the teachers' pedagogy and prevented innovation (Muijs, Chapman and Armstrong, 2014). In an evaluation of Teach First teachers' impact, the barriers to development (and impact) were identified as all being related to the particular school context, including lack of support at school or departmental level, lack of consistency in school policy and the school itself being under pressure to improve (Muijs *et al*., 2010).

The type of schools in which Teach First participants are placed also creates particular challenges. Teach First initially described these schools as 'urban complex' schools, which captured a broad set of indicators including family income, school attainment levels, geography and teacher shortages (Hardman, 2010). Over time the eligibility requirements for 'partner schools' have changed. In 2020 partner school eligibility requires that they are located in areas with low levels of family income and/or persistent levels of underperformance in attainment outcomes (according to the Income Deprivation Affecting Children Index and Achieving Excellence Areas scores Teach First, n.d.).

The distinctive nature of an employment route has implications for the role of the beginning teacher as someone who is an employee, responsible for students' progress, and a learner. The particular identity of teachers on employment-based routes has been seen (though not empirically shown) to be that of a 'good employee – loyal to the organisation and committed to meeting company objectives' (McIntyre, Youens and Stevenson, 2019, p. 164). However, it is important to note the empirical evidence showing that some participants on both School Direct Salaried and Teach First

programmes eschewed the 'brand' (Hutchings *et al*., 2006; George and Maguire, 2019).

Hardman and Carroll, both acting as university-employed tutors on the Teach-First programme, described the learning process as very 'public'(2011, p. 7) in the sense that it is performatively assessed. In contrast, another university-employed tutor's research, based on interviews with teachers on a School Direct Salaried route, suggested a different perspective as they reported enjoying opportunities to 'practise in private' behind a closed classroom door and without having a more experienced teacher observing every lesson (Hyde, 2018). Hyde also reported that the participants claimed feeling like 'real teachers' with a sense of belonging to the school, and that they were better prepared for the demands of their NQT year (ibid.).

Overall, the 'context' of the experience of beginning teachers on employment-based routes is very different from that on other routes. Cameron's study into mentoring in the Teach First programme used the metaphor of a crucible to

> *reflect the intensity of the experience of becoming a teacher and the substantial support it requires; within the support of the crucible a mingling of raw materials takes place in an environment of great heat and pressure, ultimately leading to an outcome which is both creative and transformative*. (Cameron, 2014, p. 176).

Cameron's attention focuses on both the support and the general 'environment' as aspects of the context. His overall argument claimed that mentoring practices on the Teach First programme were heavily 'attenuated' by school practices (2014). In considering the AtC dimension however, we need to attend not only to the context, but especially to the ways in which the beginning teachers negotiate it.

In summary, AtC focuses on the way the beginning teachers negotiate the physical and social situation of their learning, including their conception of their own role (their identity). Researchers have differing views on the ways that the employment status would affect their learning, with some identifying the opportunities for beginning teachers to enjoy the full complexities of being a 'real teacher,' while others worry that beginning teachers, as vulnerable learners, are subject to expectations to conform as a 'good employee.'

3.5 Aspiration

The Aspiration dimension focuses on the extent of the beginning teacher's aspiration for themselves and the students they teach. At one end of the continuum 'the boundaries are constantly being pushed', at the other end there is 'satisfaction with current levels' (Hagger *et al*., 2008). The DEBT authors highlight that this dimension is a 'powerful determinant' of beginning teachers' learning (Burn, Hagger and Mutton, 2015, p. 40). However, in themselves, high aspirations do not necessarily create the conditions for learning. If aspirations are unfocussed, for example (lacking clear Intentionality), they will not lead to effective learning and the beginning teacher may become quickly frustrated. The expressions of 'low aspirations' are also more complex as they can be attributed to several different factors, including over-confident or unmotivated complacency. Or quite differently, they might be due to low confidence (Burn, Hagger and Mutton, 2015), which – following the review of Intentionality (3.1.1) – we might consider in terms of low self-efficacy, when it is related to expectations around a specific activity.

The Aspiration dimension does not feature specifically in the citations of the DEBT seed articles, except with reference to the term alone. However, there are several relevant threads of literature. Firstly, the relationship between expectations and outcomes for learners has been a subject of research interest for many decades (Wang, Rubie-Davies and Meissel, 2018). Furthermore the Teachers' Standards have enshrined the importance of setting 'high expectations' for learners (Department for Education, 2011). The second area of literature concerns the specific nature of the teachers on employment-based routes, their personal motivations and the 'mission' statement of the programmes.

The Pygmalion effect or 'expectation theory' is generally accepted, even if we do not fully understand the mechanics of how it works (Rubie-Davies, 2007; Wang, Rubie-Davies and Meissel, 2018). Some studies, for example have suggested that teachers who have higher expectations of groups of learners behave differently in the classroom (Rubie-Davies, 2007), although as an example of process-product research, this risks confusing causation with correlation. Furthermore, Teach First's specific mission to break the link between educational outcomes and a child's socioeconomic background also reinforces the importance of challenging expectations about the

destinies of children who grow up in areas of economic disadvantage (n.d. For a more recent report see for example Teach First, 2018). In Elliot's account of the organisational discourse of Teach First, she claims that teachers are constructed as 'missionaries' doing 'heroic, philanthropic, life-changing work'(Elliott, 2018, p. 272).

In terms of the teachers themselves, teachers on employment-based routes tend to be older and more experienced (*House of Commons - Education Committee- TDA evidence*, 2012). The School Direct Salaried route requires participants to have three years of experience in industry. However, Teach First attracts a range of age groups, including many applicants straight from undergraduate degrees, who have achieved good educational qualifications at graduate level (*House of Commons - Education Committee- TDA evidence*, 2012). Teach First was set up to specifically address particular problems in the education system in London following the McKinsey Report (2001) which suggested that high quality teachers and leaders were fundamental to improvement (Wigdortz, 2012; Blandford, 2014). The McKinsey report also found that teachers in countries which were seen to be more successful were attracted by the high status given to teachers and so Teach First set out very deliberately to promote teaching as a 'prestigious graduate role' (Wigdortz, 2012, p. 122). Teach First's early recruitment was from a small pool of Russell Group universities[12], although this has now broadened[13]. The very explicitly marketed 'mission' statement and borrowing of business-type marketing strategies single it out as a very distinctive programme (Cameron, 2014).

Teach First explicitly set out to recruit people who would not ordinarily become teachers and the early recruitment processes actively sought to identify a 'new market' of 'non-conforming high flyers' (Wigdortz, 2012, p. 140). Claims that the participants are 'elite' have been made by both advocates and critics of the programme (SecEd, 2013; Elliott, 2018). Criticism of its evangelical nature (Ellis *et*

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[12] Evidence submitted to parliament from Teach First claimed that 23% of Teach First participants in the first three cohorts (2003-2006) graduated at the Universities of Oxford or Cambridge. 74% of the intake in 2008 graduated at Russel Group Universities in 2008. <https://publications.parliament.uk/pa/cm200910/cmselect/cmchilsch/275/9042006.htm> Accessed 12th April 2019.

[13] Teach First claimed that of the 2019 participants recruited: 30% attended a Teach-First eligible secondary school (i.e. high scores on Income Deprivation Affecting Children Index), 30% were career changers and 22% were from BAME groups. < https://www.teachfirst.org.uk/press-release/teach-first-recruits-largest-ever-cohort-trainees> Accessed 12th April 2020.

al., 2015) and suspicion of cult-like behaviours[14] are in part due to the active cultivation of a 'movement' of people through the 'ambassador' network (for alumni), and a focus on 'esprit de corps' throughout the programme, but especially during the intensive six-week residential programme (Hutchings *et al*., 2006).

Ofsted's 2011 inspection of the London programme reported that

> *the quality of the participants is exceptional: particularly their personal characteristics, professional attributes, self-motivation, critical reflection and their commitment to raising the aspirations and achievement of the students in their schools and addressing educational disadvantage* (Ofsted, 2011, p. 6).

Overall, it seems that Teach First participants are not seen as being typical of average beginning teachers. They may be highly motivated to address educational inequalities and therefore have very high aspirations for their learners. It should, however, be noted that this motivation is not distinct to beginning teachers on the Teach First route, but is shared by other beginning teachers both in the UK and internationally (Ashby *et al*., 2008; Avalos, 2016). In terms of the DEBT project, the beginning teacher participants when interviewed about their motivations frequently spoke about their love of the particular subject they taught (mentioned by 88%), whereas only 30% shared what the authors described as 'strongly idealistic versions of teachers and teaching' including its role in 'shaping society' (Younger *et al*., 2004, p. 249).

Teach First teachers also seem particularly likely to be seen, and to see themselves, as 'high flyers,' with high aspirations for themselves. The fact that the Teach First programme is explicitly marketed as a 'Leadership Development' programme, with participants only making an initial commitment to two years teaching also sets it apart. Leadership was envisaged by Wigdortz as a solution that would link together the three elements in his consultancy problem: 'pupils in challenging circumstances'; 'top graduates' and 'businesses and other supporters'. Wigdortz's initial proposal was that leadership was the 'missing ingredient' – 'it was what the pupils needed, what graduates wanted the chance to show and what other organisations could support'

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[14] The discussion of being 'cult-like' appears frequently in blogs and online forums. For example see https://lauramcinerney.com/top-5-myths-about-teachfirst/ or https://pragmaticreform.wordpress.com/2013/09/08/is-teach-first-working/. Note that both of these blogs are written by people who are Teach First 'ambassadors' and support the programme.

(Wigdortz, 2012, p. 44). Teach First then explicitly recruits graduates who have aspirations of leadership and it has been aligned with other 'fast-track' routes (Mcconney, Price and Woods-Mcconney, 2012), although it should be noted that the programme does not automatically lead to teachers gaining leadership positions. In a survey in 2009-10 around 36% of participants (in their first or second year of teaching) reported that they held a leadership role (Muijs *et al*., 2010, p. 26).

In summary the Aspirations of the beginning teachers are seen to be a required (though not in themselves sufficient) condition for effective learning. The literature suggests that Teach First participants may have particularly strong aspirations for their learners and themselves given their own motivations for joining the programme, its mission and recruitment process and the nature of the schools in which they work in.

3.6 Chapter summary

In this chapter I have unpacked the five dimensions of OLEF in terms of the DEBT researchers work, but also in relation to research around employment-based ITE. Citation analysis of literature related to the DEBT seed articles have deconstructed the OLEF dimensions, including drawing in concepts which were not explicitly related previously. By showing the alignment between the OLEF dimensions and other fertile concepts such as self-regulation, deliberate practice, practical theorising and self-efficacy, this chapter has opened up new avenues for research and learning.

Chapter 4 Methodology and methods

In the first chapter I provided a rationale rooted in the personal professional and broader policy context for the study, which engages teachers and mentors in research on the nature of their learning on employment-based routes of Initial Teacher Education (ITE). Chapter 2 introduced the Developing Expertise of Beginning Teachers project (DEBT), situating the subsequent 'seed' articles published within a fertile field of socio-cultural research. Chapter 3 focussed on the five dimensions of the Orientations to Learning from Experience Framework (OLEF), which forms the conceptual framework for this study. This chapter presents the methodology and methods used in the study, demonstrating the ontological and epistemological alignment with the theoretical tools and conceptual understandings outlined in Chapters 2 and 3 and the research questions.

The chapter opens by presenting the research as having taken an action research approach, drawing on tools borrowed from Vygotskian methodology. Section 4.1.1 outlines indicators of quality and rigour within these research traditions, before exploring the implications of the epistemological and ontological assumptions underlying this approach (4.1.2.) The methods are discussed next (4.2), including discussion around participation (4.2.4). The shorter exploratory studies of Phase 1 are outlined (4.2.5) with the implications for the main study identified in section 4.3. Each of the six cycles of the Phase 2 methods are presented (4.4). The chapter closes by outlining the methods of analysis (4.5).

4.1 Methodology

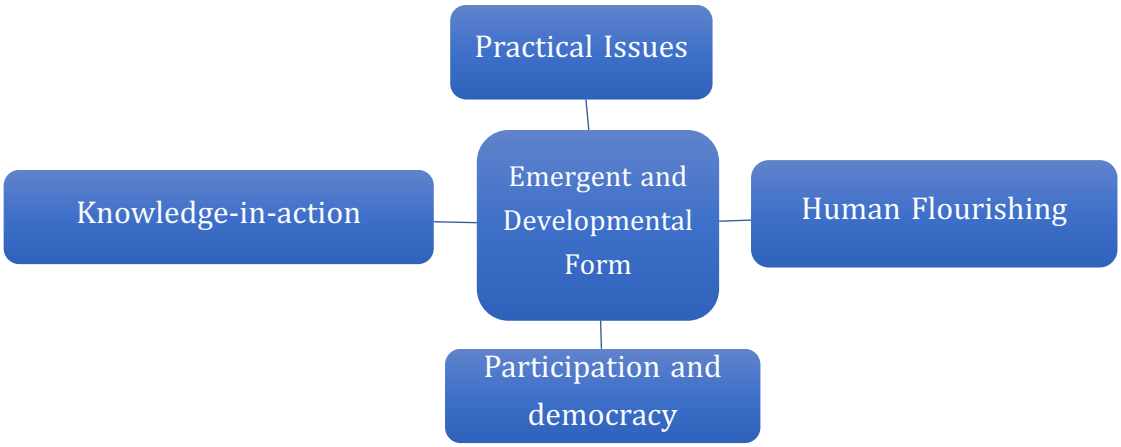
The study takes one of the research products of DEBT– The Orientations to Learning from Experience Framework (OLEF) – back into the school environment, seeking to explore how teachers and mentors might use this tool to support their activities. Furthermore, it examines whether these practitioners can generate further data to explore, and improve, their (our) own practice. The work can therefore be described as being 'Close-to-Practice' research, which a BERA report defined as:

> *research that focusses on aspects defined by practitioners as relevant to their practice, and often involves collaborative work between practitioners and researchers (Wyse et al. 2018, p.1)*

Within this range of methodological approaches, the study takes an action research approach, in its focus on cycles of action and reflection designed to develop practice. Action research has been described as 'a family of practices of living inquiry...not so much a methodology, as an orientation' (Reason & Bradbury 2008: 1). Like many families, the histories and traditions they draw on are contested (McIntyre, 2008) and the practices vary from self-learning through 'concrete steps' (McNiff 2002: 13) to more 'organic' radical emancipatory and participatory approaches (Heron & Reason 1997).

Despite the diversity of approaches, Reason and Bradbury (2008) have identified five common characteristics as shown in Figure 14. As they conceive of it, action research is concerned with positive, practical outcomes, which are created in partnerships between participants who engage in sense-making together as they explore and create new forms of knowledge in, and through, the action they investigate.

Figure 14: The five characteristics of action research (Reason and Bradbury)



The research design also used concepts from Vygotskian-informed methodologies, specifically 'double stimulation'[15]. Whilst Vygotsky's legacy is broad and far reaching (Daniels, Cole and Wertsch, 2007), Vygotsky claimed 'the search for the method' was one of the most important problems he addressed, resulting in a method

[15] This method was described by Vygtosky (and in translation) using various terms including 'dual stimulation' (Vygotsky 1987), the 'instrumental method' and 'functional methodology of double stimulation (Vygotsky 1999).

which was 'simultaneously prerequisite and product, the tool and the result of the product' (Vygotsky, 1978b, p. 65). Vygotsky rejected contemporary psychologists' focus on the simple one-way Stimulus-Response of involuntary action, instead he proposed the use of a second stimulus or 'stimulus means' (Vygotsky, 1978b) to study what he described as the 'higher mental processes' of development. He described this as follows:

> *Wishing to study the internal structure of higher mental processes we usually do not limit ourselves to presenting the subject with simple stimuli (regardless of whether the stimuli are elementary or the tasks complex) to which we expect a direct response. We present the subject another series of stimuli that functionally must play a special role - must serve as a means for organizing his own behaviour. In this way, we study the process of solving the problem with the use of certain auxiliary means, and the whole psychological structure of the act becomes accessible to us over the whole course of its development an in all the uniqueness of each of its phases. Examples of our experiments show that specifically this way of bringing up auxiliary means of behaviour allows us to trace the whole genesis of the most complex forms of higher mental processes…*
>
> *By posing the problem of studying specifically these devices and structures, bring to the outside those auxillary operations with which the subject masters one task or another, our methodology makes them accessible for objective study; in other words, it* ***objectivizes*** *them'* (Vygotsky, 1999, p. 59 my emphasis.)

For Vygotsky these higher mental functions are 'sociohistorical in genesis' (Vygotsky, 1999, p. 55) and he was interested in studying them 'historically,' that is 'in the process of change' (Vygotsky, 1978b, p. 61). The role of the second stimulus was to bring out, make accessible and *objectivize* this process.

Vygotsky's focus on introducing this extra stimulus can be understood as both a rejection of contemporary behaviourist psychology, particularly the work of Pavlov, and as a result of his understanding of human development influenced heavily by Darwin, Marx and Engels.

> *Human beings' history was for Vygotsky the history of artefacts, of artificial organs. These artefacts allowed humans to master nature as the technical tool of speech allowed them to master their own mental processes* (Van der Veer and Valsiner, 1991, p. 204).

This quotation's repetition of the opportunity to 'master' nature and themselves draws attention to the importance that Vygotsky placed on 'self-control,' 'voluntary action' (Vygotsky, 1997) or 'volition' (Sannino, 2015) in the experimental process, as well as wider life. It also reminds us of the role of artefacts, or tools and signs as mediators.

Vygotsky's conception of explicit mediation is associated with a triangular depiction of mediated action whereby an artefact mediates the relationship between the subject and object. Vygotsky claimed that

> *All higher psychological functions are united by one common characteristic, namely that they are mediated processes, i.e. that they incorporate in their structure, as the central and basic part of the process in general, the use of the sign as a basic means for directing and mastering the psychological processes* (Vygotsky, 1994, p. 207).

In a study of teacher learning, which aims to increase participant agency in improving their practice, the double stimulation method offers an opportunity both to provide a tool and to explore how the participants

> *use the donated tools, the sense they make of them, the ways in which their activity is shaped by the tool-use and, potentially, the ways in which subjects reshape the meanings of the tools* (Ellis, 2010, p. 96).

I am interested in how OLEF can act as a tool to help mentors and teachers make sense of and improve the learning of beginning teachers.

Whilst Vygotsky's research focussed mainly on the psychological processes of individuals, albeit attending to broader society, his methods and theories have been further developed to focus on collective action in and across systems. Engeström has described this development in terms of three generations of activity theory from Vygotsky's initial focus on mediated action, through the work by Vygotsky's colleague Leontiev's focus on collective action, to Engeström and colleagues' work around the activity system and networks of activity systems (Engeström, 2001).

From a methodological perspective, Engeström and colleagues have described and popularised Developmental Work Research (DWR) which uses Vygotsky's concept of double stimulation to support, develop and therefore reveal collective work practice (Engeström 2005; Engeström 2007). In DWR the primary stimulus is a selection of representations of work practices, such as video or transcripts, displayed on a *mirror surface*. The second stimulus is a theoretical tool, usually a model of an activity system from Cultural Historical Activity Theory (CHAT) (Engeström, 2005, 2007).

Edwards has argued that action research also has 'potential' to follow other forms of interventionist research if it moves beyond a focus on individual development, paying attention to 'systemic change' (Edwards, 2010b, p. 151). Indeed some researchers

have used activity theory, and another variant of DWR within work they describe as action research (Stuart, 2014, 2017; Thorgeirsdottir, 2015).

Following a symposium in 2008, a special edition of *Mind Culture and Activity* explored the possibilities for the overlapping methodologies and practice in Cultural Historical Activity Theory and action research (Somekh and Nissen, 2011), including exploring the relationship between Kurt Lewin and Vygotsky and the ways their social research overlapped (Chaiklin, 2011). Langemeyer argues that there are three elements of overlap between action research and, post-Vygotskian activity theory, such as Engeström's model:

> *(a) active participation in the research process of persons concerned with the matter of investigation;*
>
> *(b) a critique of practice and a self-critique of practitioners, which is captured in the cyclic movement; and*
>
> *(c) the (emancipatory) engagement for practical change* (Langemeyer, 2011, p. 149).

Here Langemeyer shows how the processes and aims can align.

Whilst Lewin and Vygotsky may well have influenced each other's work, and informed this study, I need to be clear that this study is not framed as the experimental action research described by Lewin in which generalised theories are tested in field settings. I do however recognise that action research approaches can go beyond addressing individual action and local problems, following Lewin in claiming that we can

> *use interventions in specific situations as a way to develop principles (e.g., general laws) that could be used to analyse similar situations,* (Chaiklin, 2011, p. 145).

Therefore, action research can develop findings generalisable beyond the original site of enquiry.

As Activity Theorists continue to extend the scale of their focus, Edwards also reminds us of the challenge of identifying the object of the study and putting limits on it.

> *The Vygotskian attention to the intertwining of mind and world can make that difficult to do, as there is very often a strong temptation to capture as much as possible: actions, activities, practices, social systems and political environments. Selecting what to foreground and what to position as relevant presents the researcher with dilemmas …The engaged researcher has to*

> *identify her purposes and select a focus that sustains the compatibility of the object of enquiry with the unit of analysis as a starting point from which to reveal the connections with the background in which they have arisen.* (Edwards, 2010b, pp. 142–3)

Within this study the object of enquiry is the beginning teachers' approach to learning from experience. The units of analysis are the five dimensions of OLEF and the ways in which the mentor-beginning teacher conversations and the broader 'mirror meeting' conversations within the research group *objectivises* these dimensions. However, these cannot be understood without contexualising 'the background' of this practice, which following sociocultural understandings is

> *historically formed, imbued with knowledge, freighted with emotion and shaped by the values and purposes of the institutions in which they are located* (Edwards and Daniels, 2012, p. 40).

Whilst the methods of DWR have been carefully described down to the detail of the room layout and resources (Engeström, 2005, 2007), Vygotsky's original methods are more loosely defined and contested on account of variants in translation, gaps in his publications, censorship, geo-politicised interpretations and his early death (Daniels, 2008; Sannino, 2015). It is therefore important to be clear about the tools I have used. Firstly, the research is interventionist in its deliberate disruption of existing practice and explicit focus on action and reflection for improvement. Secondly, I use double stimulation through 'mirror data' alongside a theoretical model, namely OLEF. The continua of orientations (OLEF) are used as the analytical tool (both as a second stimulus during the research) and in subsequent analysis.

The next section (4.1.1) will consider the aspirations for quality and rigour for this work, before exploring the underlying ontological and epistemological assumptions (4.1.2 onwards). The final part of the chapter (4.2. onwards) describes the methods used in this study.

4.1.1 Quality and rigour

Quality indicators in action research vary according to traditions and are contested (Herr & Anderson 2012; Mcateer 2014). In their review of practice-based and applied educational research, which included action research, Oancea and Furlong explored 40 sets of different criteria (Oancea & Furlong 2007). They concluded that

> *research in education ought to be assessed in the light of what it wants and claims to be, and not through a rigid set of universal standards (Oancea & Furlong 2007, p.122)*

It is therefore important to outline clearly the aims and claims of the research.

Fundamentally, the distinctions between different views of quality are based on views of knowledge (the epistemology and ontology) and therefore the paradigms in which they situate themselves. For example, Heikkinen and colleagues (2016) use Aristotle's forms of knowledge to provide a persuasive and coherent argument for the focus on poiesis and praxis in practitioner research, rather than the 'God's eye view' of episteme, which, by its very definition, has no practical aim or purpose.

Their robust justification forms a powerful defence against the implied hierarchies in research. As Oancea and Furlong explain, the assumptions of placing practice-based research in an instrumental framework in which 'the difference between theoretical, propositional types of knowledge and practical, implicit ones is one of status, rather than mode' (Oancea & Furlong 2007).

Instead, they argue that some action research has demonstrated that

> *research may contribute to theoretical knowledge* ***while at the same time*** *being part of changing practice in a way that is intrinsically worthwhile. [Action research and other practice-based research] foster theoretical, as well as practical modes of knowledge, and point up the complexities involved in bringing practice together (Oancea & Furlong 2007, p.123 emphasis in original).*

This is the ambition of this study: firstly, to support practitioner (participant) learning and knowledge, as reported by them, and also in the actions observed (poiesis and praxis). Secondly, it is intended to contribute to new understandings of beginning teachers' approach to learning, and the ways mentors may contribute to this learning through the development of the OLEF framework (episteme).

It thus fits within the framework for high quality 'Close-to-Practice Research' outlined in the recent BERA report (Wyse et al. 2018).

> *High-quality Close-to-Practice research was seen by the interviewees as research that focussed on issues that are important for practitioners, providing them with tools to better understand their problems, and to find solutions to improve their practice and promote meaningful change. Close-to-Practice researchers recognise 'usefulness' and 'practicality', combined with an understanding of how theory can be applied in a particular context in order to help broaden understanding about practice… The creation of*

> *partnerships between researchers and practitioners is therefore crucial to developing new and powerful insights that could contribute to more complex explanations. (Wyse et al. 2018, p.24)*

It might be noted that researchers and practitioners here seem to be presented as different people, however six of the 26 documents which met the inclusion criteria in the 'Close-to-Practice' report were conducted by or with practitioners (ibid, p.14).

The proposal that practitioners can create their own knowledge remains controversial. Anderson and Herr suggest that academics

> *tend to be comfortable with practitioner research as a form of local knowledge that leads to change within the practice setting itself, but [they] are less comfortable when it is presented as public knowledge with epistemic claims beyond the practice setting (Anderson & Herr 1999, p.14).*

Practitioner research was not included in the Sage Handbooks of Research in Teacher Education until 1990 (ibid.). By the 2008 edition, Borko and her colleagues identify practitioner research as a distinct genre of research, which includes action research, and cite Zeichner's (1999) claim that the emergence of teacher educators exploring their own practice is 'probably the single most significant development ever in the field of teacher education research' (Borko et al. 2009). This shows a great deal of progress, which is further attested by McNiff, who, in her second edition of a popular practitioner guide, acknowledges that whilst in 1988 action research was 'struggling for legitimacy. Today it is recognised as a valid form of enquiry' (McNiff 2002, p.1).

It seems, however, that whilst action research is very much understood as a worthwhile learning activity (or enquiry) for teachers, there remains some challenge to its broader acceptance, and value, within the academy. Korthagen, for instance, notes that whilst teachers have been encouraged to engage in reflective practice, including action research since the 1970s, teacher educators did not take this up until the 'self-study' movement of the 1990s (cited in Loughran 2007). Furthermore, despite the 'influential' and 'early emergence' of practitioner and action research traditions, Menter and his colleagues report that they are 'at first surprised' that action research methods are used in only 7.8% of the 446 items they include in their review of teacher education research 2000-2008, although over 60% are 'reflection based' (Menter et al. 2010; Menter 2011). Even when research (including action research) is carried out and reported by practitioners it tends to be very poorly rated. In the most

recent REF Wyse and colleagues (2018, p.27) report that there was felt to be a 'widely acknowledged' association between 1* outputs[16] and practitioner research.

One of the challenges for action research is that researchers do not always build a relationship between practice and broader theoretical constructs. McIntyre, drawing on Kemmis and McTaggart (2005), argues that it is the engagement with theory which makes it research, 'not the machinery of research techniques' (564: cited by McIntyre 2008b, p. 59). Yet, according to Menter and his colleagues, the failure to link practice and theory could be true of many of the works, from a range of methodological traditions included in their review of teacher education research, which they describe overall as being 'undertheorized' (Menter et al. 2010, p.3).

In describing the distinctive features of academic research (as opposed to practitioner enquiry), interviewees in the BERA Report on Close-to-Practice research claim:

> *use of a strong theoretical framework to support and enable the generalisation of findings is a fundamental feature of rigorous research. Related to the role of theory was the view that a robust methodological framework that supports confidence in research findings, and therefore allows for generalisation of the research findings, was necessary (Wyse et al. 2018, p.25).*

This study takes a particular theory of approaches to learning – OLEF – as its initial starting point. In this way, the research can be seen to follow early forms of action research in which theories developed by university-based researchers are experimented with in the classroom setting (Elliott 2006, cited in James 2014). Unlike early forms of action research however, this study argues that the theories are not only 'tested' in school settings but are used to stimulate and support the creation of new knowledge about beginning teacher learning.

This epistemic knowledge requires 'methodological and theoretical robustness' (Oancea & Furlong 2007, p.128). Wyse and colleagues similarly conclude that:

> *high quality Close-to-Practice research requires the robust use of research design, theory and methods to address clearly defined research questions, through an iterative process of research and application that includes reflections on practice, research, and context (Wyse et al. 2018, p.2).*

In the methods section below (4.2), I seek to demonstrate how the study meets these criteria, including a strongly iterative and reflexive approach. In order to achieve

[16] 1* represents the lowest grading on a 1*-5* scale.

'excellence' according to Oancea and Furlong's recommendations for the epistemic domain, the research requires 'transparency and explicitness in design and reporting.' Here, they argue

> *Transparency implies that a great deal of care, reflection, and systematic attention to detail need to be involved in the design and the reporting of research, together with an effort to make it as clear and communicable to others as its nature permits. Explicitness is the feature that makes research peer-reviewable (Oancea & Furlong 2007, p.128).*

Here I think the concept of reflexivity is particularly helpful, following Cook's description of building rigour through 'the messy turn':

> *The 'messy area' is not an easy place to be. The road in and out is not clearly defined and is unlikely to be direct or smooth. The 'messy area' itself is unsettling, worrying, exciting and challenging. It is disruptive of habit and custom. The purpose of entering this mess is to enable and allow new directions to emerge; to enable diversity and multiplicity to work together to challenge the given, to recognise the nearly known and to support the creation of trustworthy, transformational knowing. The honest embodiment of the mess, its process, practice and purpose, will help researchers understand the drivers behind changes in thinking and transformational action in enquiry; how to reach the 'messy turn'. If an indicator of our successful work as action researchers is the integration of the development of practice with the construction of research knowledge, then we must provide honest accounts of that process and incorporate mess as an integral part of a rigorous approach (Cook 2009, p.190)*

Having explored the broad range of literature dealing with quality, including those working within the action research tradition itself (such as Eikeland 2006; Herr & Anderson 2012; Cook 2009; McAteer 2014) and those considering relevant wider methodological approaches and seeking to describe academic excellence (Oancea & Furlong 2007; Wyse et al. 2018), I conclude by summarising the criteria by which I think the quality of the study should be judged. These are organised in relation to the quality (validity) criteria first presented and subsequently revised by Anderson and Herr (1999, 2012). Here the use of the term 'validity' draws on the etymological roots of the term 'valid', from the Latin for 'strong'(Eikeland 2006b). The Oxford English Dictionary defines the claim of an argument or point to be valid as its 'having a sound basis in logic or fact; reasonable or cogent' (Oxford English Dictionary n.d.). In the words of Eikeland 'it says: (simplified) trust, believe or learn this!' (Eikeland 2006b).

Table 5:Quality criteria, adapted from Anderson and Herr (2012)

Anderson and Herr (revised 2012)		Other key concepts
The Goals of Action Research	**Quality/ Validity Critieria** (definitions from 1999)	
The generation of new knowledge	**Dialogic validity** ('seeks dialogue with peers...should be done as collaborative inquiry') and **Process validity** ('permits ongoing learning of the individual or system')	**Theoretical framework** **Original contribution**
The achievement of action-oriented outcomes	**Outcome validity** ('the extent to which the actions occur which lead to a resolution of the problem that led to the study')	
The education of both researcher and participants	**Catalytic validity** ('the research process reorients, focuses, and energizes participants toward knowing reality in order to transform it...all involved in the research should deepen their understanding of the social reality under study and should be moved to some action to change it (or to reaffirm their support of it'))	
Results that are relevant to the local setting	**Democratic validity**('research is done in collaboration with all parties who have a stake in the problem under investigation')	**Member reflections**
A sound and appropriate research methodology	**Process validity** ('permits ongoing learning of the individual or system...a series of reflective cycles that include the ongoing problematization of the practices under study')	**Transparency and explicitness in methods** **Reflexivity** **Iterativity**

In Chapter 8 I address RQ 4 considering the way that OLEF is used to support learning and claims made about the process. As part of this I evaluate the research in relation to the quality criteria introduced here in terms of three goals:

1) Democratic, dialogic and process validity: research which develops new knowledge with participants and supports ongoing learning.
2) Catalytic validity: research that orients, focuses, energises and transforms
3) Outcome validity: research which achieves the resolution of the problem which led to the study.

4.1.2 Ontological and epistemological assumptions

Action research has been aligned with various paradigms including even positivism in its recognition that there is an external reality. Certainly, in its earliest iterations, as practised by Lewin for example, it could be understood as a form of applied research, whereby experimental design was taken from the laboratory into everyday 'field' settings. However, following constructivism, Reason and Bradbury (2008) contest that this reality can be articulated objectively without recognising the cultural frames by which we construct this perception of reality. As such, action research approaches have been influenced by the 'linguistic turn' and post-structural approaches in social sciences.

Vygotsky's use of double stimulation was similarly based on an understanding that we cannot directly access the object of our research and so rely on the concept of mediation. According to Vygtosky, development occurs through mediated action: using tools and artefacts to solve a problem and find meaning. As such, researchers attend to the way the tool is used by participants and the way the sense they make of it. Developmental Work Research (DWR) developed by Engeström and used by Ellis in the field of teacher education (Ellis, 2008, 2011) is the most well-known interventionist methodology that have been based on Vygotsky's work using the double stimulation method. DWR is also the most theoretically developed of these methods, so by considering the claims of DWR I hope to draw out the possibilities of other forms of research using the interventionist methods, based on double stimulation.

An important feature of DWR is the way it conceptualises knowledge following Cultural Historical Activity Theory (CHAT). Engeström argues that Activity Theory doesn't fit into the three epistemologies of realism, constructivism or constructionism, but is an 'original and powerful approach to the social construction of knowledge'

(Engeström 2005, p.159). Ellis, in comparing action research and CHAT, argues that CHAT

> *understands knowledge as accessed and developed in joint work on a potentially shared object. Consequently, knowledge is understood as existing as much among participants in the same field of practice as it does within them and the creation of professional knowledge (at the level of concepts and patterns of social organisation) might take place in the transformation of the object of activity…*
>
> *The aim of the collaborative work of participants and me as a researcher was not merely a scientific conceptualisation of practice enabled by an upward movement from the (implicitly lesser) spontaneous every day but a mature understanding of practice that entailed pushing the knowledge that had been accessed and developed out into the social world of classrooms to do some work (Ellis 2011).*

He compares this with the British tradition of action research which, he claims, focuses on a distinct, or unique form of knowledge, namely:

> *practical knowledge and is distinguished from other kinds of knowledge that have wider value in the sense of disciplinary or scientific knowledge (ibid. 189)*

and speculates that this rejects theory in a 'peculiarly Anglophone tradition of anti-intellectualism' (ibid., 189).

I would suggest that there is more overlap in understandings about the nature of knowledge, in this study at least, than Ellis claims.

Like Engeström, action researchers Reason and Bradbury argue for an extended epistemology, suggesting that action research is grounded in a 'participatory world' view, which is 'emerging at this historical moment' (Reason & Bradbury 2001, p.1). This claim can be seen too in Reason's earlier work with Heron in which they outline a 'participatory' inquiry paradigm, separate from Guba and Lincoln's descriptions of other paradigms (Heron & Reason, 1997: 289). In particular, by extending the constructivist view that research findings are subjective and interpreted, Heron and Reason argue that we need

> *critical intersubjectivity... a critical consciousness about our knowing necessarily includes shared experience, dialogue, feedback, and exchange with others (Heron & Reason 1997, p.238).*

The relationships between, and the roles of the participants and (sometimes 'as') researchers, are a particular focus of action research. McIntyre (2008) identifies that the nature of participation in participatory action research is often controversial. I

recognise the 'participatory' (Heron & Reason 1997) understanding embodied in the sense-making of mentor and teacher participants, as co-researchers, exploring their own actions through joint reflection and action. In so doing, I share Cochran-Smith's view that

> *all of the participants are regarded as knowers, learners and researchers... practitioners are assumed to be among those who have the authority to construct knowledge (with a capital K) (Cochran-Smith & Donnell 2006, p.508).*

For Heron there are two forms of participation: participation in the action and experience being researched (epistemic) and (political) participation in the thinking and decisions involved in the design, research process and analysis. The table in Appendix B summarises the extent of participation from traditional qualitative design (as Heron defines it) to his preferred model of full cooperative inquiry (1996). This table presents a useful continuum of degrees of participation, which has informed the research design.

It is clear that Heron's model privileges the knowledge of the actor or participant, rather than the 'outsider' perspective. Given this approach, he shares the assumption that:

> *the relation of knowledge and practice are complex and distinctly non-linear and that the knowledge needed to improve practice is embedded in local context and influenced by relations of power (Cochran-Smith & Donnell 2004, p.508).*

Other action researchers, such as Eikeland, contest the dualism between insider and outsider, instead arguing that an action researcher, through participation becomes a 'reflective native...studying what-it-means-to-be and- act-as –a native,' along with other 'reflective natives' (Eikeland 2006a). Therefore, knowledge is co-created within the action research group, rather than being 'captured' by a researcher. This study aimed to increase participation along Heron's continuum (Heron & Reason 1997) over time, recognising that full participation is not always 'doable' (McIntyre 2008, p.15). The theme of participation is further developed in section 4.2.4 below.

Fundamentally, Heron and Reason argue, action research focuses on practical actions and understanding. This is not a matter only of the context and purpose of the substantive learning, but also an epistemological recognition of practical (Somekh & Zeichner 2009, p.13) or experiential (Heron & Reason 1997) knowledge-in action.

Unlike, constructivism or Critical Theories, action research claims that action is a 'legitimate way of knowing' (Tandon 1996 cited in McIntyre 2008) and therefore 'extends' traditional epistemologies (Reason & Bradbury 2008). 'Knowing' is seen not as a thing, to be discovered or created and stored up in journals, but rather arises in the process of living, in the voices of ordinary people in conversation (ibid.: 7).

By accepting this view of knowledge, action researchers propose that we need to explore action and practice through iterative cycles of action and shared reflection. Knowledge becomes something which can only be partially (re)presented. This is appropriate to the concept of teacher thinking if, as argued in Chapter 2, we accept the broad consensus within research on teacher learning and mentoring of the problems of making sense of the tacit knowledge embodied in teacher actions. If teachers find it difficult to articulate their knowledge and sources of learning, we need to find more creative ways to access these rich data. Double stimulation, through the use of a mediating artefact (tool) promises to

> *elicit manifestation of the crucial processes in the behaviour of people of all ages…it helps to objectify the inner psychological processes (Vygotsky 1978 p. 74-75 cited in Engeström 2011).*

Whilst McNiff worries that tacit understanding might be dismissed to the 'swampy lowlands' by the 'high priesthood' of universities (McNiff 2002, p.20), Heron presents an 'expression of radical empiricism' in arguing that experiential understanding cannot be represented propositionally (Heron & Reason 1997, p.296). Instead he proposes moving from identifying a propositional inquiry interest, through practical knowing through action, to experiential understanding to considering how this can be represented in presentational knowing (Heron & Reason 1997). This study follows this course: beginning with a series of research questions, which are explored through action and reflection in an attempt to put practical and experiential knowing into words. Cook has suggested that in action research these four types of 'knowing' 'come together' and this study demonstrates how they 'jostle with each other' (Cook, 2009, p. 282).

This section has outlined the ontological and epistemological assumptions within which the study was designed. In particular, I sought to stimulate participants to make sense of, explicate and develop their practice through shared action. The OLEF

framework was used as a second stimulus to support and provoke participants in this sense-making, and to provide a language through which they could explicate their tacit and embodied practice, and plan future action. New knowledge was co-constructed, through dialogue with the data and each other as evident in their actions, re-presentations of understanding (in Mirror Data), and of the OLEF framework itself.

4.2 Methods

This section will describe how the research questions (RQs) were addressed, including introducing the participants, and the data and methods used. I will also evaluate how well these methods aligned with the methodology, including considering the extent of participation. The chapter will include a reflexive discussion of my role as researcher and participant along with other related ethical considerations.

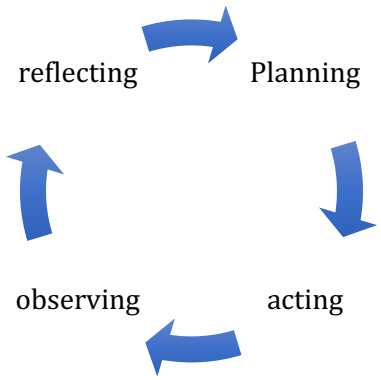
4.2.1 Iterative cycles and spirals

Many action researchers resist prescribing exact methods for their work. In the words of McIntyre, the process 'resists linearity'; instead it is often represented as a

> *spiral of adaptable steps which include the following: questioning a particular issue; reflecting upon and investigating the issue; developing an action plan; implementing and refining said plan* (McIntyre, 2008, p. 6)

Lewin's original action-reflection cycle (acting, observing, reflecting, planning…shown in Figure 15) has evolved, taking on a reflexive thread under the influence of Kemmis and McTaggart (1982 cited in McNiff 2002). Furthermore, John Elliott suggested that these simple steps belie how complex each stage is and argues that the 'reconnaissance' or 'observing' and 'reflecting' stage occur at multiple points- between planning and acting to create spirals within the cycles (1991 cited in McNiff, 2002). McNiff describes her own form of action research as a 'spontaneous,

Figure 15: Lewin's action-reflection cycle 1946. Cited in McNiff 2002



self-recreating system of enquiry' and presents this not as a 'synoptic illusion' of the tidiness of the process, but as a 'simple generative model' (Figure 16).

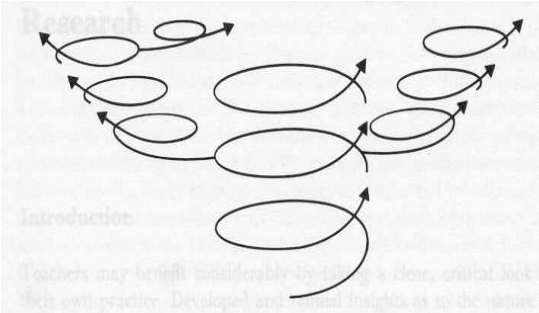


Figure 16:Action Research as a 'simple generative model' McNiff 2002:57

Figure 17 (below) provides some initial orientation for the reader through a multi-layered and cyclical design involving several years, phases and cycles. As the figure shows, data were collected across four academic years. This incorporated two phases, Phase 1 of data collection, consisted of shorter exploratory studies involving only one or two cycles of data collection. This phase took place across two academic years (Years 1 and 2), interrupted by six months' maternity leave, which prevented data collection across a whole academic year as planned.

Figure 17: Years, Phases and Cycles[17]

Year 1			Year 2		Year 3					Year 4
Phase 1					Phase 2					
Cycle 1	2		1	2	1	2	3	4	5	6

[17] The cycles are not shown to scale on this table. Cycles were sometimes overlapping with different pairs of participants. Some participants in Phase 1 only engaged in one cycle. The table shows the maximum number of cycles undertaken in each Phase and Stage.

Phase 2 was an extended period of data collection from the start of an academic school year, and into the first term of the following year. Sections 4.2.5 and 4.4 present the data collection methods and instruments for each phase, describing the cycles in more depth. In the intervening section (4.3), I will describe how the initial analysis of Phase 1 informed the design of Phase 2. The final section of this chapter describes the methods of analysis (4.5).

4.2.2 A reflexive approach

In common with any iterative and evolving cooperative action-based research design, the methods developed and were adapted either in response to changing circumstances or reflexive observations, or in response to the participants. One of the key features of action research is the degree of reflexivity embraced as the research group open up their emerging thinking to each other and systematically record this thinking and make it public. Taking Reay's definition of reflexivity, it

> *is about giving as full and honest an account of the research process as possible, in particular explicating the position of the researcher in relation to the researched (Reay 1996, p.443).*

In order to present a transparent and honest account, the work is necessarily detailed and the description of methods is:

> *interwoven with systematic examination of the practitioners' own intentions, reactions, decisions and interpretations (Cochran-Smith & Donnell 2006, p.511).*

Following McIntyre (2000; 2008), I see this approach as part of a feminist commitment to transparency and 'making the invisible visible' (Reinharz 1992 cited in McIntyre 2008). It also seeks to address concerns raised by Menter and his colleagues that ethics is too often neglected in practitioner research (Menter et al. 2010). For ease of reference, a brief overview of the data and of the analytical tools is provided in Appendix C.

4.2.3 Participants

In total, sixteen participants volunteered to be involved in the study. In Phase 1 twelve participants took part and six in Phase 2. Two mentor participants were involved in both phases. Across both phases, nine participants were beginning teachers in their first year of their ITE programme and seven were mentors. Table 6 below shows their pseudonyms and the specific partnerships between beginning teachers and mentors. It

also includes their ITE route[18]. Only one teacher (Fahad in Phase 1) was not on an employment-based teacher education programme. The group is not representative of the general population of employment-based teachers as only three of the nine participants were female (33%), whereas the national figure at that time was 65% for Teach First and 60% for School Direct Salaried (Department for Education and National College for Teaching and Leadership, n.d.). A range of subjects are included, but it should be noted that the high number of Humanities based subjects among those who volunteered to take part might be on account of my relationships with colleagues in this area, which is my own subject specialism. English is a large department that has included Teach First teachers since the start of the programme in 2003. There are no Science teachers included in the sample, despite this being a large department with several Teach First and School Direct beginning teachers present within it when I began my study. This might reflect the instability and challenges within a department which struggled to recruit and retain staff (reflective of a national shortage).

Table 6:Participants involved in the study. Bold highlighting denotes a mentor who worked with more than one beginning teacher

Phase (P) **Year (Y)**	**Beginning teacher participant (sex)**	**Mentor participant (sex)**	**ITE route**	**Subject**	**Months of experience in a school prior to training year**
P1 Y1	Ellie (f)	Jessica (f)	TF	History	9
	Will (m)	Hannah (f)	SD	English	1
P1 Y2	Fahad (m)	Laura (f)	PGCE	English	0
	Nana(m)	Jannath (f)	TF	Maths	12
	Sabina (f)	**Eric (m)**	SD	History	7
	Sebastian (m)	**Alice (f)**	TF	English	2
P2 Y3	Catherine (f)	**Alice (f)**	TF	English	9
	Dave (m)	**Eric (f)**	TF	Geography	5
	Miles (m)	John (m)	TF	Music	6 (in primary)

As Table 7 shows the mentors' level of experience in supporting beginning teachers ranged from the very inexperienced such as Jannath, Laura and Alice for whom this

[18] Appendix A provides an overview of ITE programme designs for participants involved.

was the first beginning teacher they had mentored, to more experienced, such as Eric and Jessica who had each previously mentored four or five beginning teachers, but who might not be described as very experienced. No published studies have been found that provide a benchmark with which the relative experience of these mentors can be compared.

Table 7:Mentor participants

Mentor Participant	**BT participants Mentored**	**Number of BTs they had mentored (including participants)**	**Own ITE route**	**Other school responsibilities**	**Years of teaching experience**
Jessica	Ellie	4	GTP	Senior Leader	11
Hannah	Will	2	TF	*2iC Department	5
Laura	Fahad	2	TF	Head of Year	3
Eric	Sabina & Dave	5	TF	Senior Leader	6/7
Jannath	Nana	1	PGCE		3
Alice	Sebastian and Catherine	2	TF	*2iC Department	3/4
John	Miles	1	TF	Head of Department	7

The vast majority of mentors were female (7 of 9) and four mentors (Jessica, Hannah, Eric and John) had leadership responsibilities, such as Head of Department, Head of Year or Senior Leader. Five of the seven mentors had qualified as teachers through the Teach First programme, and one other on another employment-based route, the Graduate Teacher Programme (GTP). Only one mentor, Jannath, had undertaken a university-based PGCE programme. Therefore, the study not only explores the experience of beginning teachers learning through experience on employment-based routes, but also offers insights into the longer-term legacy of such an approach to learning, as former beginning teachers have now become mentors supporting other school-based teacher learners. It should be noted this characteristic was not the result of a deliberate sampling process, but rather reflects the mentors and teachers working within the school, and those who volunteered to be involved in the study. It should also be acknowledged that the nature of their own initial teacher education may not be

reflective of the broader population of mentors, even for Teach First teachers, as Cameron's survey of 154 Teach First mentors showed that only 6.5% had been Teach First participants themselves (Cameron 2014, p.130). However, Cameron's survey was completed in 2010, several years before this study and given the growth in numbers of Teach First teachers the proportion of former Teach First participants among Teach First mentors may now be much higher.

All of those who agreed to take part volunteered to do so following an invitation offered in one of their school-based beginning teacher meetings, when I explained the research and distributed an information sheet (Appendix D). All of the volunteers were based at a London secondary school where I was employed as Deputy Principal. Those who took part in Phase 1 were a voluntary selection of a larger group of school-based beginning teachers at the school; in Phase 2 the participants were the only employment-based beginning teachers. One beginning teacher participant, Miles, did not take part in all of the planned activities, as will be explained in section 4.4. Dave's Subject Mentor also passively withdrew after volunteering, but the Professional Mentor Eric who supplemented Dave's support through additional subject mentoring, agreed to take her place. All participants were provided with an information sheet and signed to show informed consent within each data collection cycle (Appendices D and E).

4.2.4 Participation and researcher role- reflexivity and ethics

The extent to which participants were fully informed, freely involved and acted as 'full participants' (Heron 1996) should be carefully interrogated. Heron (1996) proposes that in truly cooperative inquiry the participants should participate in the research design and thinking, which he describes as political participation; as well as participating in the practices or action under exploration, which he labels epistemic participation (Heron 1996). Whilst this 'authentic participation' in every aspect of research design and practice may be desirable (McTaggart 1997), it is not always 'doable' (McIntyre 2008). Instead there were many points at which I drew on McIntyre's call for a model of 'common-sense' participation, recognising that although the research group shared a common, overlapping interest in beginning teacher learning, I had a distinct purpose in using this work in a doctoral study. In making both initial and ongoing decisions about the research design and methods I was very alert to their implications both for the quality of study, and in terms of their

impact on the participants. My ongoing decisions in response to ethical dilemmas were considered in the light of a values-based structured ethical reflection, following attendance at a seminar exploring ethical issues in action research facilitated by Professor Mary Bryden (Bryden 2013; Brydon-Miller et al. 2015) (Appendix F Structured Ethical Conversation). This was in addition to adhering to the policies and approval by the Central University Research Ethics Committee (The University of Oxford n.d.), and reference to BERA's guidance (BERA 2011; BERA 2018).

The following sections outline some of these decisions and explore the implications for the data and participants.

Political participation

It would be naïve not to recognise my greater research experience and interest in the research-design aspect of the work. Therefore, Phase 1 was designed to explore RQ1 (testing feasibility) efficiently, reducing the impact on participants' workload (BERA 2018) or 'burden' (BERA 2011) arising from their research involvement in the early stages. Early experimentation in Phase 1 was very much led by me, limiting the extent of 'political' participation (Heron 1996). Where time and participant engagement allowed, as when working with Will, Nana and Sabina, I was able to experiment with a second cycle of data collection, where methods evolved in response to the first cycle. In Phase 1 the main actions were taken by me as I revised and refined the research methods, therefore this first phase was predominantly a systematic study of my own actions.

In Phase 2 I aimed to increase participation, so that the process would become more cooperative action research, moving further along Heron's continuum of participation (Appendix B). The research design allowed for the development of participation by proposing a relatively tightly bound structure in Cycles 1 and 2, which I hoped would evolve in later cycles. In reality, our methods changed little for three reasons. Firstly, participants' primary interest was in addressing the practices explored rather than the means to access our understanding of them. Secondly, the participants deferred to me, recognising my greater research experience and preferring to follow the examples and model already set. Although I had hoped that participants would be interested to learn more about the research methods in order to play an informed and critical role, this was not the focus of the activities in which we engaged. This second point links to the

third, and perhaps, strongest reason, which was the limitations of the time we spent together as a research group. I was acutely aware of the constraints on the participants' time as busy teachers, learning on the job, or mentoring alongside other leadership responsibilities. I therefore structured sessions very tightly to fit into one or one-and-a-half hours. Even when participants agreed in our meetings to engage in action, sometimes, quite often, they did not. This passive withdrawal was I believe, not on account of deliberate inaction, but rather reflects the difficulties in managing competing pressures in a highly demanding role. In order to retain their participation, I was careful to avoid placing additional demands on them and if they did not carry out actions they themselves had suggested they would do, I was careful not to express disappointment.

Researcher participant

Throughout the research I was very aware of my position in relation to the participants. McIntyre warns that:

> *by failing to problematize - both in theory and practice - the researcher-participant relationship, practitioners of Participatory action research (PAR) run the risk of becoming oblivious to our complicity in structural arrangements that may reproduce the very practices we seek to challenge (McIntyre 2000, pp.20–23).*

Of particular importance in this study were the power relations at play. As an 'initiator' researcher, and senior leader with student researcher status, I tried to ensure that participants felt they could challenge my sense-making. Drawing on my experiences as a teacher, I carefully considered how to facilitate dialogic analysis in the reflective conversations. At times I played the role of agent provocateur, at others I purposely stepped back and withheld my views. After each cycle I recorded a memo which addressed my role as researcher, attending to my actions in each meeting. These were shared with my supervisors who acted as critical friends (McIntyre 2000).

Furthermore, the research attended to the particular power dynamics within beginning teacher learning, with the mentor acting as both 'gatekeeper' and facilitator in the process (Calderhead & Shorrock 1997). As learners engaged in the challenging, risky process of learning on-the-job, I was very aware of the vulnerability of the beginning teachers (Hobson, 2016) and worked hard to ensure that the research process did not cause harm at such a critical time in their identity formation (Mutton et al. 2010). In the case of Catherine, for example, who required external support to manage her well-

being, I was alert to any indications that the research might be placing additional burdens on her, but she herself expressed views about how the process had supported her to understand herself and manage herself better. In the case of Miles, who required several weeks' leave from school, his role in the research was suspended until after his final assessment and extended into his NQT year.

As teachers learn to teach, they are also learning to be teachers. As a result, the process of learning is tied to new ideas about their own identity and being (Lave & Wenger 1991; Feiman-Nemser 2008). The best teacher education, and the most ethical research, will therefore attend to the socio-emotional and affective aspects of beginning teacher learning. By presenting mirror data to beginning teachers I invited them to reflect on what this revealed about themselves and, at times, this was a challenging process. Ellie, for example, started to doubt her own self-conceptions as a learner

> *I don't know anymore…this I wouldn't expect to see, I don't know if it's true…I don't think that I have low expectations but maybe I do (Ellie, MM 1).*

Paul suggested at one point that the research was being 'done to you' in that the re-presentation of him was created by the researcher. Throughout the research I found it helpful to emphasise that the Mirror Data should always be seen as re-presentations of a snapshot of learning or a stimulus for their discussion. I also found that it was very helpful to support the participants to create distance between this representation by referring to it in the third person pseudonym. It became easier for Paul to talk about what 'Paul' appeared to be doing in the conversation, without feeling the need to defend his own actions or feelings. Whilst Ellie only participated in one cycle, Paul found it immensely reassuring that he had the opportunity to re-present his learning through providing more data in a second cycle.

My role in the school changed during the period of the study. At the beginning I led Professional Learning across the school, including ITE. This meant that in the first year I was working directly with participants, for whom I was a Professional Mentor. I considered myself very much a participant researcher, engaged in developing my own practice as a mentor, and lead mentor responsible for supporting and quality assuring mentoring. During my maternity leave, Eric acted as Professional Mentor and he continued this role on my return, while I took a more 'strategic,' less hands-on role in day to day provision. Whilst I still enjoyed the privileges of being an 'insider,'

familiar with the culture, language and context, I had less opportunity to directly change the programme of learning for beginning teachers or activities of mentor development, and more opportunity to observe and analyse.

Having considered my role from my own perspective, it is important to consider the participants' perspectives – i.e. how they saw me – and how this may have influenced their actions, the data and findings. Although from Year 2 of the study onwards I played little operational role in ITE or professional learning at the school, participants still recognised me as a senior leader with some strategic involvement and as a former Professional Mentor. I was aware that the mentors may have felt their work was being judged and this might have led to them protecting or hiding their actions and beliefs, in order to present what they considered to be desirable behaviours. I tried to mitigate this by positioning the research process as one of reciprocal learning, in which my practice as a mentor (albeit not necessarily current) and researcher were also open to the same enquiring stance. The consent form (Appendix E) shows one way in which this reciprocal participation was outlined.

However, during Phase 1 there were points where I felt confused about how to manage situations where my research and professional role seemed to overlap, and it was important to be transparent and reflexive in these instances. Action research recognizes that action is a form of understanding and therefore does not attempt to freeze or capture the object of study beyond the confines of researcher contamination. However, this overlap can create tensions, particularly when researchers explore their own practice, or the practices within their own context where they may have 'dual roles' (BERA 2018).

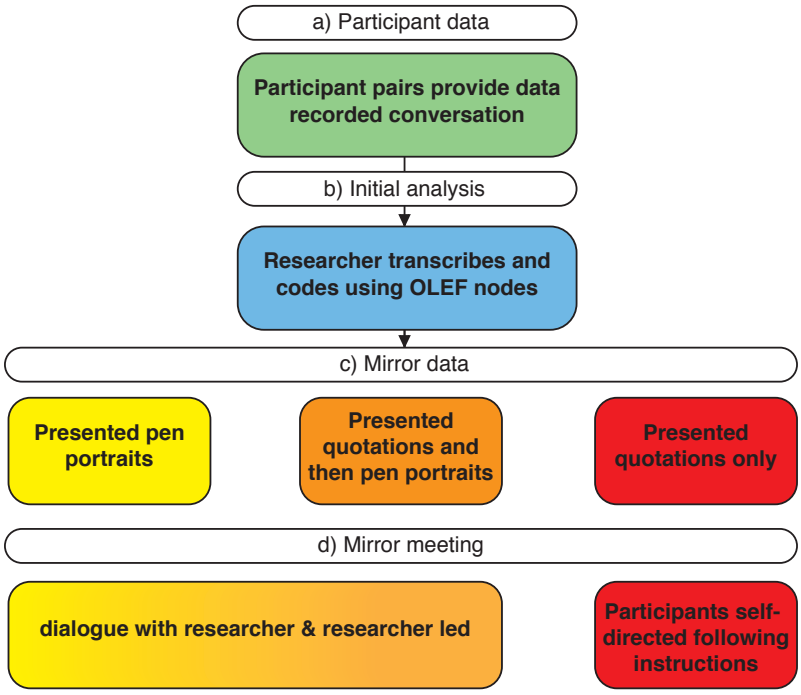
By making these layers visible through explicating our positions and perceptions, I aimed to avoid the 'cultural invisibility' that Eikeland (2006: 43) suggests is a key ethical problem in action research. In particular, I want to be reflexive: both transparent and honest about the research process and the decisions made within it. McIntyre suggests that this is a three-part process focussing on the researcher's own awareness, and that of the participants, supported by challenge from critical friends (2000). Throughout the research period I used a research journal to capture the on-going decisions and dilemmas that I encountered. Furthermore, I drew on my supervisors as critical friends, experienced not only in the research process but also in ITE and mentoring.

4.2.5 Phase 1 methods- data and instruments

Phase 1 took place in March to June of Year 1 and from January to July in Year 2, with an intervening period of maternity leave. These exploratory studies allowed multiple opportunities to involve a range of participants and to experiment with the methods and processes, taking full advantage of the flexible nature of action research design.

Figure 18 shows the main stages in each cycle (a)-(d), with the variations in (c) and (d) denoted by the different colours. Figure 19 below shows which methods were used with each participant. Each of the four stages (a)-(d) is described in the sections below.

Figure 18:Main activities each cycle showing the three variations across Phase 1



a) Participant data: recorded conversations

The first stage of data collection involved participants providing an audio-recording of a conversation between the mentor and the beginning teacher. The conversations were either one of their weekly 'mentor meetings' (M) or the conversation following a lesson observation (LO) (See Figure 19). These dialogues (D) provided the core data for the research cycle. Nine conversations were explored in four cycles of data

collection, with participant involvement fluctuating as shown in Figure 19. Conversations were usually recorded on a participant's mobile phone, using a free app 'voice recorder' and emailed to me. The recordings were then stored on a password protected laptop, using pseudonym references. The use of a digital dictaphone was offered to participants, but rarely used, as it was more convenient to use their own devices.

Figure 19:Phase 1 Participation. Shaded box denotes participation. Colours relate to the methods used (see Figure 18).

	Participant	Ellie	Will	Fahad	Nana	Sabina	Sebastian
Year 1	Cycle 1	LO	M				
	Cycle 2		LO				
Year 2	Cycle 1			LO	M	LO	
	Cycle 2				M	LO	M

b) Initial analysis: transcription and coding

As Figure 18 shows, the first stage of analysis in all the cycles explored whether data to support positioning on OLEF could be identified (RQ1). The conversations were transcribed and coded deductively in NVivo, using the OLEF dimensions as node descriptors (Braun & Clarke 2006; Hagger et al. 2008). Transcription can be considered as the first stage of analysis, because it involved close, active 'immersive' reading of the audio text (Braun & Clarke 2006: 87). Riesmann reminds us that this process is 'deeply interpretive' rather than 'technical' (Riesmann 2008, p.29) due to the decisions made about what is included. I created verbatim transcripts, including some "back-channel" non-lexical expressions' (Riesmann 2008: 31) (e.g. "Ahem" "mmm" "yep"), but did not create a close linguistic transcription which would not be 'readable' to participants.

The coding process is discussed in more depth below (p.72). In brief, the coding at this stage was designed to support easy identification and retrieval of information relevant to the OLEF dimensions. As such it might be seen as 'indexing' (Richard and Richards, 1994, cited in Elliott 2018).

c) Re-presentation: mirror data

Having organised the data by OLEF dimension, I sought to present the data in a way that would enable participants to explore it and that would stimulate their reflections on what this representation of their conversations revealed about their orientations to learning; it would thus serve as 'mirror data'. Ellis describes mirror data as 'ethnographically generated representations of current practices and discourses' (Ellis 2008, p.55). The form of this mirror data, the role of participants in the analysis during the mirror meeting, and my role as researcher developed through Phase 1 as explained below.

Initially I had envisaged presenting the data on the OLEF continuums as a visual illustration. However, the amount of data and the length of relevant extracts would have resulted in this becoming a very large, confusing and messy graphic. In addition, I realised that this format would have forced me to plot the beginning teachers' positions on the dimension continua, thereby presenting something which suggested a very fixed judgment of their orientations. Instead, I created pen portraits to describe, in prose, the beginning teachers' orientations to learning, according to each dimension (see Appendix G as an example). This format of these third-person descriptions of the beginning teachers drew on the dissemination methods of the DEBT project (Mutton et al. 2010). Following Braun and Clarke (2006), I found that the process of creating a narrative description became an analytical, as well as presentational, process, as part of a 'reflexive cycle of meaning-making' (Speedy 2008, p.31). As I worked with the selected (coded) excerpts of conversation, new insights prompted me to return to the transcripts to explore relevant data. I was alert to my position as narrator, determining the initial presentation of the participant.

Mirror data were shared with my supervisors, including Katharine Burn, a member of the original DEBT research team. This enabled further exploration and development of my understanding of the OLEF dimensions, thereby strengthening the validity of the terms.

d) Mirror meetings (MM)

The next stage employed double stimulation. It offered an opportunity for participants to explore this mirror data in order to offer further commentary around their learning and to comment on how resonantly or 'fairly' they felt the pen portraits described their approach to learning. This was not conceived only as a 'member check' to support credibility, but as an opportunity to gather more data and 'member reflections' (Tracy 2010), stimulated by the mirror data. Participants were given the pen-portrait descriptions of the beginning teachers' OLE to discuss. In mentor-beginning teacher pairs they were asked to explore the pen portraits in relation to the data, their wider knowledge and the OLEF framework, which served as the second stimulus (See Figure 20).

Figure 20: Activities in the mirror meeting

1. Review the pen portraits of Will and Ellie. Discuss if the data supports these descriptions? - is it a fair or valid description?
2. Based on this data (with a researcher hat on) where would you position the beginning teacher on OLEF framework?
3. Based on your wider knowledge and judgment (not just this data) where would you position the beginning teacher on the OLEF framework?
4. If there is a difference, discuss what other data a researcher might draw on to provide evidence of this alternative position?
5. Record any questions or comments you have about the research process and suggestions for next steps, including what you would hope to get out of this

Participants were also given a copy of a diagram of the OLEF continuums (Appendix H), which they were invited to annotate, and the transcripts of the conversations. The resultant (MM) conversations between mentors and beginning teachers were recorded and their annotations were collected. This process therefore contributed more data around their approach to learning, but also in relation to the research methods.

One pair (Will and Hannah) then repeated the process to create Cycle 2, which offered an opportunity to consider how a longer-term multi-cycle process might work,

as planned for Phase 2. Fahad's involvement also followed this process. Having used this process on four conversations, with three beginning teacher participants, I began to review and revise the methods.

Revisions: exploring participant analysis

One of the aspects that most surprised me was the participants' overall acceptance of the pen portraits as descriptive accounts of the data, rather than their recognition of the levels of researcher interpretation involved in selecting data and crafting the portraits. Chapter 5 reports my findings that participants claimed the mirror data were fair accounts. When I questioned participants about the possibility of working more directly with the data they all expressed concern that they would not be able to grapple with the raw data, transcripts or even selected quotations. They suggested this process would be too time consuming and require more knowledge of the OLEF dimensions. Will, for example, claimed 'trawling through the transcript would be unmanageable really,' (Phase 1 MM1) whilst another mentor felt:

> *you could get pretty lost if there wasn't any interpretation. If you had just given us the transcript and just said go. We could have gone down lots of different paths that don't lead anywhere. So I think there needs to be a degree of structure and interpretation. (Phase 1 MM1 Eric).*

I wanted to explore these ideas by seeing how participants managed with data in a form nearer to its original and to experiment with my role in the mirror meeting, in order to increase the level of participant analysis. I therefore modified the activities for two of the beginning teacher participants (Nana and Sabina). As before, I created transcripts and coded these according to the dimensions. The coded excerpts were exported from NVivo into a document of 'quotations'. I also created a pen portrait as previously. However, I altered the way I presented these tools, offering participants an opportunity to deal with the data in layers from the recording of the original conversation, transcript and quotations, before sharing the pen portrait. In the mirror meeting I led the participants through the process, managing the time allocated to the different parts of it to ensure that we completed it in the time available, and contributing in any way I felt would be helpful. In particular, I supported them in clarifying their definitions of the five dimensions and helped them to orientate the excerpts in the context of the whole conversation.

In Cycle 2 which involved Sabina and Nana again, and also a new participant Sebastian, I took away the pen-portrait completely, offering only the raw transcript and quotations as tools for analysis. Furthermore, I withdrew further from the mirror meeting, providing written instructions (Figure 21) for the mentor-beginning teacher pairs to follow and intervening in their conversation only to provide timing prompts and to respond to their questions.

Figure 21: Participant steps in the mirror meeting P1 R2

Based on the data from the conversation:

Initial thoughts- (transcript only)

1. If you were able to listen to the conversation/ read the transcript to remind yourself, have you got any comments about the beginning teacher's approach to learning (as presented in this one conversation)? (You may want to refer to OLEF to structure this).

Exploring the data (transcript and quotations)

2. Using the quotations (and any other data from the transcripts), where would you place the beginning teacher onto each continuum?

Exploring the descriptive analysis (+ pen portraits)

3. Does the data support the pen portrait- does it seem a fair description? (Annotations welcome)

Bringing in your wider knowledge:

4. Based on your wider knowledge of the beginning teacher, where would you place them on the continuum?
5. If this raises any differences or gaps, what other data might a researcher use to support this position- what might help them have this wider knowledge or understanding?

4.3 A summary of the implications of Phase 1 for Phase 2

Chapter 5 provides the initial analysis of Phase 1, which sought to pilot the proposed methods for Phase 2 and address RQ1. This includes discussion of how I evaluated and refined the methods for Phase 2. The section which follows here merely provides a summary of the key implications of Phase 1 in terms of the changes made for Phase 2.

Phase 1 largely confirmed the assumptions embedded in RQ1 that OLEF could be used within a different context, with different beginning teachers and using different methods. It demonstrated the feasibility and potential of the approach for the learning of participants, and generation of new knowledge. Phase 2 was designed to build on these initial explorations, by strengthening the participatory design which would enable greater access to richer data, thereby increasing the learning potential for local participants, and the scope to develop broader epistemic knowledge.

4.3.1 Increased data-additional participants, longer term

Phase 1 demonstrated that the beginning teachers' orientations to learning from experience (OLE) could be described using mentor-teacher dialogue, whether this was a mentor meeting or a conversation following an observation (LO). However, it seems that some conversations yielded more data on some dimensions than others. For example, conversations focussed on lesson observations revealed more data relevant to Response to Feedback (RtF), whilst more general mentor conversation might provide more data around Frame of Reference (FoR). Given that the nature of the conversation seemed to play a role in determining how much data was available for each dimension, a cyclical design, with multiple opportunities to present and analyse different forms of conversation, or dialogue (D) was justified.

4.3.2 Increased participation and shared learning

The resultant increase in opportunities to access the data strengthened the participatory design. The action research design enabled action between data collection points, which seemed to increase the participants' reporting of the resonance and congruence between D data and their wider knowledge, perhaps as they shaped their conversations in response to the OLEF framework. Secondly, and most importantly, the mirror meetings provided rich opportunities for co-analysis of the mirror data and further insight into learning in its broader context, through exploration of OLEF.

A Phase 2 design over a year would furthermore support the development of relationships within the research group, leading to more open exploration in which participants could challenge the sense-making and share their emergent thinking, albeit attending to power relations and dynamics. Phase 1 participants expressed their

interest in opportunities to learn from each other and so Phase 2 mirror metings provided different grouping opportunities.

4.4 Phase 2 methods

4.4.1 Timeline

Phase 2 continued the iterative, reflexive design of Phase 1, necessary to enable participants to engage fully and provide rich data across the initial year of ITE. The detailed description of methods which follows seeks to provide a transparent, reflexive and rigorous account of these inevitably varied and changing methods.

Phase 2 data collection took place between September of Year 2 and December of Year 4 (over four academic terms), enabling a full academic year of data collection from the start of the ITE programme into the NQT year. The timing and length of the period of data collection achieved two goals. Firstly, it supported opportunities for participant learning, taking into account the views of participants in Phase 1 that they would have valued an opportunity to explore their conversations at an earlier point in the academic year, as they were just beginning the process of learning to teach. They suggested that this would support their ongoing reflections. Second, from a research perspective, this also allowed for six cycles of data collection to provide a longitudinal view, and space for increasing participation. RQ 1, concerned with the dimensions of OLEF, was explored predominantly through Cycles 1 and 2 and then picked up in Cycle 6 in order to explore any changes (RQ 2 and 4.1). The opportunities for increased participation in the research design (RQ3 and 4) were in spring and early summer (Cycles 2-5), a point when participants were relatively settled in the school, but not within the intensive period of public examinations.

The period of data collection lengthened as Phase 2 progressed. The initial plan had been to work with participants for three terms, but this was extended as various delays had meant that only five cycles of data collection had been completed at the end of the academic year. The extension also enabled me to collect further data from Miles, a participant who had temporarily withdrawn from the research due to absence from school.

4.4.2 Data collected

The forms of data collected in Phase 2 were very similar to those collected in Phase 1 (for ease of reference these are summarised in Appendix C). Table 8 provides an overview of the participant data provided in each cycle, detailing which participants were involved in each and the whether the (D) data provided was a recording of a Mentor meeting (M) or followed a Lesson observation (LO).

Unfortunately, Miles was not able to attend MM2, despite having provided a recording of a conversation. I provided materials to his mentor to enable them to take part in the activities at another time, but this was not undertaken. Miles was subsequently absent for several weeks and did not take an active part in research activities until Cycle 6.

Table 8: Summary of participant Dialogue (D) data collected in P2

Participant	**Miles**	**Catherine**	**Dave**	Notes on key focus of initial analysis
Cycle 1	LO	M	LO	Focus on all OLEF dimensions
Cycle 2	M*	LO	LO	
Cycle 3		LO	M	Focus on FOR dimension
Cycle 4		LO	M	
Cycle 5		M	M	Recorded conversation based on joint mentor/ BT observation focussed on FoR
Cycle 6	NQT LO[&]	NQT LO[&]	NQT LO[&]	Post lesson observation with PM (Eric) as part of NQT termly assessment

LO= Lesson observation; M = mentor meeting

**Cycle 2 for Miles includes only the BT/ mentor conversation, but no MM data.*

[&]NB MM6 took place in September Year 4 and focussed on planning with participants ways to share learning from research project. The meeting did not include any analysis of D6 conversations data which were recorded subsequently in Nov/ Dec Year 4.

Colours refer to Figure 18 showing variations in methods used in P2. These variations are outlined in the description below.

As previously in Phase 1, all conversations were fully transcribed, but the mirror data used in each mirror meeting varied from cycle to cycle.

At the end of each cycle I created a selective transcript of the mirror meeting activities, focussing on data particularly related to the RQs (see Appendix I for an example). I also wrote a reflective memo focussing on four aspects of observation which Phase 1 had shown were important: the methods; participation; beginning teacher learning and OLE, and the researcher role. These memos provided a basis for reflection with my supervisors and enabled planning for the next cycle (see Appendix J for an example).

4.4.3 Cycles 1 and 2 Part 1

Cycles 1 and 2 repeated the Phase 1 design used with Sabina and Nana. The first cycle mirror data therefore consisted of a researcher-created pen portrait to support participants in their definitions of the five dimensions of OLEF. In the second cycle I delayed the sharing of a pen portrait by presenting quotations rather than the pen portraits initially. Like the exploratory studies in Phase 1, the shift from researcher-crafted pen portrait to quotations was intended to scaffold increasing opportunities for participant analysis, whilst also enabling participants to gain familiarity with the dimensions of OLEF.

Similarly, the organisation of the group was intended to increase participation so that in Cycle 1 I met each participant pair (mentor and beginning teacher) separately in order to allow space to explore and clarify the research process and OLEF and guide them through the process. In contrast, during Cycle 2 we met as a research group, with some parts of the meeting together, and others where small clusters of participants (either beginning teacher-mentor pairs, or a group of beginning teachers and a group of mentors) worked more autonomously together following instructions provided. (See Figure 20 and Figure 21 for these instructions, which were the same as those used in Phase 1).

4.4.4 Cycle 2 MM Part 2

The second part of MM2 marks a shift away from the methods used in Phase 1 as we started to explore ways we could use the longer-term research period (with four more cycles of data collection planned). In the second part of MM2 participants met in role groups (mentors or beginning teachers) to discuss their learning and possible future

learning and action. I hoped that by grouping participants with their peers it would support open conversations – without the mentor-mentee asymmetric power balance – and provide opportunities to learn from each other.

In the last stage of the meeting (Part 3) the research group met together, and I reiterated my hopes that the research would be cooperative, including opportunities for participants to shape the design of the activities. Participants were asked to share their ideas from Part 2 and I chaired the discussion, inviting different voices and summarising them. At the end I proposed:

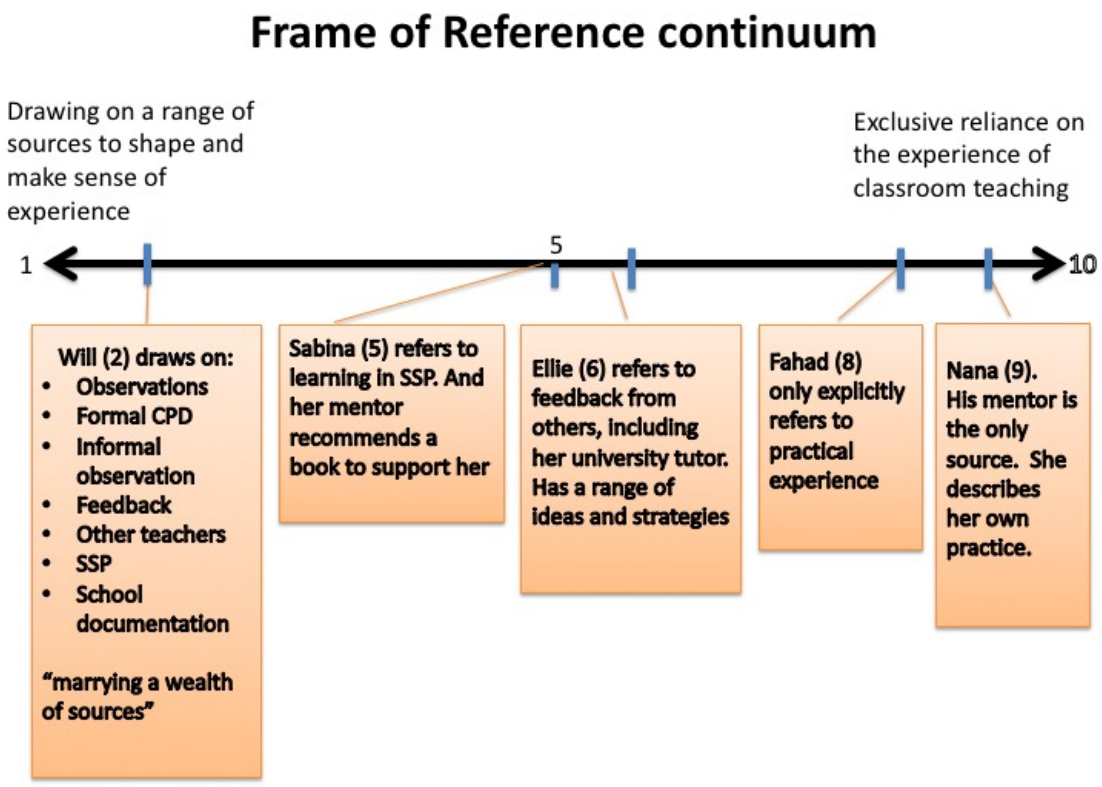
> *as pairs you have a go at trying to bring in some more frames (sic) of reference to your conversation and see it very much as a baseline experiment. It doesn't need to be perfect and the whole point of these cycles is that we build on them. And we might decide that what would be useful is for some work to be done with mentors or beginning teachers to develop this even further. But have a play with the idea of trying to shift the number of the frames (sic) of reference that are drawn on within that conversation (Tessa, MM2 Part 3).*

4.4.5 Cycle 3

As agreed in MM2, Cycle 3 narrowed the focus of OLEF onto the FoR Dimension. Chapters 6 and 7 report the findings related to the FoR dimension (along with other dimensions) and include some description of the activities undertaken to explore this particular dimension. This section will merely provide a summary to support the chronological explanation of the methods used.

As the focus narrowed to FoR, I spent some of the meeting exploring our understanding of this dimension. It might be noticed in the quotation above that participants, including myself, refer to the FoR dimension in various ways (such as 'frames of reference' rather than Frame of Reference) as explored further in Chapters 6 and 7. On arrival for MM3 participants were invited to read a short one page excerpt defining FoR (taken from Burn et al. 2015, pp.42–43), which had also been sent by email in advance. We also spent some time exploring descriptions of FoR in relation to the Phase 1 Participants' experience (taken from pen-portraits) and plotting these onto the OLEF continuum. Figure 22 shows a summary of the continuum created using these participant descriptors.

Figure 22: Participant descriptors for FoR



The next section of the meeting was similar to previous mirror meetings in which beginning teacher-mentor pairs explored their own D3 data with particular reference to the FoR dimension. As in Cycle 2, participants used selected quotations, with reference to a full transcript.

Following this exploration, participants had the opportunity for discussion in role groups around the actions they had each taken to increase the FoR, the ways in which this might be reflected in the (D3) conversations and possible future actions.

The final stage of the meeting provided an opportunity to review learning together and identify next steps. Initially I led this review, but towards the end I invited a volunteer to chair us through identifying next steps. Catherine did this, using a capture sheet to structure the decisions made (see Figure 23). The reason I sought a volunteer was based on my concern, noted in memo observations in MM3, that by leading the action planning stage I could be limiting their genuine participation. It should be noted that the writing shown in Figure 23 is my summary of the recorded verbal responses.

Figure 23: Next steps capture sheet. Italics denote Participant response.

Enquiry Question: We are interested to explore…

How can we increase the 'frames of reference' used in our mentor meetings, and what claims do we make about if, or how this helps our learning.

In particular:

- *If (and how) **adopting a co-coaching approach** to our mentor meetings (where the mentor and BT identify possible FoR together, rather than the mentor always directing) increases the 'frames of reference' **drawn on by the beginning teachers***
- *How (and if) **we enact** (through classroom experimentation) our learning from the FoR*

Data:

There are three data collection opportunities:



We will record at least one conversation (preferably **#3**) by **16th March**

Analysis-

Mirror data: It would be helpful if Tessa could prepare…

- Transcripts of our conversations
- Excerpts relevant to FoR
- Selective transcripts from the Research MM (2nd March)

Participant preparation: To prepare for the research meeting we will…



Research meeting: During the research meeting we would like to…

- *Analyse our conversations to reflect on where the BT orientation is on FoR continuum*
- *Reflect on and discuss:*
  - *a) how we tried to increase FoRs*
  - *b) how it changed the conversation and if or how this affected our learning*
  - *c) what helped us to bring FoR into the conversation*
  - *d) what made it difficult or what the barriers might be*
  - *e) what would help us to increase the FoR even more*
  - *f) any changes since the last MM*
  - *g) next steps for AR*

Research MM: We will meet again on…Wednesday 29th March 4 pm

4.4.6 Cycle 4

Cycle 4 provided further opportunities to reduce my participation in the mirror meeting as family commitments had taken me abroad and I was therefore unavailable. I met participants in advance of the meeting to go through the plan and resources, based on our discussions in MM3. As with previous meetings the mirror meeting involved various different activities and groupings. Where the group met together, Eric chaired, perhaps in recognition of his role as Professional Mentor. Overall, the group completed most of the planned activities, particularly those that were the same or similar to those used in previous cycles. However, some of the new elements developing from Cycle 3 were not completed, due to misunderstanding instructions or not being manageable in the time allocated.

In the first part of the meeting (Part A) participants were invited to remind themselves of the FoR continuum (Figure 22) and reflect on comments from MM3 (Figure 24 below).

Participants then split into beginning teacher/ mentor pairs to explore their own D4 data in relation to FoR, following the same prompt questions used in MM3. In addition, as they had requested in MM3, they were provided with a selective transcript of MM3 along with some questions specifically related to their comments. Unfortunately, this additional data was not discussed in any detail within the meeting.

In Part C of the meeting participants organised themselves in role groups to explore the questions used in the previous mirror meeting. In addition, I provided each group with some additional stimulus. Mentors were given some mirror data excerpts to explore their own FoR and role as learners. Both groups were provided with a copy of the CUREE framework for coaching and mentoring (CUREE 2005) to explore their conceptions of coaching and mentoring. However, this resource was not really engaged with, probably on account of time.

The final stage of the meeting echoed MM3, providing an opportunity to reflect as a group and identify next steps (see Figure 25 below). Here participants retained the focus on FoR but decided to specifically explore this in relation to the observation of another teacher.

Figure 24: Stimulus for Part A MM4. Participant comments from MM3.

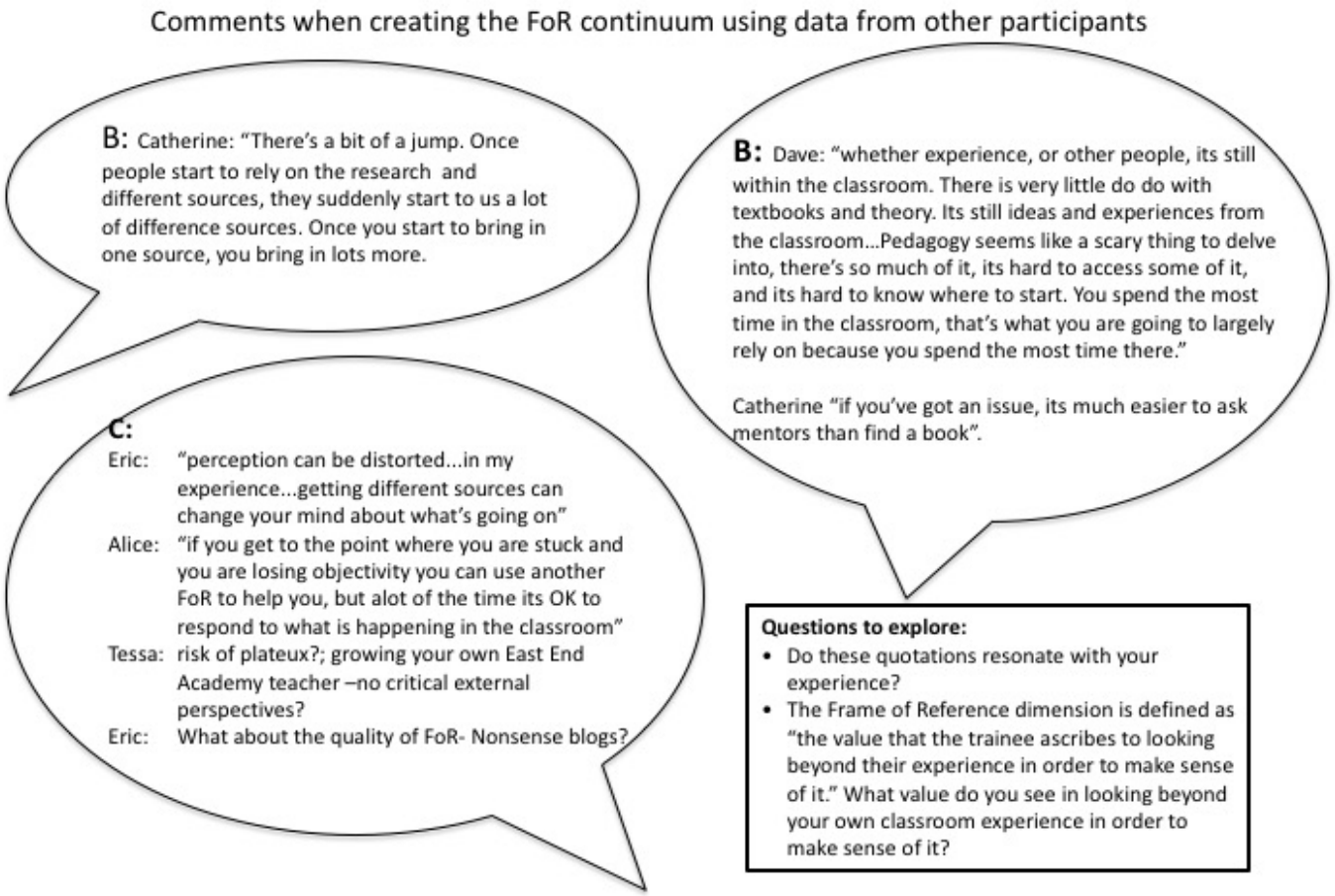


Figure 25: Summary of next steps agreed in MM4. NB Eric completed the writing during the meeting.

Enquiry Question: We are interested to explore… *How teachers with varying levels of experience draw upon FoR with the aim of becoming more deliberative*
Data: Each pair doing a joint observation. Each pair recording a conversation about it.
Analysis- *Mirror data*: It would be helpful if Tessa could prepare… • Excerpt writing • Past orientation continuums Participant preparation: To prepare for the research meeting we will… • Identify and arrange an observation • Focus dependent on individual targets Research meeting: During the research meeting we would like to… • Discuss how well the FoR was used • Do another orientation continuum

4.4.7 Cycle 5

Cycle 5 was the last full cycle, including D5 and MM5. The activities were tweaked in light of the question and the focus outlined in Figure 25, but retained the familiar structure of meeting as a whole group initially to explore the FoR dimension in more depth (Part A), before breaking off into beginning teacher-pairs to explore their conversations (Part B), then forming role groups to consider their learning during this cycle, and in the longer term (Part C), before coming together to review and plan next steps (Part D).

As further explored in Chapters 6 and 7, Part A focussed on deepening our understanding of the FoR dimension. This was achieved in two ways. Firstly, we explored mirror data comments from MM4 (Figure 26).

Secondly we broke down the definition of FoR by exploring what it meant to 'draw on' sources to 'shape and make sense'. Participants were asked to consider what this would look like in the action of their conversation and to create a hierarchy of steps to describe this (see Figure 27). The outcomes of this process are reported in Chapter 6.

Figure 26: Part A MM5. Mirror data based on MM4

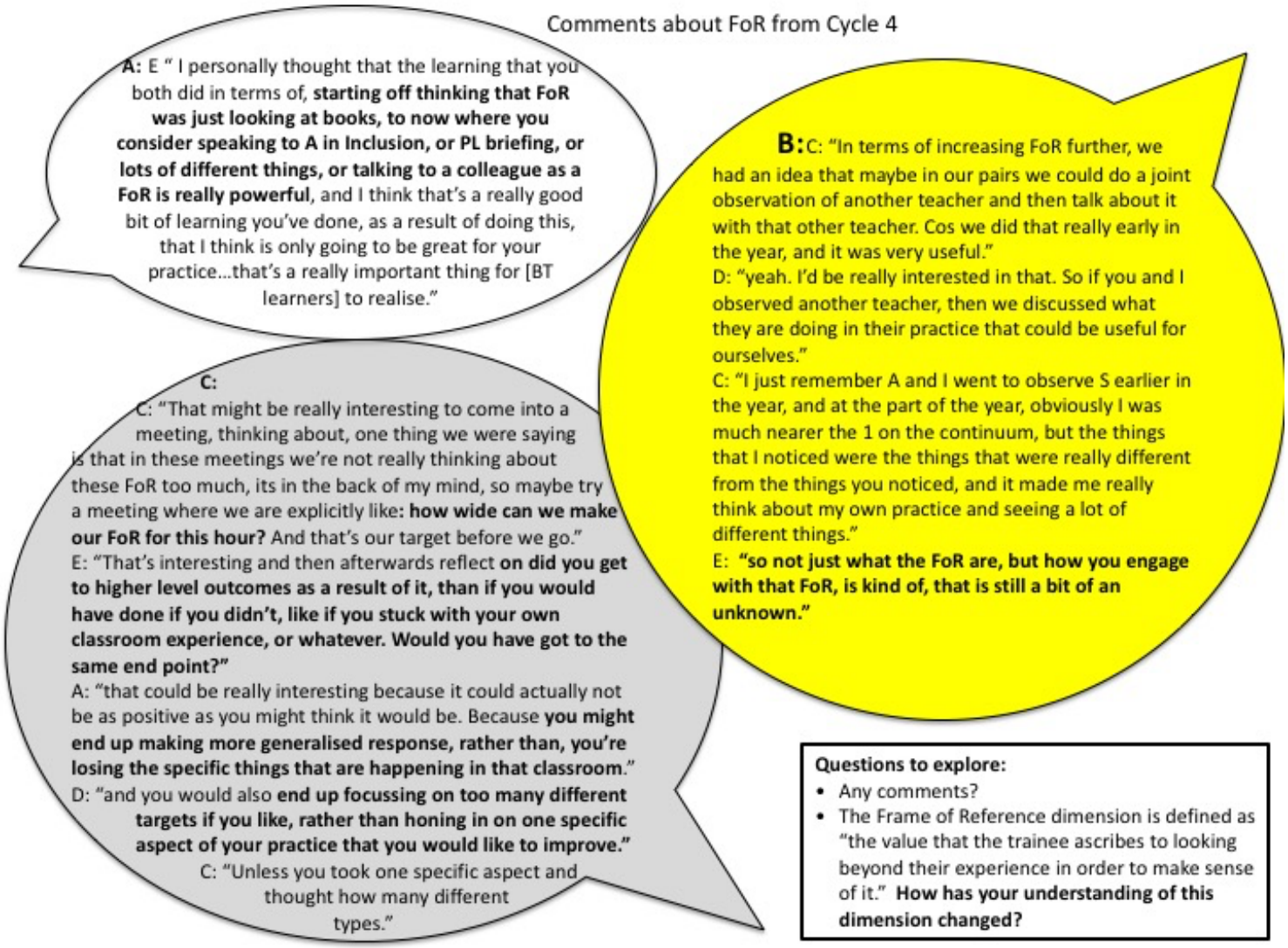
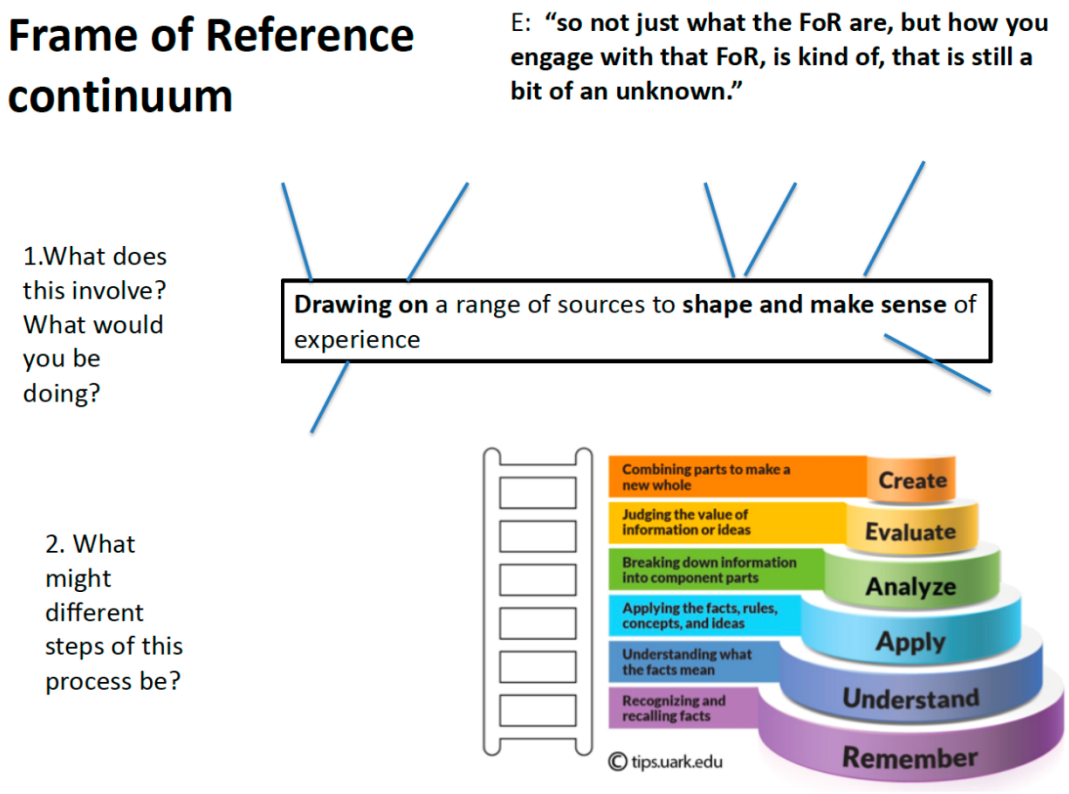


Figure 27: Part A stimulus MM5



4.4.8 Cycle 6

Cycle 6 did not follow the previous pattern of data collection which had started with participants recording their conversations, and been followed by a mirror meeting. Instead Cycle 6 primarily focussed on developing our discussions about learning through the research period and exploring ways in which this might continue. We met in October of Year 4, early in the beginning teacher participants' NQT year. Primarily this meeting was scheduled to provide some closure to the research process and to access data relevant to RQ 3.3 around participant claims about learning.

The meeting had two parts. In the first part I shared some mirror data excerpts from MM5 around participant learning. Participants were invited to provide any comments related to these excerpts and their thinking about the project the previous year.

This final meeting attempted to move the research and action process towards full participation, beyond the research project. By encouraging participants to consider their learning and the ways in which it might be shared beyond the research group, I hoped to strengthen the outcome and catalytic validity of the action research

(Anderson & Herr 1999). The results of this aspect of the research are discussed in further depth in Chapter 8.

There were two further data collection activities. Firstly, Eric and the beginning teacher participants recorded a final D6 conversation, following a formal observation as part of their NQT Induction termly assessments. I hoped this final observation would provide opportunity to compare the beginning teacher's OLEF over time (RQ3). Whilst we agreed that this should be a recording of the 'normal' conversation, Eric in fact referred very explicitly to OLEF during the conversation, thereby promoting detailed and relevant discussion as data for subsequent analysis.

The final piece of data collected was a phone interview with Eric in December Year 3. Interview questions were provided in advance and are shown in Appendix K.

In presenting a detailed account of the methods across multiple cycles of data collection over several years, I have highlighted the iterative, reflexive and participatory nature of the process. Up to now, this chapter has described the methods and tools of data collection in ways that belie how far this was entwined with ongoing sense-making, re-presentation and analysis. The following section redresses this.

4.5 Analysis methods

In exploring issues of quality in 'Close-to-Practice' research the BERA report notes that 'a sufficiently rigorous account of data analysis processes' is 'frequently neglected' (Wyse et al. 2018, p.27). A key aspect of the analysis is my recognition of my active role in the process: in identifying patterns, selecting and reporting (Braun & Clarke 2006). This section will provide an explicit and transparent account of the process of analysis, albeit recognising that analysis is inevitably an iterative and recursive process (Braun & Clarke 2006), which makes a linear description difficult. This challenge is compounded by the analysis being conducted in several stages for different purposes. During the two phases of data collection (Phase 1 and Phase 2), initial analysis was conducted in order to produce the mirror data materials for mirror meetings (as described above). The primary purpose of this analysis was to provide ways for the participants to make sense of the data (as a stimulus within further data collection). In contrast, the secondary phase of analysis, which I have called the main data analysis, was conducted by myself alone, rather than involving participants.

What follows is a brief summary of the initial analysis conducted during data collection, which serves as a recap, followed by a fuller discussion of the main data analysis.

4.5.1 Initial analysis recap

During data collection the following analysis activities had been completed:

- full transcripts (n=24) of all the conversations had been made (For a one-page example Appendix L)
- Selective transcripts (20) of all the MMs (For example Appendix I).
- Pen portraits of Beginning Teacher participants (For example Appendix G).
- Selected quotations (12) for Beginning Teacher participants around OLEF dimensions
- Annotated OLEF capture sheets (15) (For example Appendix M)

Descriptions of the processes of these forms of analysis are in the methods sections above (4.2.5 onwards) and are summarised in Appendix C. In addition, as part of the Phase 1 piloting, analysis related to RQ1 has been outlined previously on page 125.

4.5.2 Main data analysis approach

Data analysis *following* the data collection period focussed on addressing RQs 2, 3 and 4. The findings of these are reported in Chapters 6-8.

This analysis was completed using the qualitative data analysis software NVivo 11, following the five-level method developed by Woolf and Silver (2018). In describing their method, the authors are very clear that NVivo 'makes no analytical contribution to your research' (Woolf & Silver 2018, p.2). In saying this they remind us that NVivo is a data management, and concept management tool. Their method aims to manage the 'contradiction' between the emergent and iterative nature of qualitative analysis and the 'step by step' 'cut and dried' nature of computer software (ibid.). As shown in Figure 28, the five levels of the methods move from the strategy of the RQs, methodology and conceptual framework (Levels 1 and 2), through translation (Level 3) of the analytic tasks to the tactics of software tools, which might be straightforward operations (Level 4), or more sophisticated, constructed tools created by combinations of operations (Level 5) (Woolf & Silver 2018). Following a two-day workshop with

the authors, I used an Analytic Planning Worksheet to plan the tactics I would use in NVivo to meet my analytical strategies (for example see Appendix N).

Figure 28:Five Level Qualitative Data Analysis (Woolf and Silver 2018: p.27)

FIVE-LEVEL QDA				
two levels of strategy >>>>> translated to >>>>> two levels of tactics				
Level 1	*Level 2*	*Level 3*	*Level 4*	*Level 5*
Objectives:	Analytic plan:	Translation:	Selected tools:	Constructed tools:
The purpose and context of a project, usually expressed as a research question and methodology	The conceptual framework and resulting analytic tasks	Translating from analytic tasks to software tools, and translating the results back again	Individual software operations used in a straightforward way	Combinations of software operations, or software operations used in a custom way

4.5.3 Analytic activities (strategy) and tools (tactics)

Elaborative Coding

In qualitative analysis coding is often considered to be the main tool. As Elliott outlines, it is 'universal,' 'ubiquitous' and 'often under considered' (Elliott 2018, p.2850). The predominant analysis method used in this study can be described as Elaborative Coding (Auerbach & Silverstein 2003) focussed on refining and developing the OLEF framework. As such, the data was initially considered deductively, focussed on the constructs (dimensions) of the OLEF framework. Indeed, by the point of the main analysis, much of the data had already been coded using the OLEF dimensions as node codes in order to produce the mirror data in the initial analysis. As analysis progressed, through the creation of memos and matrices (Miles et al. 2014), the data was considered deductively –- focussing on those sections of text which seemed to relate to the OLEF dimensions – but also inductively, alert to potentially new, or revised constructs. Child nodes were used to provide further thematic structure to the OLEF nodes and a few further nodes were created. For example, the parent node 'Intentionality' was further broken down to consider data not only around the two opposing orientations 'deliberative' and 'reactive,' but also considered the nature of the deliberative actions – who was planning it? (leading learning); was there indication that they took the action? (engaging in intentional

learning). What was the nature of the action? (targets) and how far did this represent a minor adjustment to their behaviours, or a more fundamental shift in their understanding? (scale depth breadth). Nodes not directly related to the OLEF constructs included consideration of the 'mentor relationship'; and 'affective' aspects of the data.

Cycle Memos: Beginning teacher participant (within case) descriptions for each cycle

In NVivo, cases are the units of analysis (Bazeley & Jackson 2013, p.122). In Phase 2, I created a case for each beginning teacher participant (3) and each Cycle (6). This enabled comparative analysis within cases and cross-case (Bazeley & Jackson 2013, pp.257–260). For each participant (case), I created a memo summarising the (D and MM) data around each of the five dimensions in each cycle (8 in total). These Cycle Memos mainly used the same format as the pen portraits of the mirror data. As previously, the OLEF dimensions were used as nodes to support in retrieving relevant data. In addition to a summary related to each dimension, three other aspects were considered: the interrelationships between dimensions; observations on mentoring and the emotional climate. These themes (which, as noted previously, began as nodes which seemed to offer a new angle to the constructs of OLEF) were created as part of the recursive conversation between the data, through elaborative coding and writing memos.

Dimension Memos: (Cross case)

I also wanted to consider the beginning teacher's approach across the six cycles, according to each OLEF dimension. The NVivo matrix coding query (Woolf & Silver 2018, p.92) was used to create an index into the data (dimension nodes as rows and attribute-value for each of the 6 cycles as columns). I used the matrix to retrieve relevant data to create a Dimension Memo summarising each beginning teacher's approach to learning according to each OLEF dimension. I approached this first with one participant, Catherine. As the data had only initially been coded broadly using the OLEF nodes, thinking and writing in detail required the creation of further 'child nodes'. Writing is necessarily an analytical process, requiring a constant conversation with the data through coding. In time, some of these child nodes became themes which provided a structure of the memo. When I came to explore the data for other participants, I used Catherine's memo structure as a template for my memos for the

two other participants, which supported comparison. This process resulted in a further 15 memos.

Summary Matrices and Memos: (Cross-case)

Having created 23 memos in total, I created 6 Summary (or Meta) Matrices (Miles et al. 2014) using MS Excel. The process of making comparisons and contrasts was intended not only to 'display' the data (Miles & Huberman 1984), but also to generate meaning (Miles et al. 2014). Five of the matrices were cross-participant summaries per dimension (Figure 29).

Figure 29: Summary matrix for each dimension

	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Change	Continuity
Catherine								
Dave								
Miles								

The Nvivo matrix tool was used to retrieve data from each Cycle Memo, which was then summarised in six columns, including quotations from the data where relevant. These summaries were then compared to the Dimension Memos to ensure consistency. The final columns considered key changes and continuities across the data period (RQ 3.1).

A final memo was created for each participant summarising their approach to OLEF across the six cycles.

The last stage of data display in relation to OLEF was the creation of a Summary Matrix (Figure 30) which presented the data by dimension, exploring the similarities and differences between Phase 2 participants, before bringing in relevant information from Phase 1. By this point I had gained a real fluency with the data, and felt there were few new insights, which might suggest I had explored the data in light of the development of OLEF fully.

Figure 30: Summary matrix by dimension

	Similarities between P2 Participants	Differences between P2 participants	P1 Participants summary	Overall claims
Intentionality				
FoR				
AtC				
Aspiration				
RtF				

The role of OLEF as a double stimulus (RQ3 and 4) was considered in relation to analysis of the mirror meetings. I used inductive coding using the six components of transformative agency (Haapasaari, Engeström and Kerosuo, 2016). This analysis and the findings are discussed in more detail in Chapter 8.

In closing this section on analysis, I want to return to my opening comments about the iterative, recursive and highly interpretive nature of analysis. In presenting the process as a series of activities and outputs: coding, memoing and matrices, it is essential to acknowledge the role I played as researcher: noticing, selecting and recording. At all stages of the analysis, my memos and matrices were discussed with supervisors to provide challenge and alternative insights. I have tried to be explicit in my descriptions of methods and the tools used and constructed are available to the reader to support transparency and process validity.

In this chapter I have explained how the study was undertaken, describing the multiple cycles of data collection and analysis across three years. The recursive development of the methods – in light of analysis, and in response to the participants – coupled with a commitment to transparency and reflexivity necessitated a detailed account. The rich rewards of research over time, working alongside participants reflecting on the actions investigated, are found in the findings presented in the chapters which now follow.

Chapter 5 Findings 1-Can employment-based beginning teachers' 'orientations to learning' be described from mentor-teacher dialogue?

Phase 1 explored the extent to which the Orientations to Learning from Experience Framework (OLEF) can be used beyond the context of the original research using new methods through a series of short exploratory studies (RQ 1). The findings from this phase are therefore primarily methodological, demonstrating the potential for OLEF to be used in action research cycles with mentor and beginning teacher participants, as subsequently enacted in Phase 2.

Two aspects were considered in response to RQ1. The first is whether the data were available to describe beginning teachers' approaches to learning: were the conversations rich enough in data relevant to the OLEF framework? Consideration of this issue involved reviewing the extent to which data for each of the five dimensions was available, paying particular attention to Attitude to Context (AtC) and Frame of Reference (FoR) (RQ 1.2). The second aspect is whether the descriptions of the beginning teachers' learning created from the data can be considered valid: do they resonate with the participants who had greater and wider knowledge of the beginning teachers' learning, beyond the recorded conversation?

5.1 Rich conversations?

Taking the first aspect, Phase 1 clearly demonstrated that beginning teachers' orientations to learning can be described from mentor-teacher dialogue. During Phase 1, six pen portraits of beginning teacher orientations to learning were created using the recordings of the mentor-teacher conversations. Five of these were based on rich data, whilst one was crafted from a shorter and far less data-dense discussion, as illustrated by the length of conversation shown in Table 9 below. Nana's first recorded conversation, as different as it is from the other examples, provided much insight into the substantive research questions. More importantly for the purposes of Phase 1, the conversation raised methodological questions which are the concern of this chapter.

Table 9: Mentor-beginning teacher conversations collected

Beginning Teacher	ITE route	Number of conversations provided	Type of conversation	Length in minutes (")	Pen portrait created?
Will	SD	2	Mentor meeting	1) 28" 2) 26"	Yes (X2)
Ellie	TF	1	Post observation	1) 29"	Yes
Fahad	PGCE	1	Mentor meeting	1) 43"	Yes
Sabina	SD	2	Post observation and mentor meeting	1) 32" 2) 46"	Yes
Nana	TF	2	Mentor meetings	1) 16" 2) 24"	Yes
Sebastian	TF	1	Mentor meeting	3) 28"	No

The richness of data available was determined by the content and format of the conversations between the beginning teachers and their mentors. Effective, *educative mentoring* conversations (Langdon and Ward, 2014), which focussed on the beginning teacher's learning – reviewing their progress and supporting the beginning teacher to identify further areas for development before joint action planning – yielded ample data around the OLEF continuums. These features were evident regardless of whether the conversation was a weekly mentor meeting or focussed on a specific lesson observation (See Table 9).

However, Nana's conversation with his mentor was shorter than others and was tightly led by the mentor, Jannath, who presented her own practical experience as a model to Nana. Because this conversation entailed so much mentor talk, there seemed to be less opportunity to gain an insight into the beginning teacher's approach to his learning, beyond noting the contribution of the mentor. Although it was harder to craft a portrait from this conversation, and the portrait is far less detailed, it acted effectively as mirror data, stimulating a rich conversation about the beginning

teacher's approach to learning, and indeed the role of the mentor in supporting that learning.

The involvement of Nana and his mentor Jannath provided insight into the potential drawbacks of the conversational data being used, but also the strengths of a research design which allows for multiple cycles and embraces the catalytic impacts of the research process on the action it investigates. In analysing the initial conversation provided in Cycle 1 I was reminded of the warning words of previous scholarship. This was 'judgementoring' in action (Hobson, & Malderez, 2013). Jannath could easily be seen as an 'imperator' (Crasborn et al. 2011), doling out 'narrow, particularistic, and technical' feedback (Clarke et al. 2014). At first, I felt that this data would be impossible to use to create a vivid description of beginning teacher learning, and indeed, at the risk of engaging in 'judgementoring' myself, I decided to send an email to the participants requesting another recording:

> *because my research focuses on the ideas of beginning teachers, rather than their mentors, there was not enough data in the 15-minute recording (which was mostly Jannath giving helpful guidance and modelling her very practical ideas).*
>
> *It's incredibly helpful to hear all different types of conversations (and this is in no way a comment on the helpfulness of the conversation in terms of Nana's learning or Jannath's mentoring), but in order to do the particular analysis to share with you I would need to hear a little more of Nana's views and ideas in the conversation. (Email March Year 2)*

Nana and Jannath did not reply or provide further data but did sign up to meet to discuss the analysis, which suggested that they were happy to continue to be involved. In order to have something to share with them, I returned to the data and created a pen portrait roughly half the length of other portraits (1,100 words). I hoped the relative brevity of the pen-portrait, and suspected lack of congruence with Nana's own self-view, might stimulate discussion about the nature of their conversations and mentoring. In a mirror meeting which challenged us all, this is indeed what happened. To my great surprise, they also revealed that the email had led Jannath to 'approach it differently' resulting in less mentor talk and more questions. When Jannath asked Nana for his views on these changes he replied

> *it was good before…I could use your experience as a Frame of Reference for myself, but now you are kind of getting me to find my own answers…I am doing more talking, kind of getting the answers myself, exploring my own*

*ideas and I think she kind of gets me to decide how I am going to implement my own ideas, rather than use her ideas. (*MM*1 April Year 2).*

The recording in Cycle 2 did indeed demonstrate this shift and furthermore provided far more relevant data to describe Nana's orientations to learning from experience (OLE). When exploring the reasons for the shift, the participants suggested three reasons. Firstly, Jannath felt her mentoring had changed to elicit more of Nana's own views and ideas:

*you obviously had it all in mind, but me giving you the opportunity to talk and having those questions to let you talk allowed you to bring everything together so I wasn't like cutting you short like before… I was able to do that because I realised after the last one, I realised after the last one that I really needed to ask more questions, so I reflected. (*MM*2 June Year 2).*

Nana too felt he had changed in response to the mirror meeting, but also as a result of other professional learning activities as part of his programme:

*most obviously, because I know what the recording is being gauged against, even if it's subconscious…also I think it did give me, walking away from that [mirror] meeting it gave me more to reflect on knowing, so using it and knowing you would be using it, gave me more to reflect on in my day to day practice and then obviously having reflected on these I am going to discuss them and make them more explicit. (*MM*2 June Year 2)*

I questioned whether the change was only a performative change, on account of it being recorded, which he acknowledged:

to some degree, but I think it's more because I've had more to think about and thinking about that obviously affects my reflections. And I had some really good meetings in between the two recordings with F (Professional Tutor), where I was able to tie these in with those meetings. Because they were two big meetings towards the end towards when I was being graded and then I really reflected on those conversations I was trying to really push forward from the good to outstanding.

This case-study was typical of all the cycles in demonstrating the potential of OLEF to generate and support mentor and beginning teacher learning. It demonstrated that even where conversations were short or narrowly focussed, they could still act effectively as a first stimulus. It also supported the use of an iterative, action research design that enabled multiple cycles of data collection, with opportunities to make changes to the action being investigated, in order to have positive impacts on practice, as well as providing a fuller understanding of it. The theme of participation and the claims participants made in relation to this are further explored in Chapter 8.

5.2 Participant validity – resonance

Phase 1 assessed the extent to which the methods of data collection were able to provide a valid account of beginning teachers' learning. Given that it is not possible to directly capture beginning teachers' orientations to learning, OLEF-informed descriptions generated from mentor-beginning teacher conversations were used as units of analysis. A key purpose of Phase 1 was to ensure that the research process, and resultant tools could be used meaningfully by the participants. Mirror meetings were therefore used to explore how far the researcher-based descriptions, based on the data, resonated with the participants. Drawing on Tracy's definition of resonance, I wanted to explore if the research process, and particularly the tools, specifically the mirror data and OLEF, 'meaningfully reverberate and affect[ed] an audience' (Tracy, 2010, p. 845). I was interested to ensure that the mirror data was seen as a fair reflection of the data which participants had provided, but also that it could stimulate discussion and action related to their learning.

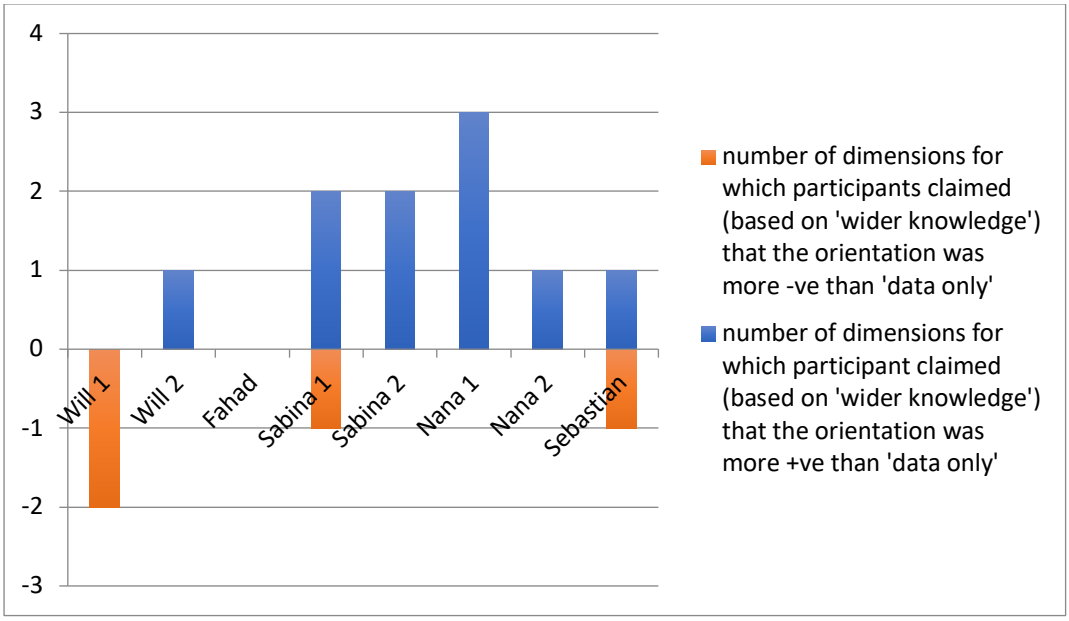
All of the participants reported that they judged the portraits to be a fair description of the approaches to learning, based on the data available. However, I also recognised that the participants had further information about the beginning teacher participants' learning, based on their broader actions and understanding. The researcher-generated descriptions thus sought to act as mirror data to stimulate participants to reveal more information. Phase 1 demonstrated the importance of this double stimulation process.

Whilst the mirror data was seen as providing an entirely appropriate description – based on the beginning teacher-mentor conversation – participants indicated that this description only broadly resonated with their wider understanding of their approaches to learning. The extent of the gap between the mirror data presentation and the picture they had formed based on their wider knowledge, can most easily be seen on the OLEF capture sheets annotated by the participants (Appendix M). In order to explore these claims further, I performed a very rough binary analysis of the relationship between the data representations and wider knowledge by counting the number of dimensions in relation to which participants felt there was congruence. Congruence here is defined as the participants marking positions 'based on the data' and 'based on wider knowledge' as being the same. Table 10 shows that 61% of the dimensions were seen to be congruent across all the conversations. When this is aggregated across

the conversations to give a mean percentage across participants, the proportion of congruent judgements increases to 69%. These calculations however do not include Ellie, who did not annotate her capture sheet.

Only one participant, Fahad, was totally satisfied that the process had fully captured his approach to learning. Equally only one participant, Ellie, fully rejected her portrayal. In most cases, as Figure 31 and Table 10 show, there were one or two dimensions which participants suggested were slightly out, and therefore incongruent. Figure 31 summarises the extent of difference in each case to show the direction of incongruence – that is to say whether the data presented their learning more negatively or positively than the participants would have described it, based on their wider knowledge. It also shows for how many dimensions this was true. In Sabina's first conversation, for example, Sabina and Eric felt that two of the dimensions were underplayed by the data (and so they should be higher) and one overplayed (and should be lower).

Figure 31: Number of 'wider knowledge' dimensions that were different from 'based on the data'.



Patterns can be discerned across the data. Most of the lack of congruence resulted from participants feeling their orientations were actually more positive than seemed to be reflected in the data from formal conversations (10 dimensions across the conversations being seen to underplay their attitudes and beliefs, whereas only four were seen to overplay them). Whilst the data representations of Intentionality and

Table 10:Congruence between data presentation and wider knowledge in P1

Participant	*Intentionality*	*Frames of Reference*	*RtF*	*AtC*	*Aspiration*	**Overall congruence %**	
						by conversation	**by participant**
Will 1	Disagreed (-)	Agreed	Agreed	Disagreed (-)	Agreed	60	70
Will 2	Agreed	Agreed	Disagreed (+)	Agreed	Agreed	80	
Ellie							
Fahad	Agreed	Agreed	Agreed		Agreed	100	100
Sabina 1	Agreed	Disagreed (+)	Disagreed (-)	Disagreed (+)	Agreed	20	50
Sabina 2	Agreed	Disagreed (+)	Agreed	Disagreed (+)	Agreed	60	
Nana 1	Agreed	Disagreed (+)	Disagreed (+)		Disagreed (+)	25	67
Nana 2	Agreed	Disagreed (+)	Agreed	Agreed	Agreed	80	
Sebastian	Agreed	Disagreed (-)	Disagreed (+)	Agreed	Agreed	60	60
					Average	**60.625**	**69**

(-) participants' wider knowledge was more negative than the data presented

(+) participants' wider knowledge was more positive than the data presented

Aspiration tended to be agreed, FoR was most commonly queried, which participants argued would be more positive if wider data were considered.

In all these cases, the nature of the specific conversation was seen to be the primary reason for the limited portrayal. This was particularly true in the case of Nana, given the nature of the first recorded conversations with his mentor, as discussed above. However, Ellie's portrait, based on a detailed and engaged conversation with her mentor, also resonated little, either with the participants, or with myself as her Professional Mentor:

> *overall, my first reaction would be that's not Ellie...it doesn't seem like an accurate… (Hannah,* MM *1).*

In positioning Ellie on the OLEF (based on the data) there was a sense of reluctance to acknowledge what the data suggested, particularly about the narrow FoR expressed and RtF. There was a sense that the process had challenged Ellie's own self-evaluations and view of self:

> *I don't know anymore…this I wouldn't expect to see, I don't know if it's true…I don't think that I have low expectations but maybe I do (Ellie, MM1).*

This mirror meeting like the first mirror meeting with Nana, was very challenging as the participants and researcher confronted a negative portrayal of the learners. It was fortunate that that my collegial relationships with these participants and their open attitude to exploring their own learning and mentoring allowed us to have a powerful conversation about the reasons for the dissonance. In addition to the general reasons related to the nature of the data and the role of the mentor above, we also identified that Ellie's level of confidence in speaking about (and justifying) her own practice may have resulted in her appearing to be less deliberative than she actually was. Her hesitancy could appear from the transcript data to reflect indecision or lack of thinking. This problem of interpretation reminds us again that these are very personal portrayals, shaped in nuanced ways by the idiosyncratic nature of the conversations and indeed the relationships between participants.

Fahad's willingness to accept the portrayal of him in full may also be explained by his relationships with his mentor and with me. As a teacher on a final PGCE placement he was far less embedded in the school, having less developed relationships with those supporting him. He was indeed being 'hosted,' and in his particular case, in an unusual arrangement designed specifically to take into account his family commitments. This might lead us to question whether Fahad felt he was being the 'good guest' by going along with the way in which the data depicted him, particularly at a point close to his final assessment. However,

the extent to which Fahad engaged with the mirror meeting, often adding further supporting evidence and the agreement of his mentor who shared her classroom with him, gives me confidence that, on the whole, it was a fair account.

Whilst Ellie's case-study reminds us of the great challenges involved in the study's use of 'naturally-occurring' conversation-based data, it reaffirmed the importance of the mirror meeting as an opportunity to address those challenges. Through double stimulation participants had the opportunity to place the particular conversation in its wider context, based on their broader knowledge of the beginning teacher's learning. Furthermore, I had the opportunity as researcher to seek clarification and the participants were able to offer explicit explanation in relation to any areas of ambiguity. The mirror meeting was, therefore, not only vital for contributing further data around the beginning teachers' orientations to learning but can be seen to be a powerful platform for further action to enhance learning.

Phase 1 explorations also suggested there was much strength in the cyclical and long-term nature of the proposals for Phase 2. All of the participants felt that if more conversations were analysed, the portrayals would be more resonant. The opportunity to involve three participants (Will, Sabina and Nana) over two cycles gave rise to considerable optimism about the potential for the process to lead to positive changes for participants. Within the second cycles there seemed to be greater congruence (than within the first) between judgements about OLEF based on the recorded conversations and those informed by wider knowledge (see Table 10). This indicated that these conversations provided richer, more helpful data. In Nana's case, at least, this shift was consciously crafted by him and his mentor.

5.3 Attitude to Context

Generally, there was ample data for four out of five of the dimensions of OLEF, with particularly rich data being present for Intentionality and RtF. This was particularly clear in conversations which focussed on a specific lesson observation (in line with the design of the DEBT project). In contrast, FoR was more apparent in more general mentoring conversations. In both types of conversation however, data for AtC were not always present.

In generating research questions, AtC was identified as a particularly relevant dimension for beginning teachers who were employed by the school and subsequently spent the vast majority of their training year in that context (RQ1.2). This is in contrast to PGCE teachers

(as studied in the DEBT project) who might identify most with their training institution but are 'placed' in 'host' schools for shorter periods of time. In the DEBT project

> *Context is broadly conceived and includes the nature of the school, the host subject department, and the role and status of the student teachers themselves* (Mutton, Burn and Hagger, 2010)

As Chapter 2 demonstrated, the papers disseminating the findings of the DEBT project, like many works within a socio-cultural tradition, emphasise the important role that context plays in learning.

The participants shared their attitudes towards the students they were teaching in the conversations. Their discussion around problems related to students were almost always seen as a starting point for learning, or at the very least framed within the context of a challenge to which solutions needed to be found, such as providing more realistic models which recognised students' current starting points, or adapting strategies to support further progress. This echoes the DEBT team's findings (Burn *et al*., 2000) and might be expected from a group of beginning teachers who were making good progress, particularly perhaps those who had chosen to work (and learn) in schools with high scores on the Income Deprivation Affecting Children Index (IDACI).[19]

However, the data rarely yielded insights into the beginning teachers' views of other aspects of the context. With hindsight it seems obvious that the nature of the research data – conversations with a mentor also based in the same context – might preclude such revelations for several reasons. Firstly, as the context was a shared one there was no need to explicitly discuss it or evaluate it, it was taken for granted and understood by both parties. This was made very clear, when, by chance on two occasions, participant conversations followed a period of teaching in another school (Second School Placement). These conversations stood out for the ways in which context was discussed, as the beginning teachers, Will and Sabina, not only considered their experience of learning in this different context, in contrast to that of their employing school, but also in order to explain and justify their decisions to their mentor who was not familiar with that second context.

Secondly, as the beginning teachers were talking to their mentors who were more experienced (and often more senior) teachers within the employing school context, they

[19] Teach First uses IDACI to identify which schools meet its eligibility criteria for being a placement school. See https://www.teachfirst.org.uk/schools/eligibility-criteria

might not reveal any negative feelings about how the particular school context seemed to constrain their learning. In a mirror meeting Will, for example, explained his feeling that the conversation had presented his attitude as slightly more positive than he gave himself credit for, as he felt he was often having an internal 'battle' to be positive and felt he had a 'tendency to moan about certain restrictions…blaming what went wrong on limitations' (MM 1). In this case he was referring specifically to a period when he was very frustrated about his data-projector not working, but had not told his mentor about the problem. This example reminds us that these conversations are performative, with beginning teachers choosing which aspects of their learning to present in relation to the audience, who acts not only as a mentor, but as 'gatekeeper' (Calderhead and Shorrock, 1997). Ultimately however Will and Hannah agreed with the data's presentation of his AtC.

There might also be something particular about the employment-based context that makes AtC less relevant and therefore an aspect about which less data is available. In their studies of the DEBT participants in the second and third year of teaching – more equivalent to the full-time employed participants of this study – Burn and her colleagues (1997) also claimed that the AtC dimension was less helpful, and that they should instead consider the 'extent to which the teachers proved to be context-dependent for their continued learning'. The AtC dimension, they concluded was 'better understood as a product of [the] other three dimensions' (ibid.).

5.4 Frame of Reference

Concerns about school-based ITE have often focussed on the limited range of experiences and sources of learning for beginning teachers who are invested so heavily in 'practical' classroom experience (Murray and Wishart, 2011; Mcconney, Price and Woods-Mcconney, 2012; Chapman and Armstrong, 2014) . Other beginning teachers, such as the PGCE teacher participants in DEBT, also identified 'experience' in the classroom as the predominant source of their learning, which led the DEBT team to explore their approaches to learning through experience, and ultimately to create OLEF. Indeed 72% of the teachers' reported instances of learning (that were attributed to any particular source) were attributed to classroom experience (Mutton, Burn and Hagger, 2010).

The dimension FoR explores the 'extent to which [trainees] recognise the value of looking beyond their own experience in order to make sense of it.' (Hagger *et al*., 2008, p. 169). The DEBT team suggested that FoR 'might include wider reading, discussion with mentors and

university tutors and reference to appropriate research findings' (ibid.). In this study FoR also includes the roles of the students (pupils) themselves, their teaching colleagues and the broader network of the education community, often including sources available through social media such as YouTube.

As with AtC, the nature of the data itself affected the relevant data around FoR. When discussing the presentations of beginning teacher learning in the mirror meeting, FoR was usually a dimension which the beginning teachers felt was not fully portrayed by the data alone (Table 10). In Phase 1, six reasons for this were identified linked to the role of the participants themselves and the nature of their learning and knowledge.

1. Beginning teacher participants, as employed teachers, tended to focus on the work at hand – the practical day-to-day needs of their learners and how to support their progress. Indeed, most of the conversations were dominated by the learning of the students, rather than the teachers.

Sometimes the learning of beginning teachers could only be inferred from the focus on student learning. For example, if a teacher was going to experiment with different models to support student learning, recognising their differing starting points, he or she would be learning about modelling and how to support students effectively through this process. Indeed, some of the participants valued the opportunity the mirror meeting gave them to focus quite specifically on their own learning. Eric, for example, claimed

> *actually when I reflect on the type of conversation I have had with [Sabina] and the way I have had them, a lot of it does focus on student attainment and learner progress rather than your development as an individual…this gives us more of a language and gets me to think about you more explicitly as a learner. (P1 MM1)*

2. Although the participants valued the contribution from university tutors through their subject studies (Teach First) or weekly university programme, (School Direct), some participants found it hard to make links between these 'external' ideas and their own practice. Sabina, for example told us

> *I still find with reading, it puts things in context for you, but you know the academic to practical isn't always a direct link, so for example, if you look at Visible Learning, you take so much away from that about what works in the classroom and what students respond to. But in the heat of the moment in the classroom, you're not necessarily thinking of Hattie…Reading is really, really useful to understand what I should be doing and there is nothing I have read that I have thought that its wrong, but it's implementing that in a practical context. It's not the first source of growth for me, so maybe that's why we don't talk about it* (Sabina MM2).

3. Despite all of the Teach First teachers undertaking an academic PGCE qualification in addition to their work towards QTS, some felt the structure of their teacher education was so different from teachers on traditional university-based PGCE courses, that they simply didn't have the time to draw on these other sources effectively, claiming that it's

> *not as though you're in a university conversation about it…that's a much more PGCE approach in some ways: sit down and reflect. You've got time to reflect. It's very much informed by reading. (*Ellie, P1 MM1*)*

Another mentor suggested:

> *I think it's the nature of the training itself when you are doing Teach First. The essays you spend time during the holidays doing, and you spend time in the classroom and the bulk of your experience is in the classroom* (Alice, P1 MM1*).*

4. Whilst mentors might be best placed to support beginning teachers in bringing together differing sources of learning to support individual synthesis into practice in a version of *deliberative reflection* (Nelson and Sadler, 2013) or *practical theorising* (Hagger and McIntyre, 2006), some mentors were unclear about whether this was or should be, or indeed could be, their role. The idea of academic writing being a source of learning was particularly challenging. Hannah acknowledged, 'as a mentor I don't refer to reading…to be honest, reading is not a priority' and questioned:

> *is it dependent on the mentor and their background? I would never ask someone? (Hannah,* MM *1)*

Another mentor Laura, with some irony, used a theoretical model of reflective practice to describe her approach:

> *that's the way we structure these conversations…I guess because the training in this school is quite Kolb like, but without the bit where you add in the research.* (Laura, MM 1)

When academic material was discussed, it was very much in the context of the classroom – drawing on it in order to make sense of their experiences, or to provide further ideas to support their practice. For example, mentor Alice reported:

> *When we've talked about the essays it's not really been about the theory of the essays. It's been, as a result of this essay, I tried this in the classroom, and then it's all been focussed on the classroom*

Her mentee, Sebastian added

> *If we do discuss theory to help teaching…we don't have extended discussions about the theory itself (Alice and Sebastian,* MM *1)*

These comments suggest that the beginning teachers expected 'theory' to provide practical outcomes, in a 'theory into practice' model of teacher education.

The final two reasons are linked to the nature of practice-based teacher learning and knowledge.

5. Beginning teachers are not always explicit about the origin or sources of their learning but as the classroom is the place in which this is enacted, they tend to overplay the role of practice and experience as the sole source of learning (Mutton, Burn and Hagger, 2010).

6. Whilst some sources may be seen as too far outside the crucible of learning, some references can be hard to spot by a researcher because they are short-hand and need insider knowledge to identify them. For example, when Ellie referred to 'backward learning' in one conversation, I can make the link to a professional studies session around planning, which incorporated the ideas of McTighe and Wiggins (2005). Similarly, her mention of:

> *that story thing…the reason I didn't cut it down was because of this idea that historical sources that the minute you do that you take away the meaning of the source and there was so much in there*. (Ellie P1, D1)

can be traced to a subject studies session covering the use of sources and implications for differentiation.

Mentor Eric noted in a mirror meeting:

> *to me that's implicit that you had been learning about learning theories from your course and you had been thinking about constructivist learning. That seems implicit to me*. (P1 MM2)

Nana summed this up when he quipped:

> *It's difficult to index all of your frames of reference within a conversation, especially an informal conversation, I don't think I need to produce a bibliography*.

Similarly, Sabina suggested:

> *by virtue of it being verbal, rather than written, you often don't talk in literature or you don't generally, it ends up coming across a bit pretentious if you talk about that book, I think you refer to things a lot more implicitly* (P1 MM2).

Despite the majority of participants feeling that the data under-played the breadth of their FoR, two felt 'surprised' (Sebastian, P1 MM1) at how many different sources were present in the conversations analysed. Will's two conversations identified the most references, leading his mentor Alice to describe how he was 'marrying a wealth of sources' (P1 MM1). In both of the conversations, which had the widest FoR, the focus was a broader mentor conversation, rather than focused on a specific lesson observation. Sebastian felt that perhaps

the extent of this range was on account of being in the early summer term, relatively near to the end of his formal programme, and following a recent observation and university essay. Similarly, Will's recent return from a period of second school placement allowed him to stand back and evaluate his progress. However, not all more general mentor meetings drew on the same diverse range of sources, which suggests that the nature and timing of the conversation alone does not explain all the difference.

Although the small scale nature of Phase 1 does not enable strong comparative claims, there does not seem to be any support for a suggestion, shared by some of the participants such as Ellie, and indeed scholars (Hordern, 2014), that the range of sources drawn on depended on the ITE route and its relationship to a university partner. Will, a teacher on the School Direct Salaried route, explicitly referenced a far greater range of sources than Fahad on the PGCE route. Fahad felt:

> *when it comes to planning I know why certain things need to be done, for example why a plenary is necessary or why a starter activity is the best way to start a lesson…I know that, I know the importance of that from what I've learned at university. But in terms of actually implementing it, figuring out for myself the best of way of doing it, it would be derived from the experience of teaching it in the classroom… while I do know it, I've learnt about it at university. I have really. It only comes to the forefront to do with classroom teaching, to do with experience. (Fahad,* P1 MM1*)*

Here Fahad powerfully illustrates the challenges of unpicking the FoR in practice-based learning, when the nexus of learning is the experience itself.

More relevant perhaps than ITE route, might be the finding of the DEBT team that the role of 'experience' increased for their PGCE participants over the three years they were studied, so that by the time they were in their third year of teaching it accounted for 86% of the learning attributed to a source (Burn, Mutton and Hagger, 2010).

5.5 Chapter summary

Phase 1 incorporated multiple shorter exploratory studies, involving six beginning teachers and their mentors over two academic years. This chapter has focussed on addressing RQ 1, demonstrating firstly that orientations to learning from experience could be revealed by routine conversations between beginning teachers and their mentors in employment-based routes of ITE. Secondly, it has shown that OLEF could indeed provide a useful tool, as a secondary stimulus, in discussions between teachers about learning to teach. Although mentoring conversations in themselves do not always include rich data around AtC and FoR,

the use of these conversations as mirror data to stimulate further discussion led to ample evidence.

The next chapter focuses on the substantive findings of the study, describing the orientations to learning of the beginning teachers involved in both Phase 1 and Phase 2. Two themes identified in this chapter will be further discussed below. Firstly, the nature of work-place learning goals, which focus more directly on the student learner, rather than the beginning teachers' learning (Eraut, 2004; Endedijk *et al*., 2012; Bronkhorst *et al*., 2013) will be discussed further in relation to Intentionality. Second, the lack of 'direct link' between 'theory' and practice will be explored in relation to the mediating processes of developing a Frame of Reference.

Chapter 6 Findings 2 - What does mentor-teacher dialogue reveal about beginning teachers' orientations to learning?

Chapter 6 provides an outline of the participants' approach to learning through the Orientations to Learning from Experience Framework (OLEF) dimensions. Each dimension is considered in turn, drawing on data across all of the nine beginning teacher participants. Building on Chapter 3, which provided an introduction to the OLEF dimensions drawing on secondary literature, this chapter will describe the ways in which participants in the particular research context approach their learning, as constructed from the data. These fuller accounts of the dimensions will support an understanding of the ways in which the approaches to learning vary across participants, and within participants over time, which is developed in Chapter 7.

6.1 Intentionality

I have considered Intentionality in three ways: firstly, how clearly future learning is planned and rehearsed. As beginning teachers' plans often related to specific targets and actions, I have considered the broader teacher aims using categories developed by Burn and colleagues (Burn *et al*., 2000, 2003). Secondly, I describe the extent to which the data provide evidence that beginning teacher participants actually engaged in the planned learning, taking deliberate action to put ideas in place. Thirdly, I review how far the beginning teacher participants took responsibility for proactively identifying their own learning needs, and can be said to therefore be leading the learning.

6.1.1 Planning learning

The extent of, and nature of the participants' plans for their learning are clearly shaped by the national, programme-level and school or departmental level context. All participants were very focussed on meeting the national Teacher Standards and regularly reviewed their progress against these, and other ITE programme standards. The Teach First participants involved in Phase 2 were required to record weekly targets on 'Blue sky', an online portfolio, and engage in termly formal reviews against the Teacher Standards, and the Teach First Progression Framework. In the words of Catherine: 'Teach First kind of makes you [intentional] even if you're not' (MM 1). These formal review processes structured the recorded conversations, so that five out of the six conversations recorded by Dave and Eric were explicitly focussed on discussing a formal observation, or a termly review. In Miles'

second recorded conversation, 78% of the words were coded for Intentionality. It should be remembered however, that the data do not include non-formal conversations and capture only a small proportion of formal mentor meetings (approximately 1/7[20]).

There was a clear expectation, expressed in Teach First guidance (TeachFirst, n.d.)[21], and shared by participants, that each meeting would result in explicit targets for the learning of the beginning teachers. As Appendix O demonstrates, these were often specific action-based targets, commonly focussed on a change in the specific class observed. This aligns with Teach First guidance to:

> *ensure that targets are specific, time bounded, agreed and attainable… Endeavour to leave the participant in a position to be able to take the next steps* (TeachFirst, n.d., p. 60).

It is also clear that these targets might relate to more general goals. Phase 2 conversations recorded at the beginning of the programme were less likely to identify how, or when participants might meet these targets. For example, MM1 provided the first opportunity for Miles and Dave to consider their progress since D1, nearly a month earlier. In contrast, by the end of the year, perhaps on account of noticing this as part of the mirror meetings, participants were more likely to create time bound targets.

Some participants, such as Dave, particularly valued explicit target setting, expressing frustration where they didn't feel a conversation had led to this, and revealing, as will be discussed below, the extent to which they relied on the mentor to support them to move from general areas of learning to concrete action steps. Dave described D4, a meeting focussed on the termly review as a:

> *really good meeting…a lot of targets and objectives came out of there…very clear… I think that last conversation definitely felt the most productive and beneficial to me. (Dave, MM4.)*

However, following D5 which provided an opportunity for Dave and Eric to talk with a teacher whose lesson they had both observed, Dave claimed:

> *although the conversations are useful and it does get me to think about it more, I think if there was specific target that I had to meet in two weeks' time then it might be more beneficial to my practice (MM5 Part A… it would be nice to go and act on some of these things we saw. (MM5 Part B)*

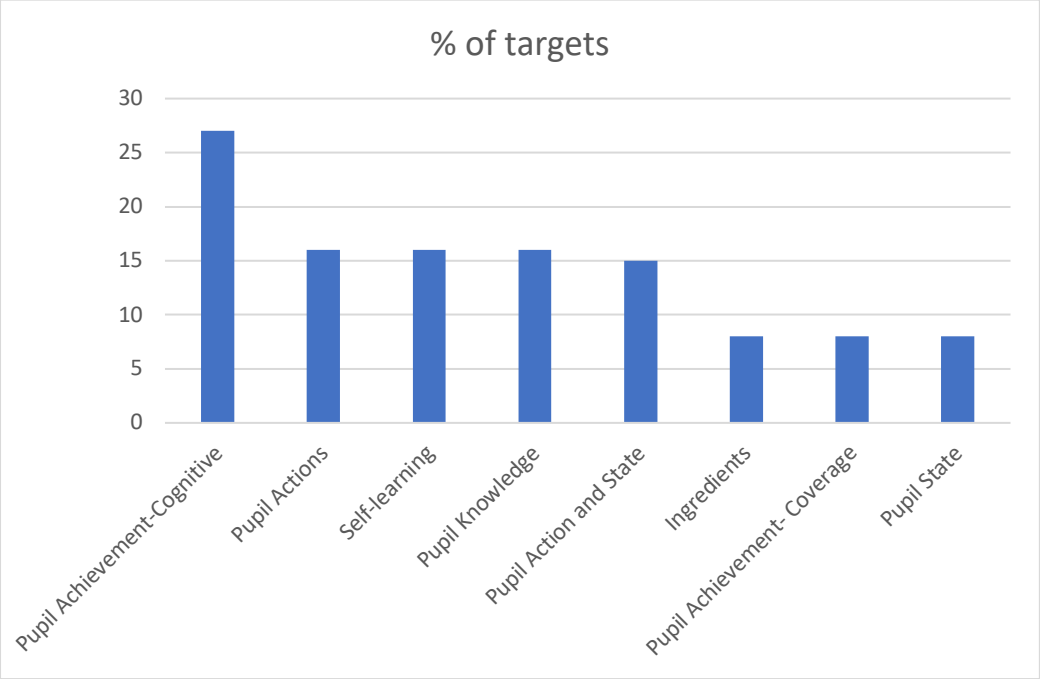
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[20] BTs were expected to meet with their mentors for a weekly formal meeting. In 39 weeks of the academic school year, we have captured five meetings (13%). Or one per (avg.) seven-week half-term (1/7).
[21] Date of publication withheld to support anonymisation of participants.

It becomes clear that Dave did not, in this instance at least, identify clearly how he would use the resource (the lesson observation of Charlotte) to support his own learning or that of his students. Neither did he independently identify specific concrete actions he would take as a result of the lesson observation and conversation. It seems he still required Eric's scaffolding for this process.

Figure 32 (below) shows that where targets were set they focussed primarily on student learning, rather than teacher learning: only 16 % of the teacher aims identified were classified as *self-learning*. Twenty-seven per cent of teacher aims – the largest proportion – were focussed on progress in students' learning *(Pupil achievement-cognitive)*. Again this aligns with Teach First guidance that targets should be 'focused on pupil success' (Teach First, n.d., p. 60), and other research into the goals of experienced and beginning teachers (Brown and McIntyre, 1993; Burn *et al*., 2000, 2003) but might also be seen a product of an increased accountability culture with a focus on student progress (Llewellyn, 2016). Whilst from a social justice perspective, the focus on student learners is important, particularly given the often-disadvantaged areas in which teachers are teaching, the effect of this emphasis is to reinforce the primary role of the beginning teacher as employed teacher, over their role as learner. It also means that the beginning teachers' learning is less explicit but needs to be inferred from actions and targets designed to meet students' needs. Indeed, Eric felt that one of the main impacts of the research process was a shift towards seeing beginning teachers as learners, rather than focussing on the progress of students, or considering how far they were meeting the Ofsted framework (Final Interview). This will be discussed further in Chapter 8, which explores the ways participants used the OLEF framework.

Figure 32: Percentages of targets classified using categories developed by Burn et al (2000; 2003)



This tension between the needs of the student learner and the learning teacher are particularly visible when mentors also have leadership responsibilities (as did two of the three P2 mentor participants). Miles' mentor John, who is the only other music teacher, also acts as a Head of Faculty, with responsibility for Creative and Expressive Arts. D2 shows that many of the future actions are prompted or suggested by John, acting as mentor, but also perhaps as line manager, who needs to reinforce faculty or school policy. In D2 John's repetition of the word 'accountable' three times may emphasise how carefully John negotiated both Miles' learning needs, and the management of the curriculum area for which he was responsible.

6.1.2 Engaging in Intentional learning

Where participants discussed progress against targets we can see evidence of the extent to which participants engaged in intentional learning. This seems to occur more frequently in P1 (academic years 1 and 2 of the data collection), perhaps on account of the physical presence of a hardcopy journal (rather than an online 'Bluesky' portfolio) which structured the conversation. In P2 (academic years 3 and 4) the mirror meetings often prompted participants to review their engagement in learning and discuss the extent to which they had been able to take actions to support their learning.

On the whole, all participants actively sought to meet their targets and were very aware of the deliberate actions they were taking to improve. In D6 the descriptions of Catherine's actions in the classroom are striking in how they mirror targets set in her BT year. Eric notes:

> *massive achievements… how much more aware of what you were doing to be in control of that than you were last time (D6).*

This may be on account of the mentors favouring particular actions and strategies, leading them repeatedly to comment on them explicitly. This might be particularly true with actions based on targets set by Eric himself. But with the insight that comes from having listened to all of the five conversations previously (something which Eric has not done), it is very clear that Catherine also responded to targets agreed in conversations with other people.

Catherine also demonstrated clearly her understanding that improvements in her teaching have come about through deliberate conscious actions. When asked by Eric in D6 to differentiate between 'conscious' and 'natural' strategies she was using to support behaviour for learning, Catherine was quick to distinguish between them. For example, she identified that using names on the positive side of the behaviour board is 'conscious. Well now I try to do it every lesson,' whereas she described her position in the room as something:

> *'I don't really think about [that] anymore…feels quite established and I was working on that quite a lot last year and at the beginning of the year, but now it's just I don't really think about it, it just kind of happens. (D6)*

It is notable that even where participants seemed to be intentionally engaged in learning, targets often recurred or continued, sometimes for the length of the programme. Dave for example continued to focus on constructing and sharing student learning objectives and other aspects of Assessment for Learning (AfL) through the whole year (See Appendix O). Nana also claimed that he had AfL as a 'target for the last...the last decade! No, I'm joking! the last six weeks' (P1/R2/ D2).The focus on AfL (which had not featured very strongly in the DEBT participants' learning) is indicative of a shift in the dominant national teaching practices (Vlachou, 2015), as well as ITE focus (Taber *et al*., 2011). The school was also undertaking a whole-school professional learning programme focussed on 'Embedding formative assessment,' as part of an EEF evaluation (EEF, n.d.). The repetition of targets may reflect the complex open-ended nature of some of the targets set and the iterative and long-term continuous nature of teacher learning and development. It may also be that AfL is a particular issue for beginning teachers as it is so fundamentally entwined with learning, but is often discussed as if it were a set of decontextualized strategies and resources which teachers

should use, and which are in tension with dominant high stakes assessment (Taber *et al*., 2011).

Sometimes the beginning teachers required more support to make sense of, and enact, the targets set. Catherine, for example, described insightfully the difficulty she faced in understanding how to translate a broad area for development into shorter term action steps, outlining the importance of her Professional Mentor, Eric, in helping her to break down a general focus into concrete actions.

> *I had a tutor from Teach First who I didn't get on with very well, and I found myself getting very defensive in response to her feedback, because I didn't understand what it was she wanted me to do, and how she wanted me to do it. And I think that that negative experience maybe reached out in to all feedback and I felt generally quite 'grrr' about the whole process, because I didn't understand what I needed to do to improve…*
>
> *I think you were probably the most helpful person in getting me out of that situation. Because I remember you were incredibly specific. I remember you sitting down after, at the end of session I had had with that tutor and saying 'Well what does she want and let's work out how to do it.' And then you suggested the timer, and I remember that being really helpful, so thank you for that, because suddenly I was like I can do that thing, and this thing and then it started to work, and then she started to be more positive, and I was like, that's what she wants (D6)*

This suggests that at that point Catherine's Intentionality did not extend to being able to identify concrete actions she could take, from targets (areas for development) identified by her tutor. It took a further conversation with Eric to help her to translate the target into specific actions she could take. In D6 Catherine was far more able to identify specific actions she could take in response to areas of development. As Catherine tells Eric

> *I think I would have many more tools now. Because I know, I have more strategies for different things. I remember one piece of feedback that I found difficult last year was 'Improve your AfL' and I didn't know what to do – I didn't have – know many strategies so I didn't know how to do that in an English context. But now I do have lots of options, and I know about lots of options, like lolly sticks, which I have never used, but I know some people find helpful. So if somebody said to me 'Improve your AfL' I might try lolly sticks. And I know where to go, if someone said 'Improve your behaviour management' I would know which people to talk to, to ask about that. In a way that I don't think I did last year. (D6)*

Like Catherine, all P2 participants claim increased Intentionality by the end of the year, particularly in breaking down longer term goals into shorter term actions by the end of the research (the beginning of their NQT year).

6.1.3 Leading Learning

By the end of the research period all three P2 participants claimed to be better able to lead their own learning. In Catherine's case, her mentor Alice initially set all the targets for learning. In D2 she claimed 'I wasn't in a very receptive state of mind…I was very overwhelmed and like I can't do it.' The use of 'receptive' might give some indication as to how she viewed the conversation – as one in which she receives feedback and instruction for her mentor.

By D3 there is evidence of Catherine identifying specific things she will do, although Alice continued to provide detailed guidance and modelling of next steps. It is not until D4 in May that we start to see Alice probing Catherine to identify what she could do to improve and there are more examples of Catherine making unprompted suggestions for her own development. In the mirror meeting Catherine and Alice noted this shift, with Catherine telling her fellow beginning teacher Dave 'although we still need prompting, I think we lead learning a bit more' (MM4).

Broadly then, Catherine's development appears to take a linear path: as the year went on she took increasingly more ownership for her learning. However, this is a simplification based on only the six data points, whereas the extent of Intentionality seems to be strongly related to her emotional state, which might vary day to day. At its extreme, Catherine described feeling in D2 'overwhelmed, like I can't do it' (*D2)*. She described a reactive 'day by day' (MM2) approach to managing the competing demands of teaching and university-based work:

> *sometimes I am quite bad at planning university work, that's been a big problem. And often I find myself just taking it day by day. So I'll plan something…I'm not planning a week in advance or going home and reading an essay and thinking oh I'll apply that idea in two weeks' time. I'm not doing that at all* (MM1).

At the end of the research period Catherine concluded:

> *these orientations are good to have in your head actually, because it's not linear. Like you can have days where you are really reactive, and like tired or whatever, but it's nice to have, to know how to get towards the 10 and to have it in your head that it's a thing you need to be thinking about. (D6)*

Overall, although the beginning teachers claim an increased leadership of their own learning, and this can be seen in the conversations recorded, it is also clear that mentors still play a significant role in helping to shape targets, partly perhaps on account of their greater understanding of (and prioritising of) ITE, departmental and school expectations.

In summary, the consideration of the Intentionality dimension revealed the extent to which participants' conversations focussed on planning future learning to support the learning of their students foremost, with their own learning being considered less directly. On the whole participants were motivated to make progress in relation to the targets set, engaging in actions to improve. Whilst beginning teacher participants claimed they were directing their learning more independently, the role of the mentor in scaffolding their future learning is clear. This is particularly clear in the ways mentors both afford and constrain the resources they draw on - their Frame of Reference - beyond the classroom.

6.2 Frame of Reference (FoR)

As explored in Chapter 4, the data presents particular challenges for identifying participants' FoR as they were rarely explicit about the external sources they were drawing on as they become tacit, interwoven with, and assimilated into their practical actions in the classroom. Furthermore, where participants were explicit, their references may be short-hand, requiring insider knowledge to identify them. Overall this may result in the FoR being under-represented in the data, although these effects are reduced as participants explicitly explored the dimension in the mirror meetings.

The FoR dimension was identified by P2 participants as being a focus of their actions and reflections from Cycle 3 onwards. This focus was chosen on account of early data presenting their FoR as narrow, and as a result of recognising the benefits and opportunities that a broader, richer FoR may have on their learning. Chapters 7 and 8 consider this development, exploring in turn the extent to which the participants approach this orientation in different ways as they progress through their ITE, and in relation to the use of OLEF as a reflective tool.

This section will consider four questions:

1) How did participants understand the concept of FoR?

2) Which sources did participants draw on?

3) How did they use them to inform their learning?

4) What was the role of the mentors in their FoR?

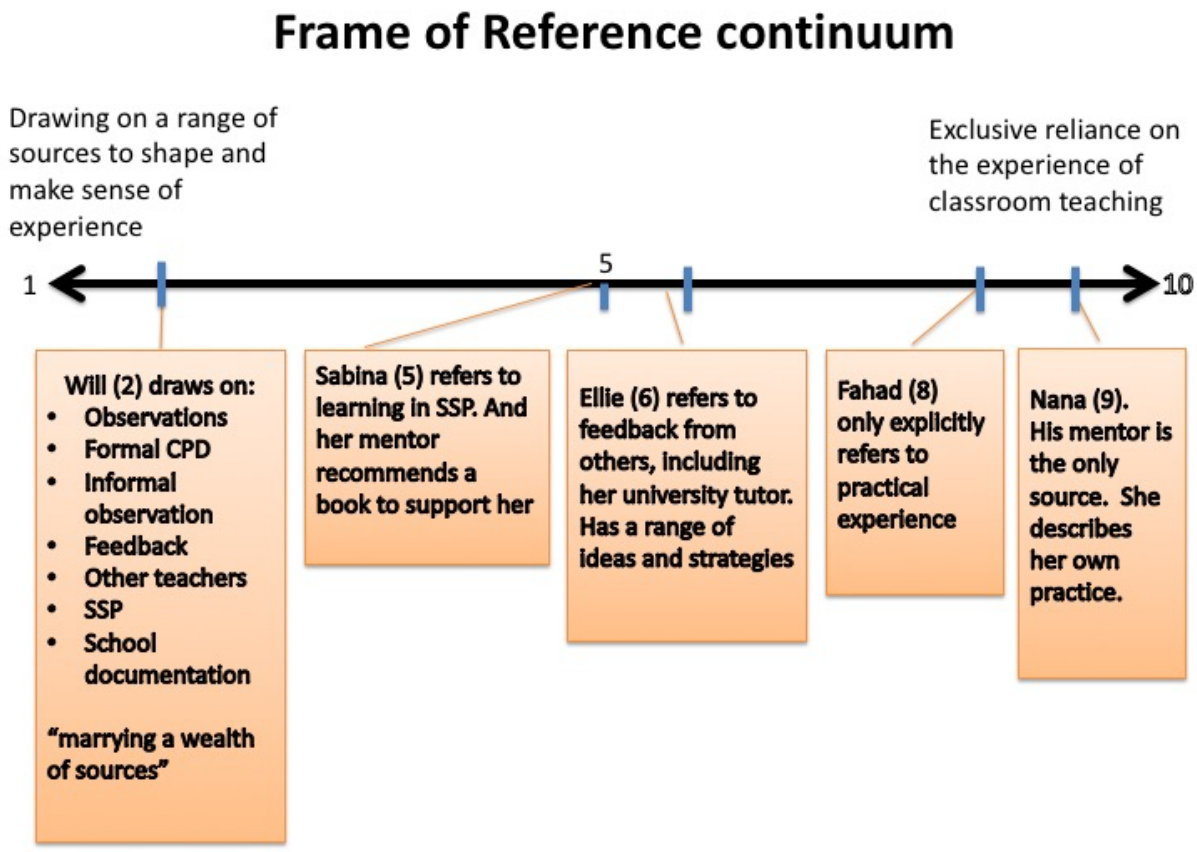
I tackle each of these in turn, with the heading forming a short response to the questions posed.

6.2.1 Frame of Reference, *Frames* of Reference, Frame of *References*

Participants' understanding of the dimension changed through the research process and this was intimately tied up with the research activities themselves. In initial explorations of the FoR, participants were quick to begin to spot the references they had used. Often this involved counting the number of explicit sources, or *frames* of reference they had drawn on. As the group became more engaged in this process, the number of sources referred to increased, especially as participants intentionally attempted to add to them, for example, by bringing in external sources to support their planning and reflections on lessons. These deliberate actions as part of the research process are explored in detail in Chapter 7.

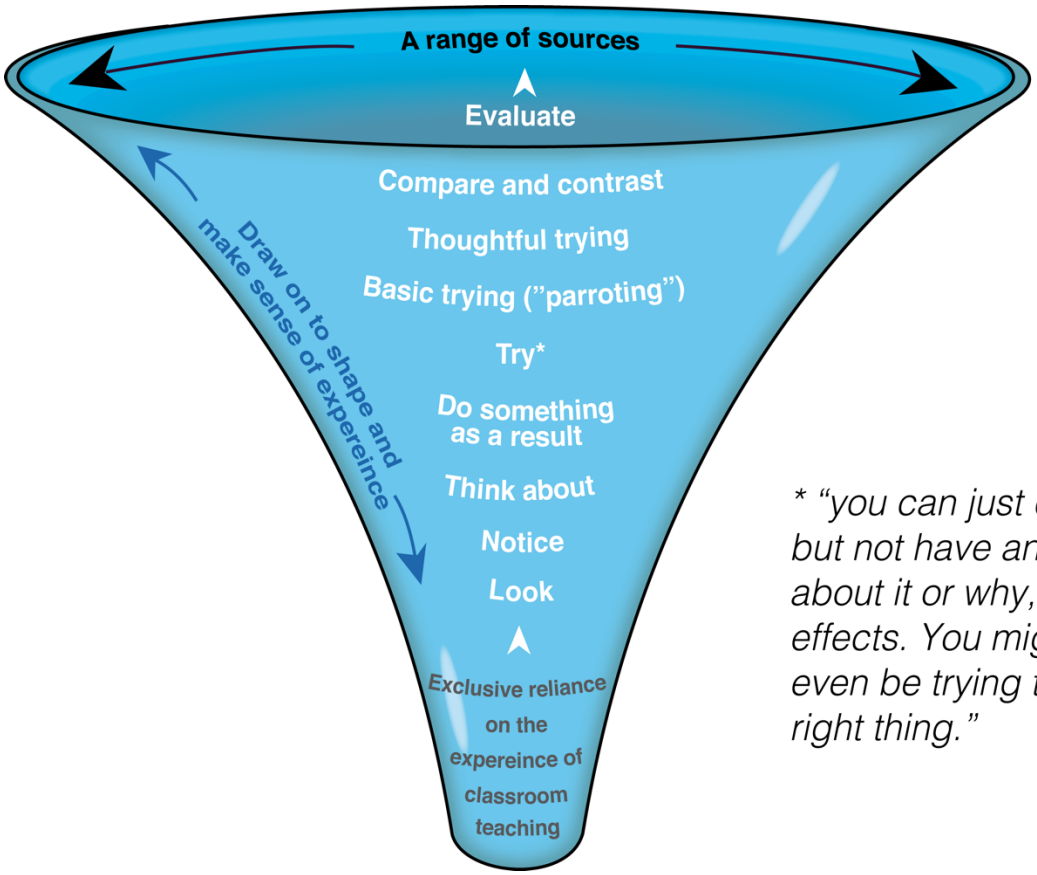
As I became aware of the possibility of participants having too simplistic an understanding of the dimension, I created two activities in MM3 and MM5 to clarify our understandings. In MM3 I shared an excerpt of writing from the DEBT project (Burn, Hagger and Mutton, 2015), along with a selection of data from the Phase 1 and asked participants to create a continuum of data excerpts, providing descriptors of the dimension. Figure 33 is a representation of the continuum created by the participants.

Figure 33: Participant continuum using P1 descriptors for FoR



In MM5 we developed this further by breaking down the DEBT definition to 'draw on' 'shape and make sense' to identify what this might look like in action, or in the data. (See Chapter 4 for a full description of this process.) A key intention here was to encourage participants to move away from acquisitive 'bagging' of *frames* of references or frame of *references*, as they were often referred to, towards considering how these sources were used and to what effect. Were they illuminating participant understanding and transforming actions and behaviours, or simply being collected? Figure 34's vertical dimension shows the action words that participants chose to describe this progression. This illustration (created as part of the author's own analysis process, rather than during mirror meetings) combines these words with a horizontal axis, which recognises a broadening in the range of sources used (as explored in MM3). In this way I aimed to redress participants' early conceptions of the dimension: making it more explicit that FoR was better seen not as one dimension- of an enlarging frame of reference, but that this intersected with using these ideas in more powerful ways.

Figure 34: FoR dimensions, based on discussions with participants



Participants' own practice in relation to FoR did not follow a linear path of development along the dimension(s), but rather 'bulged' to include a greater range of references, with a brief foray into deliberate experimentation to increase them, before seeming to retract again, reflecting a narrower conception, which prioritised sources easily accessible and directly linked to classroom experience. In MM2 Dave suggested:

> *pedagogy and different resources can seem kind of laboursome, but if it was broken down it could be quite useful. To be able to have those readings and again I think we are both wanting to be less reactive, more using a wider range of sources to assist us in our planning and teaching" (MM2 plenary).*

But in MM4 he claimed:

> *Before, I thought it was largely pedagogy and reading, whereas now I realise its effectively anything outside my classroom, any sources of information which I can use which isn't solely my own opinion of how things are going (MM4 Part B).*

Dave particularly favoured opportunities to draw on the experience of close colleagues through observations. It seems that although Dave did not rely exclusively on his own classroom practice, he was less ambitious about those sources that might support him to broaden his FoR. Catherine similarly shows a contraction:

> *I remember at the beginning I had this idea that I should be reading lots of literature, like I should go and read lots. But as the year has gone on I've felt, well actually its more about how you apply that. So it's maybe more useful to have a look at a range of different practice. See things being done.*

6.2.2 Sources close at hand

The table in Appendix P shows the range of sources used. These range by participant in terms of the number of sources used and from where they are sourced. Across all participants we can see a general increase in references to other sources being used, which may be on account of engagement in the research (discussed in further detail in Chapter 7). In D5 Eric told Alice:

> *I don't think Dave necessarily knew that, like drawing on lots of different things, was something that he should be encouraged to do. Like I think that when he started he thought that you get better by teaching your class, someone observing and giving you feedback, sometimes you share ideas around the department. Seeing his sphere of different things expand has been quite useful. For him, but also for me to see (D5).*

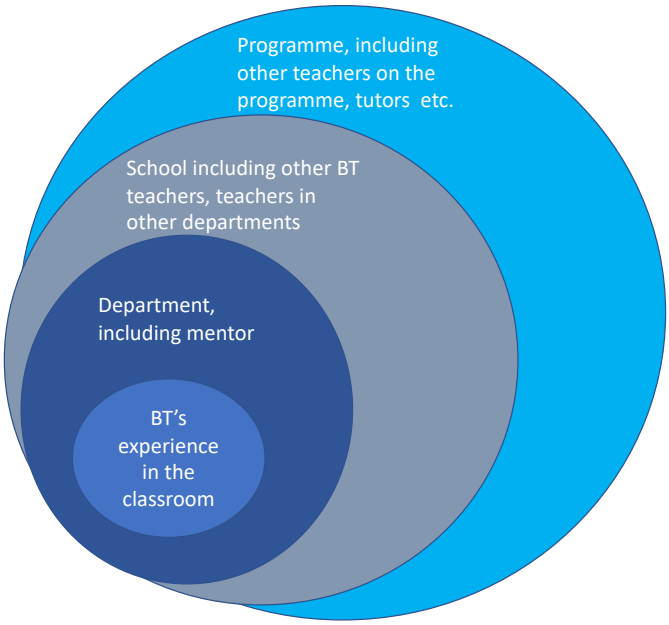
Dave's own words support this:

> *if my actions were solely based on experience on the classroom, then I'm not likely to progress as much as if I draw on other people and other sources (MM4 Part B).*

However, it is notable that participants tended to prioritise and refer to more internal sources, particularly those close to them, as Figure 35 illustrates. The sources that Dave referred to as having informed his practice tend to be observations of other teachers, particularly those within his own department, or through structured observations within the ITE programme (Summer Institute ESCL and the Second School Placement). Eric was keen to broaden this range, suggesting to Dave that:

> *what you are drawing upon often is what is in your immediate vicinity. And it's not wrong, but if you think about its your students, it's A and L [colleagues], it's me, but actually there are, even within the school there are things like- well did you talk about going to see Inclusion…so maybe I'm being a bit unfair…range of specialisms across the school. There is [sic] lots in literature and pedagogy. I think part of drawing on FoR is knowing which FoR to draw upon for the best kinds of outcomes. And at the moment its quite proximal (MM4).*

Figure 35: An illustration of proximity-based sources of learning



6.2.3 Knowledge for action: practice prioritised.

Overwhelmingly participants used the sources of knowledge instrumentally, to solve problems they were facing. Catherine described them as helping to

> *get[s] you out of those holes of despair where you think nothing is going to work...you get used to thinking, there is a thing, who can I ask, who can I watch. (MM4 Part C)*

Her conversations with Alice reveal an acquisitive approach. At the start she approached sources as pool of ideas, resources or strategies that she could 'borrow' in her classroom (D1). This pragmatic 'magpie' approach continued through the year, including D5 where Catherine described her approach: 'how does he do that? I could nick that.' Alongside this, Catherine increasingly engaged with other sources more – using them to make sense of her own experiences, and to evaluate differing ideas. This development will be discussed further in Chapter 7.

Cycle 5 provides an interesting insight into Dave's views on the FoR dimension. After initial prompting (by Eric) to link the purpose of the observation to FoR, Dave suggested the focus of the observation of Charlotte is

> *using another frame of reference by observing Charlotte teach a lesson, so that helps my own learning. But then also thinking about what frames of learning that Charlotte herself might draw on, again to add frames of references to myself. So kind of two things if you like. (D5)*

However, looking back on this, Dave expressed a sense that he might have gained more: 'it would be nice to go and **act on** some of these things we saw' (MM5 Bold type added for emphasis). The D5 observation and discussion seem to be an exercise, which Dave found hard to link directly to his learning. This may reflect his privileging of knowledge for action – sources should lead to something to 'act on.' Without the opportunity to unpack how the discussion has supported new understandings, and might inform action, Dave struggled to identify his learning, or potential learning, independently.

Just as Alice in P1 had noted a physical division between time in the classroom and academic essays in the holidays, two beginning teacher participants also noted this division in the organisation of their work. This may have further contributed to participants finding it hard to bring together research-engaged pedagogy and action in the classroom.

6.2.4 Mentor learning

Chapter 4 reported Phase 1 findings that some mentors were unclear about their role in supporting beginning teachers to bring together differing sources of learning to support them to make sense of their experience in 'deliberative reflection' (Nelson and Sadler, 2013), instead prioritising practical actions in the classroom. Indeed, in Phase 2 Alice expressed concern to her fellow mentor Eric that she would 'run out of theory that I will remember' (MM3). However, she was quick to identify ways to address this, suggesting that she could learn from Catherine's reading for her university assignment (WA3) and 'we could always

ask other members of staff too for theories that have helped them' (MM3). In this way, Alice modelled her own Intentionality and desire to broaden her *FoR*.

Eric, repeatedly encouraged Dave to draw on academic reading as a source of learning, although it didn't always appear natural, or lead to changes in Dave's practice. In D2 Eric explicitly 'set[s] you some reading,' which prompted him to laugh. Later Eric explained 'I think I was laughing, setting you some reading to do, it is a funny thing to do.' *(MM2)*.

In D4 Eric encouraged Dave to draw on the reading he has done as part of his university course Written Assignments, reminding him:

> *Didn't you do lots of reading for WA3?... I mean that's not, don't see that as separate…I'm sure there's lots of things you've learned through that, and there's no reason why that should begin and end in an essay.*

Dave acknowledged that 'I guess I do sometimes [see them as separate]' (D4). Later in the conversation, Eric's earlier prompting was rewarded when Dave himself suggested:

> *I can go back to WA2 for this as well, because this is where I planned a scheme of work which only focused on one class, and used enquiry-based learning. And to an extent it worked, but you know, I quite heavily reflected on that throughout my essay, and I did quite a lot of reading on enquiry based learning at the time as well, so be useful to go back to that. Like Margaret Roberts for example is like kind of the founder of enquiry based learning in geography, so maybe just going back to that and thinking about how I can use it for a range of classrooms. (D4)*

It is not clear from the data, however, that these potential sources were actually used meaningfully to support his learning. In D6 Dave again identified observations of teachers as having informed his practice, and Eric once again attempted to broaden this through discussion of a whole school Professional Learning project around AfL.

In summary, whilst Dave and Eric referred to a wide range of sources that could be drawn on, there is no explicit evidence that sources beyond observations (or discussions) with other teachers, particularly those in his own department or the Teach First network, are drawn on. In Eric's words:

> *I think D will quite happily reflect on things he's seen in people's classes and say "I could do that" and he will also quite happily talk to Inclusion and stuff like that. But there are still certain things that his reading for his essays, that he doesn't see how it translate into what he does. And he doesn't see like I'm struggling to, like differentiate for lower ability, he wouldn't go to the P[rofessional] L[earning] room and look for a book to find strategies for EAL speakers and think that's a useful thing. I think he still has this thing that pedagogy is about Vygotsky and jargon. (MM4)*

This section has shown that the FoR dimension was a powerful construct helping to unpick beginning teachers' and their mentors' approach to learning from experience. By provoking them to consider the breadth of resources they were using to make sense of their classroom experience, the participants gained insights into the ways they made sense and their views of reflective practice. It revealed the ways participants tended to prioritise readily available resources within their immediate surroundings in order to solve problems within their practice. The role of the mentor as a main provider of feedback and advice is considered in the next section.

6.3 Response to Feedback (RtF)

As Chapter 4 outlined, one of the implications of the methods used in this study is that there was the opportunity to hear how beginning teacher participants responded to the feedback given by their mentors. Fourteen of the 24 recorded conversations in this study took place after a mentor-observed lesson[22]. Within the conversations recorded during Phase 2 specifically (n=15), mentors spoke 56% of the words on average[23], allowing ample opportunity to share their views, and for participants to respond. Across all the conversations, recordings showed that participants responded overwhelmingly positively, seeming to accept mentor critique and suggestions with humility and a desire to learn. Across the 24 conversations there are very few examples of defensiveness, rejection or hostility. On the whole this is probably indicative of positive relationships between mentor and BT participants, and of BTs using feedback effectively to support their learning.

However, the data also strongly demonstrated how high stakes, performative and often emotionally involved the observation process was. BT participants were engaged in a process which ultimately resulted in mentor and tutor assessment and recommendation of their Qualified Teacher Status award. As discussed in Chapter 4, there were also some indications that beginning teachers were carefully considering how to respond to their mentors, in terms of how they presented themselves as employed professionals.

[22] See Appendix A summary of programme for details of observations.
[23] In conversations following lesson observations this average increased to 58% of words.

6.3.1 Positive Response to Feedback, even when challenging

All the participants in P2 generally responded positively to feedback, but Dave perhaps exemplifies this most consistently. At the end of the project Eric made some conclusions about Dave's RtF:

> *I think you have always been very good at this actually, you have always been very reflective and wanted to know what to do to improve, and you have taken on constructive feedback really well over the time that I have worked with you. And always tried to put things in place that we have talked about, so I would say you probably started quite high on that as well. (MM6)*

There are three elements to which Eric draws attention: firstly, Dave wanting to know what to do to improve; secondly, taking on constructive feedback; and thirdly, responding to targets by taking action. The first and third elements relate strongly to Dave's Intentionality, discussed in the related section above.

Of particular interest in this section is that Dave appeared to respond very well to all feedback, including demonstrating that even from the initial cycle, he could take on board feedback that challenged his views and ideas, or criticised his behaviours. In D1 for example, Eric admitted of Dave's habit of 'shushing' students that he 'personally found it a bit irritating.' (Eric, D1). In the MM Eric suggested that:

> *reading it back it was quite head on…you did so well (all laugh) I went bright red when I was listening to that on my own…cos I said "maybe you shushed thirty times in the classroom" and I don't think you did…that's respect to your humility, I think I would have got really embarrassed and upset and stopped the conversation at that point. (MM1)*

Dave acknowledged that he

> *[I] probably was a little bit embarrassed, but I took it. The reason I didn't take offence to it, is because I would rather know about it… I'd rather be told honest opinions and thoughts than beating about the bush, as it were. (MM1)*

Dave was also open about some of the difficulties he faces. In MM2 Dave claimed: 'I always feel comfortable enough to accept when I find things challenging' (MM2 Part 1). This suggests he did not approach the conversation defensively, feeling he needed to defend his choices, actions or ideas. Furthermore, in response to a target, Dave acknowledged 'No that sounds good. That is definitely something that I do struggle with.' (D2)

Dave's apparently consistent positive response seems to support his Intentionality, and yet as will be discussed below, does seem to be hard won and deliberate, rather than natural, as a result of his ITE being a high-stakes, emotionally involved and performative process.

6.3.2 Trial by observation

Participants considered observations by mentors and tutors to have serious consequences, which affected their behaviour in planning lessons, the lesson itself, and the conversations which followed. All participants described the extra attention they paid to planning observation lessons more carefully. At its extreme, Will described that in his observation:

> *I just became very self-conscious to the point where I just didn't have things to say... the thing that I find really tricky in lesson observations is that if something doesn't quite go right, and this must be a sort of perfectionist type streak (P1MM2).*

Before joining the school as a School Direct teacher, Will was a professional actor, and he linked this previous experience to his feelings in the observation:

> *thinking about the performance and the performance isn't going very well. That did become very disabling ((P1MM2).*

In the second recorded conversation (D2) Catherine claimed she valued feedback but found the process stressful because she thought that each (formative) observation would be used in her final summative assessment:

> *I actually like having people watch, although this is a bit stressful. Just because its formal...having the feedback is really useful, just having it formal makes it a bit stressful." [At this point, and off recording, Catherine cries] (D2)*

Like Catherine, Will described the anxiety around feeling the process was 'summative', rather than 'an opportunity to make progress' and declared:

> *I think I need to learn to frame things more positively: that everything that happens is a chance to show what you've learnt…*
>
> *I do remember it was at this point in the year…I was starting to find, definitely starting to find observations a real kind of trial and I was desperate for them to stop. And it's partially because it was getting to that time of the year and it's that feeling that the more observations you do, you know what am I going to show progress on next? I do remember feeling I just want these to stop now. So clearly on one level I was like, I don't want any more feedback now. I'm done. For the moment. I might not be the perfect teacher but I've had enough, sort of thing. And that was honestly how I felt. …Objectively I recognise why should it be like that? Nothing's gonna-it should just be a learning opportunity. But it clearly is this idea. Clearly you wanted to show progress every time. What I wanted was that every time I did an observation I wanted someone to say "Well done. You're getting even better. You're better and you're better and you're better." And at the end of the year "you're perfect.:.. if someone had said "right you've got a choice now. You can not be observed. You can finish observations." I would have taken it in a moment* (P1 MM2).

The data suggests that the very high value beginning teacher participants place on feedback to support their learning, and its role in their assessment for ITE, as well as managers of their performance as an employee, make it very high stakes for all participants.

6.3.3 Emotional Feedback

Burn and her colleagues outline the importance of recognising the 'emotional charge' of learning to teach (Burn, Hagger and Mutton, 2015, p. 46). In this study the high stakes nature of feedback can be seen to be one of the reasons the observation process could be particularly emotionally charged. The feedback is high stakes not only in terms of its summative role in the formal assessment process, but also in terms of the high value placed on it by participants. Being observed and receiving feedback was seen to be important, with plenty to lose or gain, which therefore often became emotionally charged. However, this is not a simple causal relationship where the observations changed participants' feelings. Rather, that in the course of the recorded conversations some participants revealed their general emotional state. In the section below I will describe Catherine's experience to illustrate how her RtF was mediated by her emotional state, which is readily revealed in her mentor conversations.

Catherine claimed on the whole that she responded to feedback very effectively (positioning herself in cycles 1 & 2 consistently >5). At the outset, in MM1 Catherine claims:

> *generally I find critical feedback quite helpful…as a child I did lots of classical music on Saturdays and that's just vicious. So I was used to being put on the spot and torn apart, from the age of about 11.*

However, Cycle 2 challenged this account. Looking back on this (in the mirror meeting) Catherine acknowledged:

> *This is probably the least receptive of your feedback I have ever been I think. And I think I was just past the point where I was feeling receptive… I think I was feeling quite deflated and I was receptive to things that I could take and apply, but I was not receptive to …unravelling… it's just got a bit emotional, it got a bit emotional (MM2).*

Catherine's emotional state and the feedback are clearly related. It is hard to untangle a range of factors which led to Catherine feeling so overwhelmed. Relatively high challenge from the mentor, her own sense of disappointment, perhaps combined with the exhaustion of the term, led to her not being able to respond as positively to the feedback.

Catherine attributes her response to her feelings about the lesson, her abilities as a teacher, and her overall 'mood':

> *'I was feeling anxious and like it was my fault it hadn't gone well… I am definitely expressing a sense of frustration with what I perceive as going backwards in progress. I think that was my overriding feeling in my meeting being that 'Oh why did she have to see them like that?'*

> *…I don't feel like I was in a very good place to be learning that day, so it's quite. It makes me feel quite sorry for myself when I read back. Because I wasn't in a. It was useful in the sense that it did make me. I have definitely acted on some of those targets. But I think in that moment, I wasn't in a very receptive state of mind…Yeah I think on that day I was very overwhelmed and like 'I can't do it. I don't know why I am here'. So I think that comes out in the transcript quite clearly that I was like 'ahhh!' (MM2)*

She contrasts this with another observation with her PM, Eric:

> *I was in a much bouncier mood that day… At the end he said 'Thanks for being such a good sport'…he pushed me really hard and I found it enjoyable because I was in the right frame of mind. (MM2)*

For Catherine, her emotions are revealed in her conversations, sometimes bubbling out even where she doesn't want them to. Her emotional state or 'frame of mind' also affects how 'receptive' she is to feedback. In contrast, there is evidence that whilst some participants didn't readily reveal the same anxieties or low emotional response, they did experience them. As discussed in Chapter 4 the nature of the recordings with their mentors, who acted as gatekeepers, and often managers, seems to have affected how beginning teachers chose to present themselves.

6.3.4 Negotiating professional identity

The beginning teacher's RtF is intimately related to their AtC, which will be further discussed in the section below. It is clear that some beginning teachers, such as Will and Nana, actively sought to present themselves positively, and this seemed to be tied to a powerful sense of what desirable, professional behaviour was.

In MM 1 Will claimed that the data presented him 'in quite a flattering way' as more deliberative and as having a greater acceptance of the context and ability to capitalise on it, than he felt he had. He raised questions about how far his words revealed his thoughts and feelings, describing the internal 'battle' to be positive and 'tendency to moan [privately] about certain restrictions' (MM1). The main example that Will cited was his frustration at a projector not working, which he felt at the time really restricted his ability to teach, and despite frequently complaining about this at home, he didn't raise concerns with his mentor. This reminds us that the mentor meeting conversations capture Will's presentation of himself, to his mentor, rather than necessarily his own private feelings.

Both Nana and his mentor Jannath made very deliberate changes to their conversation in Cycle 2 as a direct response to the research process itself (as discussed in further detail in Chapter 8).

> Nana*: maybe I want to score highly on my next profile…if we had another conversation, even if its subconscious, some aspect of me will be trying to score highly on this. The way I speak in this conversation is going to be shifted to score more highly on this. That's me being frank* (P1 MM1).

Nana's desire to present himself positively has implications for the ways in which we can understand the data provided (as discussed in Chapter 4), but also seems to reveal something of what he felt it meant to be seen not only as having helpful orientations in terms of the OLEF framework, but more broadly as a professional.

Unlike Nana and Will, who are explicit about the conscious choices they are making in their behaviours and responses, it is only in Cycle 6 that we start to see indications that Dave's full feelings are not readily revealed. As discussed above, in every cycle his conversations exemplify a positive RtF, yet in MM6 he describes his first observation as:

> *Nerve wracking and daunting. I found an observation like very, yeah daunting process, whereas now I don't find it that way really. I see it with more positive light [laugh!] than I probably did this time of year ago (MM6)*

In part the dissonance between his description of his feelings and the way he presents himself could be explained by his very high levels of self-criticality, which will be discussed in the section on Aspiration below. However, it may also give us another insight into the careful self-management of participants in how they responded, which belies the personal difficulties they face.

6.3.5 Defending decisions

Underpinning much of the discussion in this section is the issue that participants can, to some extent, choose how to present themselves in the conversations recorded. Their decisions about what to say, and how to respond are shaped by understandings about the nature of the process: how formative, or summative it is, and how high stakes; the nature of the context in which they are working both as employed beginning teachers in the particular department and school; and their relationship with the mentor themselves. It is notable that of the very few examples of beginning teachers defending their decisions, in response to implied or explicit criticism, most come when the beginning teacher is discussing another mentor (not the discussant). Ellie for example powerfully defends her planning decision

> *We're using this book for the whole scheme of work and it's like a story. And it's really, quite long and that's one thing I know, that was picked up on by the other observer. But the reason I didn't cut it down was because of this idea that historical sources that the minute you do that you take away the meaning of the source and there was so much in there. I know there was a lot of text for them. By chunking it would have taken away the story element of it which actually made it accessible. So that's what I thought. (*P1 D1)

But it is not clear from the data whether she was able to share this thinking with the observer. She certainly does not question or challenge any of the feedback from the mentor with whom she is in discussion.

Examining the FoR dimension calls for close attention to the relationships and power dynamics within employment-based ITE. Participants viewed the feedback of mentors, particularly that linked to lesson observation, as high stakes. Their responses were shaped by this relationship, their own emotional state as well as their developing professional identity as employed teacher. It is to their attitude to this particular context that we now turn.

6.4 Attitude to Context (AtC)

6.4.1 Taken for granted

AtC was the least frequently coded dimension across all the conversations in Phase 2, with only 21 references across 14 conversations (3.4% coding density on average). Six conversations had no coded references to AtC. Chapter 4 has outlined the three ways in which the methods of data collection contributed to the limitations in the data available. Firstly, I recalled how Burn and her colleagues suggested that the AtC dimension was less helpful when considering DEBT participants in their second and third year of teaching, who might be seen as the equivalent of the full-time employed participants of this study. AtC is entangled with other dimensions, particularly RtF and FoR. Instead Burn and colleagues (1997) argued we should consider the 'extent to which the teachers proved to be context-dependent for their continued learning'.

Secondly, Chapter 4 highlighted the challenge of using conversations where the context was shared – it was taken for granted that it was understood and was therefore not often explicitly discussed. Thirdly, because beginning teacher participants were discussing context with their mentors and, often managers, they may not have felt able to comment openly, or raise concerns about aspects of context which they felt constrained them. This may account for the lack of evidence of participants identifying the context as constraining, or of them attributing blame to the context, even where they faced substantial challenges.

In addition to the context being taken for granted, and therefore not explicated, there was also some evidence that the affordances and opportunities of the context were not particularly acknowledged. Where conversations considered experiences in other contexts, provided through Second School Placements, for example, there was much greater data available. Will claimed that 'being at the other school has given me, sort of fresh eyes in a really good way, on the school (P1 D1). Through a contrasting school placement, Sabina also contrasted her frustrations with teaching in this 'unusual' context with her 'home school':

> *It was quite difficult teaching something where the agenda was set by somebody else and where I hadn't had the time to build the kind of relationships that I would normally hope that I would normally have with students in my home school. So I didn't really feel completely in my comfort zone…In the planning I never saw what they learned when they first covered that topic and I had no idea how they had approached it, they were doing a different [exam] board so that was not something I was familiar with, I had to look at the focus of questions in a different way, so I wasn't entirely comfortable with planning. And also in terms of delivery I didn't know what their prior knowledge was and how deep that knowledge was when I was going into that revision" (P1 D1).*

In the mirror meeting she acknowledged:

> *I'm bringing the context more into the analysis than here, for example, where I have a lot more space to think about the learning and the students, than other things, that you know, I just take as given, in a classroom that I'm content with…I am vocalising the constraining factors a lot more than I normally would (P1/R2/MM1)*

It is notable that both these participants were on the School Direct programme, which required a month in a 'contrasting school,' whereas Teach First teachers spent only one week undertaking similar activities in another context.

6.4.2 Shared context?

Table 11 summarises aspects of context for the two beginning teacher participants, Dave and Catherine, who took part in all the cycles. These are colour-coded to show whether participants described them in ways which suggested they could capitalise on them and exploit them for their professional learning, or were seen to constrain them. The table considers the four levels of context outlined in the DEBT definition:

> *the nature of the school, the subject department, and the particular classes and students that they are teaching – as well as the role and status of the trainees themselves* (Burn, Hagger and Mutton, 2015, p. 44).

As part of this last level, I have also considered the nature of the ITE programme.

Aspects of whole school context, which might help an outsider to contextualise their visit such as the physical provision, curriculum, Ofsted designation, leadership structure or vision, generalised overview of the background of the students, were not discussed in any conversation. At the programme level, the various people involved were referenced, alongside aspects of the 'university work' (Catherine, MM2). These were often presented in terms of being 'separate' (Dave, D4) or 'divorced' (Catherine, MM2) from their practice-based learning. As full-time teachers, Teach First participants often physically separated their university work from term time school work, by completing assignments in the holiday time[24]. Although three of these assignments were Reflective Journal Assignments which explicitly required engagement with their own practice.

Table 11: AtC for Dave and Catherine

Key:
Constraining features of context
Features of context to capitalise on
Neutral- accepted
No data

	Catherine	**Dave**
SCHOOL	High performing urban school with high scores on IDACI Change in leadership mid-year	
FACULTY/ DEPARTMENT	High performing, collegiate subject department "so many resources"	Part of fragile department with lower KS4 outcomes that other areas of the school. Subject mentor does not initially regularly provide mentor meetings so PM steps in
STUDENTS	Complex needs of students- high proportion of EAL and SEND students. Some challenging, and low level disruptive student behaviour More boys than girls	
	Teaching bottom sets	
ITE PROGRAMME (role and status as trainees)	Practice based learning TF programme Competing demands of "University work" vs teaching	
	Mentor involved in assessment[25]	Mentor involved in assessment.

[24] Teach First teachers spent one week in a contrasting school, and six days per year in Subject Studies. School Direct teachers spent one day per week at university, but often worked in school when formal teaching was not scheduled.
[25] This has been extensively discussed in the section on RtF above.

At one point, Catherine identified how the involvement of her Leadership Development Officer[26], in filming her teaching, had provided a 'really useful…other perspective.' (MM4). The participants' desires to increase their FoR, particularly bringing in external sources to support their learning, also suggests a desire to capitalise on the context of a programme which drew on three institutions – the school, Teach First and the university involvement. In general, participants seemed to describe the non-school based aspects of the programme, as tangential, rather than as integrated.

Although participants shared school and programme level contexts, there were considerable differences in their faculties or departments and the mentor support available to them, and the ways they negotiated these affordances and constraints. Catherine was working in a high performing, stable and collegiate department, whilst Dave worked in a department with a high staff turnover and lower KS4 outcomes (results) than other areas of the school. Catherine regularly referred to resources within her subject area:

> *there is a lot of sharing of activities…we watch each other a lot. And we jointly plan a lot…we're always popping in and sharing stuff. (D6)*

Catherine's Subject Mentor, Alice, is a Teach First ambassador[27], having completed the Teach First programme at the school and progressing to 'Second in Faculty'. At the end of the study, she was promoted to 'Head of Faculty'.

In contrast. Dave's subject mentor, herself a new teacher to the school was stretched between being subject lead and Head of Year. As a result, she was supported extensively by the Professional Mentor who provided the formal mentor meetings and observations for Dave. Although we might expect this context to constrain him, he only referred to this factually, sharing little insight into his views in D1-5. In the section on FoR above, I described how Dave regularly drew on the practice of others within his department to support his learning.

6.4.3 Student context

The only aspect of context which Dave regularly discussed is a group of Year 10 learners. He described the class as particularly challenging and daunting' (MM1) and Eric called them 'your nemesis. They constrain you where others don't'. (MM2) Both Dave and Catherine admitted the difficulties at certain points of teaching a diverse range of students with complex

[26] See Appendix A for details of roles.
[27] Teach First describes people who have completed the two-year programme as "ambassadors"

needs. Catherine complained that there were 'too many needy ones' (D3) and described her frustration at teaching 'bottom sets'.

> *I find it constraining generally, especially with Year 7 I find it frustrating. Because I want to do more with them...I find it much more satisfying to teach someone how to infer than how to spell. So that is a problem that I find with my Year 7s. I am fond of them as humans, but I find the content really quite dull. (D2)*

However, these frustrations and complaints are never used as excuses and her students are not seen as being to blame. Catherine considered the individuals in her class very carefully, perhaps on account of her previous experience as a Teaching Assistant (TA). Indeed, she claimed at one point: 'This is classic. I want to be TA to them all…feels most natural to me' (D3). This transition from focusing attention on one or two identified individuals, to taking responsibility for a large group seemed particularly challenging for her, and she frequently used mentor meetings to focus on individual learners to support her, and her students' development.

6.4.4 Context dependent: I can change it

In reviewing his AtC in D6 Dave claimed he had 'moved ahead massively…trying to enjoy it':

> *I think I've moved ahead massively in AtC as well. No 'cos it's not a difficult class, but my own, in a way, AtC 'cos I'm embracing being in the classroom a bit more and keeping it a bit more positive, and even in that class there are two or three students, like A. today, for example, he's one of the more challenging students in that class. But something that stood out for me today, is A. said. Actually I don't think it was him, I think it was I., tried to make a bit of a joke, and he said penguins when he knew it wasn't, like a very good answer, and he was trying to get a cheap laugh. And today I just reacted by twisting it, and making it a positive for him. Whereas I think last year I would have gone. I might have said "Come on, you need to be sensible." Whereas I'm trying to just put more on a positive spin, on the more challenging students…*
>
> *Definitely improved. Yeah I am just trying to enjoy it more if anything. Not taking everything as the end of the world as well. If a lesson doesn't go badly, reflect on it, see how you can make it work next lesson. Whereas last year I probably had more days where I was in a rut, don't know where to go sort of, this is the kids' fault a bit more. A bit more, I think I have always known it was, because you see great teaching practice, you know it is to do with you. But it's easy to, straight after a lesson, to be annoyed (D6).*

In C6 exploring how he feels as an NQT, 'with a bit less support', Dave replied: 'I feel OK because I've got people to turn to still in the department, which is helpful and supportive, I feel OK. I'm enjoying it actually. I'm actually enjoying it, it's good. [laugh]' (D6).

Whilst he was explicit about the challenges of the particular Year 10 class throughout the project, his suggestion that his AtC has 'definitely improved…not taking everything as the end of the world' (D6) may extend beyond this particular group, and brings attention to what may not have been said previously. Dave's highly self-critical approach to his own practice, and constant focus on what he could do to improve, may have masked how hard he was finding it, and potentially the emotional burden of adopting this stance. This is compounded by the nature of the conversations (and data) themselves as they are with his PM, Eric, an Assistant Head, who might be seen to represent the employer and school needs.

Overall, whilst Dave recognised that he couldn't change the context, he felt able to change his attitude towards it.

> *I think AtC has helped. We had quite a few conversations about that last year. And I think consciously being aware that I am the one that can change it, has made me improve as a teacher probably. (D6)*

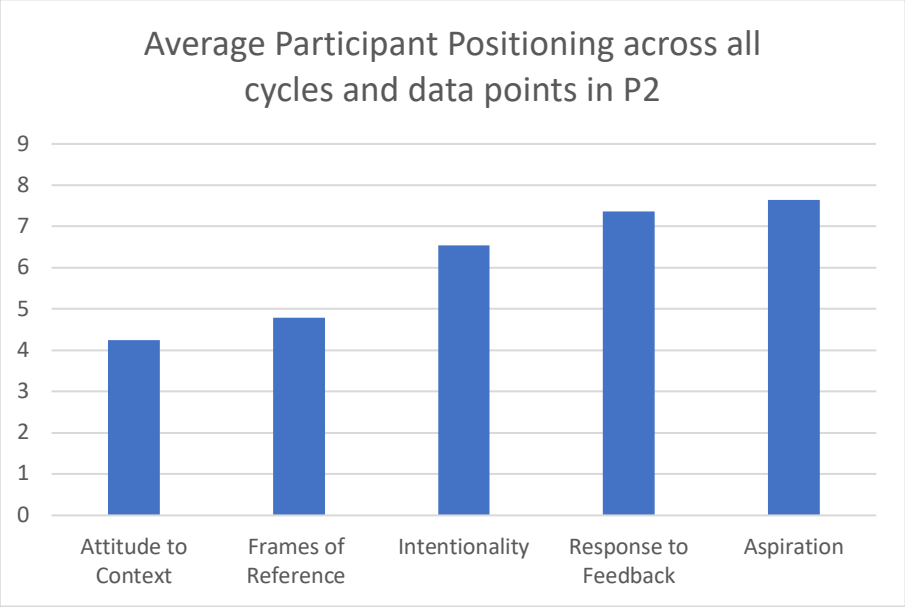
This reminds us how the AtC dimension relates to other dimensions including Aspiration, Intentionality and FoR. Dave felt he has improved, and will continue to improve if adopts an intentional, proactive stance to his learning, which capitalises on the opportunities provided by his own immediate context, but also draws on other sources.

6.5 Aspiration

In the mirror meetings participants positioned the beginning teachers in P2 as being highly aspirational: 8 on the scale 1-10 on average, demonstrating an aspirational awareness that they could improve on this dimension, before claiming position 10[28]. The Aspiration dimension was considered the strongest dimension across the three participants, in all cycles where participant positioning was collected (18 data points. See Figure 36 below).

[28] In the OLEF framework used with participants the scale was 1= most helpful orientation and 10 = least helpful. Participants positioned the beginning teachers at '2'. This scale was reverse to support graphical representation.

Figure 36: Participant positioning in the Main Phase. Averages are across cycles and participants. Average (whole number) refers to positionings based on data, wider knowledge in each cycle where data was collected, and in Cycle 2 pen portraits.



This might be expected in demanding programmes, which required teachers with strong academic achievement who were prepared to 'learn on the job'. Its predominance might also reflect the nature of the data which, as the section on Intentionality outlined previously, focussed heavily on identifying how beginning teachers could improve. Sabina's mentor, Eric, quipped 'we wouldn't talk for 48 minutes if we weren't aspirational', to which Sabina responded, 'I'm never happy with where I am' (P1/R2/MM2). Mentors strongly recognised the levels of Aspiration which participants claimed. John, for example noted 'mostly you say, I think it could have gone better.' This echoes Will's words shared earlier that he wanted

> *someone to say "Well done. You're getting even better. You're better and you're better and you're better" And at the end of the year "You're perfect" (P1/R1/MM2).*

6.5.1 "I'm never happy where I am"

The strong desire to improve, within a performative and high performing environment revealed, and may indeed have contributed to, some anxiety, negativity and feelings of self-doubt. Will and Catherine were particularly open about their negative feelings, with Catherine requiring additional support to manage her wellbeing. She claimed 'it's harder than

I realised it would be', despite having had more experience than other participants as she had worked in the school for the previous year[29]. In MM2 she explained

> *in this conversation the root of is frustration that I am not good enough or the behaviour of the kids isn't good enough and I want to be better.*

In D6 Catherine admitted:

> *there has been so much more failure this year than at any other period of my life. And it's quite difficult when it feels like you are relentlessly, you feel like you are relentlessly underperforming.*

Similarly, Dave's ever focussed attitude was driven at points by 'self-critical…borderline negative' view of his practice. (MM2) In D6 he reflected that 'I think my aspirations last year I wanted to be good, like really quickly.' This echoes Catherine's frustrated admission in D1, five weeks into teaching, 'I just want to be really good at it now!'

6.5.2 Aspirations for students

Participants' aspirations are not limited to themselves, but were strongly related to a desire to improve and develop student learning. Like the original DEBT research, in which Burn and colleagues reported that the teachers were thinking very carefully about student learning - their responses, their understanding very early on (Burn *et al*., 2003).

An increase in school accountability cultures, particularly with a focus on the 'progress' of students (Llewellyn, 2016) may have increased this emphasis. All participants discussed at lengths the needs of their students and their current levels of understanding and much of the conversation focussed on the next steps they would take to develop the students' learning. In P2 conversations there were 71 references to 'progress', 92% of them to student progress (rather than the progress of the beginning teacher). Seventy one percent of these references were in conversations between Dave and Eric, and it seems Eric was highly focussed on the progress of learners[30]. In part this might be explained by the nature of the conversations as D4, which accounts for 25 references (38% of total student progress references), was a meeting around the termly review. It may also reflect Eric's role at the school as a senior leader, highly familiar with the accountability agenda.

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[29] Catherine is discussed in further detail in Chapter 7. She was on a support plan, which included a well-being focus from February-May.

[30] In C6 a conversation between Miles and Eric, 12 references to student progress were made, compared to only 2 in the conversation between Miles and John.

6.5.3 Acceptance and ability to be more intentional

By the end of the research period (at the end of their ITE year and the start of their NQT year), Dave and Catherine reported feeling more acceptance of where they were, and the mistakes they made as learners. They also claim that they felt more able to identify what they could do as a result, to be more intentional. As will be discussed further in Chapter 7, Catherine felt that the research process itself had

> *helped me to accept as well, this reflection on reflection thing… accept that failure is fine. Because there has been so much more failure this year than at any other period of my life. And it's quite difficult when it feels like you are relentlessly, you feel like you are relentlessly underperforming, and then you come to this and you think about it and you discuss it and you look back to where you were when you recorded the conversation, you realise you have already improved. It kind of allows you to see that it is a process and it's not like never ending drudgery. It's nice to have that perspective. Other people have done this. It's a thing that happens. (MM5)*

The opportunity to review her conversations and discuss her learning experiences with her mentor and peers explicitly seems to have supported her to feel less isolated and caught in 'never ending drudgery'.

Dave similarly (but in a separate meeting) identified a shift in his attitude:

> *Like because I have always wanted to be a good teacher last year really quickly and I have realised this year there is no such thing as a great teacher and a bad teacher, you just work away at it, a bit more, take more pride in the good things you are doing. Accept when you have made a mistake or pitched a lesson wrong, or maybe reacted not in the best way to deal with behaviour incident. And I think I just accept that a bit more, better this year. And think of it in terms of small steps, and last year my Aspiration was just to be good…. For me to be good, and also for the students to be good, and learn and all those other things that would come with it, progress. Whereas this year, its more tangible. And I think, yeah. I think I've always wanted myself and the students to have a better relationship and get more out of the lessons, I think now I can break it down easier and think about those steps a lot more….more realistic in that it's not going to go perfect all the time, and as long as you reflect on that, and try the next day to make that class more focused, and work harder, then that's fine* (D6.)

We see here how his high Aspiration is balanced by a sense of acceptance that teacher learning is an ongoing long-term process, a realisation that it will require continual adjustments and changes.

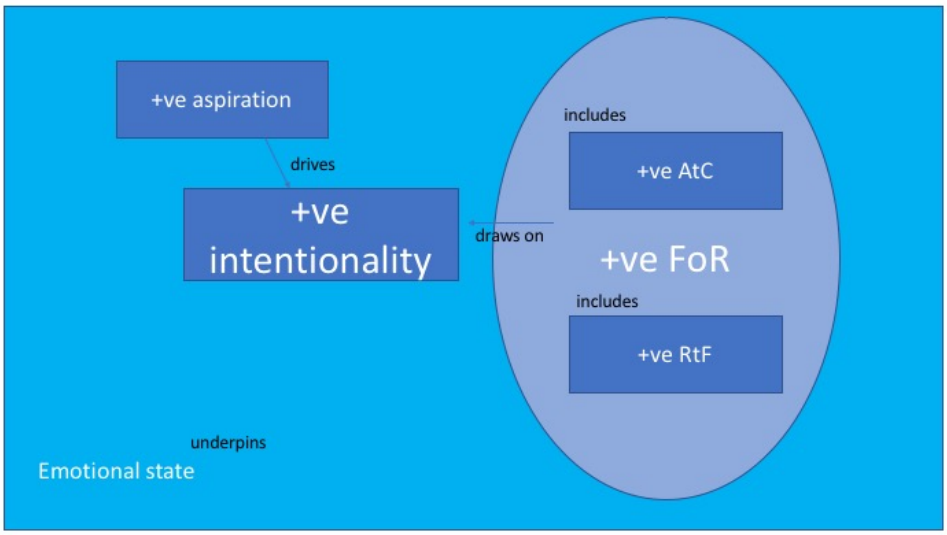
All participants claim to be better able to meet their high aspirations, through continued effort. Miles in D6 claimed 'the harder you work, the easier it is.' Whilst Catherine claimed that whilst her Aspiration remained high:

I think I've got more confidence in my ability, and the students' ability, to achieve that. ... I came in initially thinking that they are going to be able to achieve this, and then I realised there were certain barriers, often literacy barriers to that, so I took a dip and I thought "Oh they can't do it, they're not that bright". And then I realised they are bright, they just don't have the tools. I have more confidence in their basic ability, or their innate intelligence, and also in my ability to fill in those gaps, or help them fill in those gaps" (D6).

6.6 Closing comments

This chapter described participant approaches to learning to teach, according to the OLEF framework. In this section I provide a brief survey of the findings about the dimensions, and the ways in which these are related to one another. Figure 37 provides an illustration of these interrelationships.

Figure 37: The relationships between positive OLEF dimensions



The data provided particularly rich insights into the beginning teachers' Intentionality (at the centre of Figure 37), as many of the conversations were highly focussed on meeting programme, or ITE targets. This seemed to be driven by very high levels of Aspiration for themselves and their students.

In order to develop, participants initially identified that they wanted to broaden their FoR further, as they felt they relied too heavily on their experience in the classroom. Chapters 6 and 7 will provide a fuller account of the ways this developed in relation to the research activities. However, at this stage I have suggested that the participants' FoR bulged,

beginning to the take into account a wider range of sources, before retracting to rely on sources that were easily accessible and practical, and could therefore be seen to be highly relevant to their own practice. Sources used tended to be approached instrumentally, providing practical guidance, models or resources, to meet the deliberate actions the beginning teachers had identified. In this way it could be seen that high levels of Intentionality relied on drawing on a helpful FoR. I proposed that FoR might better be considered as having two dimensions, encompassing firstly the range of sources used, and secondly the ways they were used to 'draw on' and to 'make sense of' their classroom experience.

I have drawn attention to the challenges of using the specific data – conversations between the beginning teacher with their school-based mentor – to provide authentic insights into their AtC and RtF. However, overall it seemed that participants highly valued the opportunities for learning presented by the school, departments and particularly their mentors. Most of the data around these two dimensions relates to the ways in which the context and the feedback received might be seen as resources to draw on. In this way they could be seen as part of the beginning teachers' FoR, and they are therefore shown on Figure 37 to be absorbed within the broader FoR concept.

Underpinning this model is the important recognition that the orientations are not static or universal, but highly contingent on the context and the individual, including their emotional state. Chapter 7 provides a further opportunity to explore how the dimensions vary across and within participants over the research period.

Chapter 7 Findings 3 - In what ways do the dimensions Intentionality and Frame of Reference vary across and within participants during the research period?

Building on Chapter 6 which provided an overview of participant data across the dimensions, this chapter will narrow the focus in two ways. Firstly, I have considered the ways in which the orientations vary across and within two case-study individuals: Catherine and Dave. Secondly, I have concentrated on two particular dimensions: Intentionality and Frame of Reference (FoR), as these dimensions have the most data and seem to be central to understanding the learning of beginning teachers.

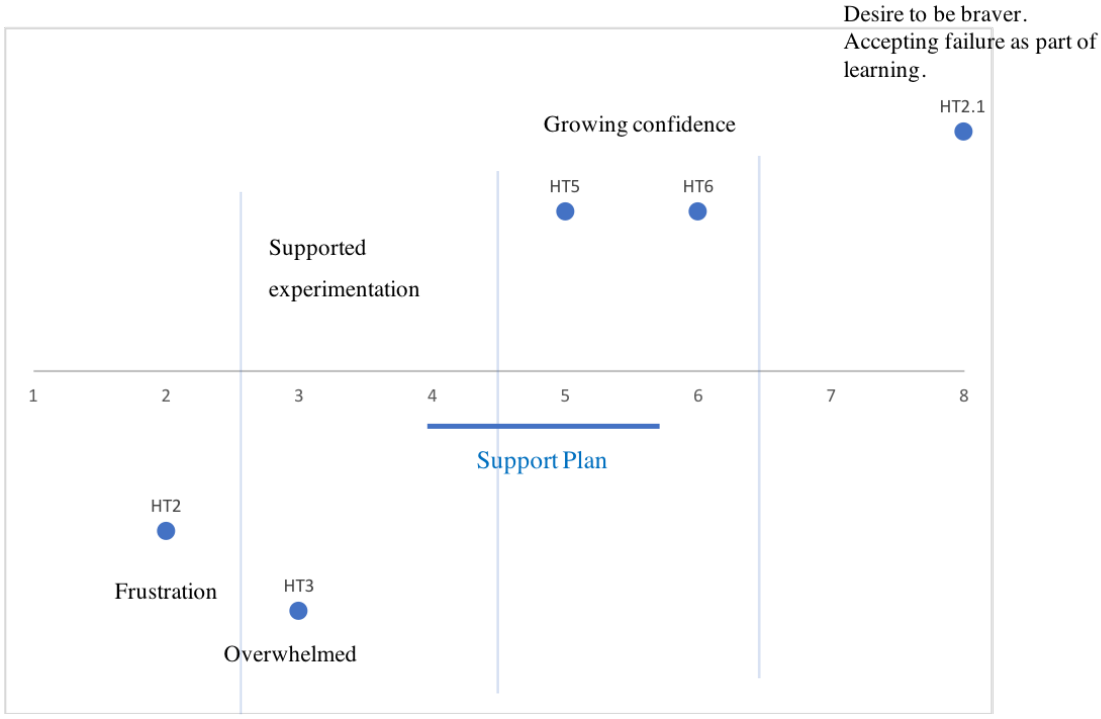
The chapter opens with an introduction to Catherine and Dave, in order to provide a narrative overview of their beginning teacher experiences (7.1 and 7.2). The beginning teachers' experiences are then considered in relation to the two dimensions Intentionality (7.3) and FoR (7.4). The chapter closes by bringing the findings together in relation to models of *professional judgement* and *practical theorising*.

7.1 An introduction to Catherine

Catherine was employed as an English teacher on the Teach First programme. She worked as a 'graduate achievement coach' (effectively a teaching assistant) for a year before joining the Teach First cohort. Her school-based subject mentor, Alice, had taught at the school for four years, also joining the school through the Teach First programme. Alice also mentored Sebastian, a participant involved in Phase 1 of the research.

Although the data collected presents only glimpses into the experiences of Catherine's first year as a teacher, we can discern an overall pattern in her year, experiencing early frustration and feelings of being overwhelmed to increasing confidence to experiment and take risks. This is depicted in Figure 38 below.

Figure 38:A representation of Catherine's approach to learning. The horizontal axis includes covers the eight half-terms of the research period. Each data point is D1-6. Labels indicate the half-term (HT). Vertical lines show terms. The vertical axis is a broad distillation of her approach to learning.



By D1[31], five weeks into term, Catherine's early idealism had become frustration at not being as proficient as she wanted. 'I just want to be really good at it now'. In MM1 Catherine claimed:

> *It's harder than I realised it would be, even though I knew it would be hard… In this conversation the root of it is frustration that I am not good enough or the behaviour of the kids isn't good enough and I want to be better.*

The conversation is dominated by concerns about behaviour management, which she described in terms of conflict: 'I feel like I am in a battle that I want to have won already.'

D2 (in the third half-term in January) showed Catherine's lowest point in the year. Following a formal lesson observation which hadn't gone as she had hoped or planned, the conversation with Alice included some uncomfortable challenge around her planning decisions. The recording ended with Catherine telling Alice:

[31] A reminder: "Cycles" refer to the six data collection cycles, each over a half-term. D1-6 are the recorded conversations between mentor and beginning teacher. MM1-6 are the mirror meeting discussions between research participants.

I actually like having people watch, although this is a bit stressful. …having the feedback is really useful, just having it formal makes it a bit stressful.

At the end of the conversation, with the recorder switched off, Catherine cried. In MM2 Catherine observed:

I think this is definitely the weakest observation I have had. And I don't feel like I was in a very good place to be learning that day…It makes me feel quite sorry for myself when I read back… it was useful in the sense that it did make me. I have definitely acted on some of those targets. But I think in that moment, I wasn't in a very receptive state of mind…Yeah I think on that day I was very overwhelmed and like I can't do it. I don't know why I am here. So I think that comes out in the transcript quite clearly that I was like 'ahhh'.

It is clear that by MM2, later that month, Catherine felt more able to be intentional, and she identified that she wanted to:

find ways to build theory in a bit more…Because it seems quite intimidating to me, this thing that we have to do in our essays, but I find it, in my mind I've divorced it from practice quite a lot. It's a thing that I will look at and read, when I have to write an essay on it…. Because at the moment I've got a really negative attitude towards it. Oh its tedious. It's not helpful. But actually it could be. In our last feedback session, Alice was telling me about Bloom's taxonomy, which I hadn't really, obviously I'd heard of it, but not fully engaged with it. And it has proved really useful…I also think it would be useful… I think personally, I am most likely to engage with FoR just selfishly 'cos it's something I want to get better at

Cycle 3 captures the most successful attempts to do this, showing Catherine and Alice working together to explore a model of teaching writing, through joint planning and observation. As Catherine described:

so we used that theory to then plan a sequence of five lessons. And then this reflection was based on the final lesson of that which she had observed. So in that sense we had deliberately sought to increase the FoR by using theory, and yeah and it definitely did impact my learning, because I felt more focussed with it and I was able to use both the theory and Alice's knowledge at the same time, because she helped me apply that theory in my planning. Well she started me off and then I did the rest of it. And then in that conversation, we were then reflecting on it more. It was useful.

In relation to the ongoing concern around behaviour management, Catherine felt 'better… more in control,' which might also sum up her general mood.

Cycle 4 revealed Catherine's growing confidence with her teaching and her own approach to learning. Although Alice still led on setting targets, Catherine was more likely to pre-empt her comments and suggestions. In MM4 in May Catherine claimed 'although we still need prompting, I think we lead learning a bit more.'

Disappointingly, the deliberate experimentation in planning and teaching was not sustained into Cycle 4. Catherine revealed a quiet confidence, verging on complacency 'we have a bigger FoR now…it's all just there...and it's less of an effort.' She had become more used to those:

> *holes of despair, where you think nothing is going to work. And the more you get used to feeling that…and then you get used to thinking, there is a thing, who can I ask, who can I watch?*

Although this might suggest that her FoR had broadened, and become something more routine and automatic, requiring less deliberate, forced actions, it is notable that she was still focusing very much on technical procedural understanding. In considering the possibilities of further work around FoR, she concluded that it's:

> *especially this end of the year [approaching exam season] … hard to make time to look at theory and discuss it together. Realistically there isn't going to be time over the next month.*

Alice echoed this, suggesting 'usually there is something that is more practical to discuss in our mentor meetings.' However, they agreed to do a joint observation of another teacher.

Cycle 5 showed how the focus on FoR is used to make sense of immediate practical concerns. The observation itself focused on differentiation and behaviour management, areas identified for development in Cycle 4. Having discussed what they observed, Alice asks Catherine for 'things to take to your class?'

Catherine's response suggested a sense of agency, which she contrasted with observations earlier in the year where she wondered:

> *'How does she do that? I could never do that.' Whereas [now] it was more like 'How does he do that? I could nick that.'*

She also showed greater confidence in grappling with differing advice 'I think I am going to try and be braver,' she experimented with strategies she has observed to have been effective, despite it being 'against the advice I was given.'

This growing confidence is reflected too in an acceptance about the process of her learning:

> *I think the thing that this has helped me to accept as well, this reflection on reflection thing, is that it's helped me accept that failure is fine. Because there has been **so** much more failure this year than at any other period of my life. And it's quite difficult when it feels like you are relentlessly, you feel like you are relentlessly underperforming, and then you come to this and you think about it and you discuss it and you look back to where you were when you*

recorded the conversation, you realise you have already improved. It kind of allows you to see that it is a process and it's not like never ending drudgery. It's nice to have that perspective. Other people have done this. It's a thing that happens.

Taken out of context her expression that 'failure is fine' might lead some to conclude she is expressing low aspirations. Instead, in the context of a long year of highly self-critical, and at points externally expressed concerns about her progress in learning to be a teacher, we might see it as her recognising that her feelings of failure are not unique to her, but shared by other beginning teacher learners; that they did not stop her from improving; and that making mistakes is part of a challenging learning process.

By D6 in her newly qualified teacher (NQT) year, perhaps buoyed by having successfully completed her initial teacher education (ITE) year (and been graded as 'good' in the final assessment), Catherine agreed with Eric that there had been a 'shift' in 'the way you see yourself as a teacher.'

Catherine: I feel like that, because generally I'm more confident. I'm more willing to analyse mistakes and without thinking that it reflects on me as a human being and that its terrible [laugh], just think: that this was good, that wasn't good, it's easier to do that the more experience you get, I think.

This new confidence is related to strong levels of Intentionality apparent in a thorough self-evaluation of the lesson, including the successes as well as the areas for development. The recording shows that she has thought carefully about her teaching; she is aware of the effects on student learning, and she readily identifies the next steps she can take to improve.

7.2 An introduction to Dave

Dave was employed as a Geography teacher on the Teach First programme. His Subject Mentor (SM) Elizabeth, was also new to the school and had responsibility for Geography within the Faculty of Humanities, as well as being a Head of Year. In the initial weeks of term, it became clear that although Elizabeth would regularly team-teach and share resources with Dave, she found it hard to meet with Dave regularly for formal mentor meetings and had little capacity to engage in additional research meetings. At this point, Eric, the Professional Mentor and History teacher[32] within the faculty stepped up his involvement agreeing to meet with Dave every other week for

[32] Eric also acted as subject mentor for Sabina in Phase 1.

formal mentor meetings, to complete the majority of expected formal observations, and act as his mentor in the research project. Dave continued to work with Elizabeth through team-teaching, subject specific planning and bi-weekly mentor meetings.

Dave's journey through his ITE into his NQT year was not marked by dramatic shifts in his attitude, approach and behaviour. Even from the initial cycle it was clear that Dave was a highly motivated, intentional and self-critical learner. Eric claimed:

> *I think you're thinking about all aspects of what is happening, all aspects of your practice…listening, thinking about it and then putting into words what you were going to do about it (MM1).*

In the mirror meeting he was the only participant in the study (n=9) to claim that D1 data and pen-portrait showed a more positive description, than his general practice. Despite this critical self-view, he also demonstrated a robust confidence in his ability to improve, leading Eric to push and challenge him.

In Cycle 2 Dave and Eric's conversations continue to be 'positive, upbeat' (Eric, MM2). Dave 'cringes' about the description of him as self-critical in the pen portrait, prompting Eric to quip 'Are you being self-critical while reading a paragraph about you being self-critical?' Dave: 'That's exactly what's happening.' (MM2 Part 1) Later Dave reflects:

> *It's made me realise how self-critical I am. Borderline negative. I am always, quite often jumping to the aspects that I wasn't happy with in the lesson, as opposed to maybe looking at the positives a bit more. … it made me realise you don't just learn from the negative aspects of a lesson. And it's quite easy to think about how you can improve that, that, and that, but also good to acknowledge bits that I've done well, you don't just let that run away and forget about it in the future. (MM2 Part 2)*

As part of the research meeting (MM2) Dave identified that he wanted to improve his FoR. In MM2 he admitted:

> *I probably do rely on experience in classroom to make judgements about what I do next rather than use other resources and other experiences to assist me…I'm very happy to be given other information. But I never go and get it, or observe other people and find reading…pedagogy and different resources can seem kind of laboursome, but if it was broken down it could be quite useful. (MM2)*

He also claimed that he wanted to improve his Attitude to Context (AtC), particularly regarding his Year 10 class who Eric described as his 'nemesis- they constrain you where others don't'. (MM2).

The early optimism and energy waned slightly in Cycle 3 in February and March in which both Dave and Eric describe themselves as tired. Their regular meetings fall on a Friday afternoon, a context Eric feels the need to 'acknowledge' in the recording of D3 'in case I say stupid unintelligent things' (Eric, D3).

The style of the conversation has shifted with Eric keen to be 'more of a coach' and asking more questions to encourage Dave to take the lead in setting the agenda such as 'What do you want to talk about today…how long do you want to talk for? …What do you want to get out of this?' (D3). Dave responds readily, although he struggles at points do the hard thinking demanded, or to find solutions, telling Eric 'I am really trying'. In Eric's words:

> *As the conversation goes on…tired…I'm not asking you questions. I lead you to the answer I want to give. I end up giving you the strategy for what I think will be appropriate for what you are trying to do… But when you come up with the barrier, I take an easy way through. (MM3).*

As a result, Dave contributes 40% of the words spoken, which shows no shift from previous conversations (D1=33%, D2= 42%).

Cycle 4 however showed a bigger shift, with Dave accounting for 59% of the words spoken, leading the meeting confidently which focuses on his Termly Review objectives. Dave and Eric focused intensely on identifying targets and importantly how they would be achieved in actions, drawing on a range of sources to broaden the FoR. They are both focussed on ensuring that the targets set will support Dave to demonstrate he has achieved the highest grading, "exceeding", by the Summer Term. In MM4 Dave described this meeting as 'definitely the most productive and beneficial to me' (MM4 Part B).

Cycle 5 demonstrates the limitations in Dave's high levels of Intentionality. D5 captures a conversation between Eric, Dave and another teacher, Charlotte, whose lesson they both have observed. Dave claims the focus was:

> *using another frame of reference by observing Charlotte teach a lesson, so that helps my own learning. But then also thinking about what frames of learning that Charlotte herself might draw on, again to add frames of references to myself. (D5)*

The conversation was slightly awkward, with Eric leading initially to model asking questions to Charlotte to get her to unpack her thinking and practice. Later he encouraged Dave to lead the conversation. Although Dave was initially unsure how to proceed, he tried to follow Eric's example. However, when given the opportunity to

continue independently (as Eric had to leave the meeting), Charlotte and Dave choose to end the conversation. In MM5 Dave told the group that the meeting would have been

> *more beneficial if there were more identifiable targets and actions, because although the conversations are useful and it does get me to think about it more, I think if there was a specific target that I had to meet in two weeks' time, then it might be more beneficial to my practice.*

Although unusual, D5 shows the limitations in the extent to which Dave was able to lead learning himself, drawing on a range of sources to make sense of his own experiences and plan future action for himself. He clearly missed the opportunity to make sense of the observation with his mentor, and translate it into clear actions steps for his own practice. However, this example also reveals the difficulty in seeing impacts in the short term, as by Cycle 6 (the following academic year) Dave claimed to be drawing on Charlotte's lesson.

As an NQT in Cycle 6, Dave demonstrated very positive orientations to learning from experience, across all dimensions. Although in Cycle 5 Dave found it hard to make links between the observation of Charlotte and future actions he would take, in D6 he refers to the lesson:

> *I remember one of the last things we did last year, was we looked at Charlotte teach, and she's quite a pacy teacher isn't she? So I think partly I kind of had that at the back of my mind to keep it moving, with kids that can get off task.*

Although referring to a range of sources in the conversations, it is notable that his favoured source continues to be observations of teachers, particularly teachers on the Teach First programme. This shows little change from MM4 when Eric claimed 'what you are drawing upon often is what is in your immediate vicinity.'

In relation to his Attitude to Context, Dave claimed this has

> *definitely improved. Yeah I am just trying to enjoy it more if anything. Not taking everything as the end of the world as well. If a lesson doesn't go badly, reflect on it, see how you can make it work next lesson. Whereas last year I probably had more days where I was in a rut, don't know where to go sort of, this is the kids fault a bit more. A bit more, I think I have always known it was, because you see great teaching practice, you know it is to do with you. But it's easy to, straight after a lesson, to be annoyed. (D6)*

This acceptance of difficulties as part of the process was clearly linked to his Aspirations and Intentionality:

> *I think my aspirations last year I wanted to be good, like really quickly. And I have always. Like because I have always wanted to be a good teacher last year really quickly and I have realised this year there is no such thing as a great*

teacher and a bad teacher, you just work away at it, a bit more, take more pride in the good things you are doing. Accept when you have made a mistake or pitched a lesson wrong, or maybe reacted not in the best way to deal with behaviour incident. And I think I just accept that a bit more, better this year. And think of it in terms of small steps, and last year my aspiration was just to be good…. For me to be good, and also for the students to be good, and learn and all those other things that would come with it, progress. Whereas this year, its more tangible. And I think, yeah. I think I've always wanted myself and the students to have a better relationship and get more out of the lessons, I think now I can break it down easier and think about those steps a lot more….more realistic in that it's not going to go perfect all the time, and as long as you reflect on that, and try the next day to make that class more focussed, and work harder, then that's fine.

At the end of the conversation he observed: 'I'm enjoying it actually. I'm actually enjoying it, it's good. [laugh]' (D6).

Having provided a chronological narrative of two beginning teacher participants, the chapter now turns to exploring their Intentionality (7.3) and Frame of Reference (7.4) in turn.

7.3 Intentionality

The conversations demonstrate that Catherine and Dave are intensely focussed on improving as teachers, particularly in relation to the response of students and also their performance in assessments. However, the levels of Intentionality vary across the conversations. Five features of high Intentionality are identified.

7.3.1 What are they focussed on?

Catherine and Dave are highly focussed on the learning of the students they teach. Table 12 breaks down the areas of focus for their targets, using the categories developed by the DEBT team (Burn *et al*., 2000, 2003). It shows that most of their conversations included targets related to the 'cognitive development' of their students, which Burn and colleagues define as 'the acquisition of new concepts, the development of effective learning strategies or the practice of particular skills' (Burn *et al*., 2000). Examples of Catherine's targets in this category include supporting her students to develop evaluative skills using more structured self-assessment, or sequencing tasks to support progression according to Bloom's taxonomy. For further specific examples of the categorisation, please refer to Appendix O.

Targets related directly to their own learning as teachers ('self-learning'), such as observing their colleagues, or gaining a clearer pedagogical understanding of the

difference between objectives and outcomes, were less frequent, occurring in three of the twelve conversations. As discussed in Chapter 6, this focus on 'pupil success' (Teach First, n.d., p. 60) reinforced their primary role as employed teacher, over learner, emphasising that the learning of the beginning teacher was a means for increased student learning. As noted in Chapter 2, this seems to be typical of work-placed learning, including initial teacher education (Eraut, 2004; Endedijk *et al.*, 2012; Bronkhorst *et al.*, 2013), and is an explicit recommendation of teacher education pedagogies which encourage *clinical practice* (Kriewaldt *et al.*, 2017) and *adaptive expertise* (Soslau, 2012).

A second area of concern for both Catherine and Dave was the behaviour and 'state' of the students (pupil action and pupil state). As Appendix O shows, these targets often related to managing student behaviour and creating the conditions for positive affective states – enthusiasm, motivation, interest and attention. Targets set for Catherine included using a 'hands-up rule' more consistently, 'tactical ignoring' of low-level disruptive behaviour and 'creating a hook' to engage student interest in the subject.

Table 12: Areas of focus for targets in conversations

How many conversations included targets focussed on each of these areas? (categories from DEBT 2000, 2003)						
	Catherine		Dave		Miles	
		% of conversation		%		%
pupil achievement - cognitive	3	60%	4	80%	2	100%
pupil achievement - coverage	0	0%	1	20%	1	50%
pupil achievement - product	0	0%	0	0%	0	0%
pupil state	2	40%	3	60%	1	50%
pupil action	4	80%	1	20%	1	50%
pupil knowledge	0	0%	3	60%	1	50%
self-learning	1	20%	2	40%	0	0%
Ingredients	1	20%	1	20%	1	50%
TOTAL conversations	5		5		2	

These findings echo the highest categories in the findings of DEBT where 42% of the aims of the beginning teachers were identified as being focussed on 'pupil achievement cognitive' and 22% focussed on 'pupil state'; 12 % on 'pupil action'(Burn *et al.*, 2000). As for the participants of DEBT there is little focus on curriculum delivery, since 'coverage' or 'products' as an outcome of the learning feature less frequently as targets.

There is an interesting difference between Catherine and Dave's focus concerning 'pupil knowledge'. Whilst this features in the targets of three of Dave's conversations, it is not the focus in Catherine's. On closer attention to the specific targets it seems that the strong focus on pupil knowledge in Dave's conversations may not reflect (as it did in the DEBT project) his position as a 'novice working in [an] unfamiliar context' (Burn 2000:263), but rather the focus on teachers identifying students' current levels of understanding or competence in order to support further progression, as advocated by the Assessment for Learning (AfL) agenda. As Chapter 6 revealed, targets related to AfL were common among the beginning teacher participants and were the focus of a formal written assignment for Teach First teachers.

Although they are employed by the school, the beginning teachers may be considered to be operating in an unfamiliar context, rather than as experts. Notwithstanding their status as novice teachers, Catherine and Dave seem to share the concerns not only of the DEBT participants, but also of more experienced teachers. Brown and McIntyre generalised the goals of the experienced teachers they studied as focussed on a 'normal desirable state of pupil activity,' alongside 'progress'(Brown and McIntyre, 1993), categories which directly influenced the DEBT team's research design and analysis.

7.3.2 The features of high Intentionality

The levels of Intentionality varied most within participants, rather than between them. Through close analysis of a conversation in which each participant was intentional, and another conversation where there was less Intentionality, I have identified five features of conversations which support Intentionality. Whilst close grain analysis offers a highly specific account, perhaps limiting its generalisation, I have brought the findings into dialogue with relevant secondary literature in order to offer broader contextualisation. As introduced in Chapter 3, this literature relates Intentionality to the constructs of *self-regulation, deliberate practice*, *professional agency* and *self-efficacy*. A description of each of the five features of high Intentionality now follows, illustrated with examples from the four conversations and related to other relevant research.

1. <u>Intentional learning is valued and the conversation is seen as an opportunity for planning learning and active retrospection</u>

The value of intentional learning, that is of planning deliberately and recognising the role and responsibility of the beginning teacher in their learning, is explicit in conversations with high Intentionality. It is made clear in the time spent discussing

future plans and in the monitoring and evaluating of learning. Endedijk and colleagues (2012) describe this as '*active retrospective regulation'*. The conversation D4 for example, is highly valued by Dave and tightly focussed on setting targets for his progress with reference to a Teach First Standards Tracker used in the Termly Review. At each stage of the conversation the explicit next steps are identified.

Whilst the aim of the targets remains clearly focussed on the impact on the student learners, it is clear that the process is tied to the progress of the beginning teacher along an 'emerging-establishing-embedding-exceeding' continuum in relation to each of the sub-parts of the Teachers' Standards. This is high stakes, directly linked to the recommendation of QTS at the end of the year. The Teach First programme therefore presents the improvement of teachers as being one that requires deliberate and explicit review, reflection, target setting and monitoring. Researchers have noticed the 'Ofstedisation' of educational discourse in which the language and grading system of England's education system' regulatory body (Ofsted) dominates (Roberts, 2019, p. 28). It should be noted that there is no statutory requirement for awarding bodies to submit termly gradings for the final award of QTS and the Teachers' Standards themselves are not graded. However, as ITE awarding bodies are required by Ofsted to provide summary final grades, many institutions, including the universities partnered with Teach First, do use a form of grading throughout their ITE programme. Indeed the process of formative review against the Teachers' Standards is recommended by National Association of School-Based Teacher Trainers which provides a model using the 'Outstanding/Good/Requires Improvement/Inadequate' scale used by Ofsted (NASBTT, 2015).

However, Dave does not demonstrate this Intentionality consistently and this seems to be related to how far the conversation is understood, and valued, as an opportunity for intentional learning. In the next recorded conversation (D5), which provided Dave with the opportunity to discuss a lesson he had observed with the observed teacher Charlotte and Eric his mentor, Dave did not seem to be convinced of the purpose of the conversation or to value the learning opportunities it presents. He ended the conversation with Charlotte after twenty minutes as soon as Eric left, giving him permission to 'carry on having this conversation…but if you, yeah, want to wrap, up that's fine as well. I'll leave you to it.' (D5). When left to it, Dave did not embrace the opportunities for learning and later suggested that the conversation would have been more 'beneficial' if it had led to explicit targets for his action, which were reviewed

soon after. His lack of engagement in a more active conversation which resulted in his learning may be related to various reasons, including his position as learner and relationships with colleagues or his conception of learning to teach. For example, the activity – of observing a teacher and discussing it afterwards in relation to the FoR dimension – may have seemed somewhat unusual or contrived. He may have acted as he did out of concern not to take any more of Charlotte's time or because he was feeling awkward in relation to his colleague, a peer with only a year's more experience than he had. Whatever his reason, there is a lack of clear intention in the conversation and Dave does not use it as an opportunity to plan explicitly for further learning.

2. <u>The beginning teacher has an active agentic role in the conversation</u>

Dave's *agency*, the way he 'initiates intentional action' (Paris and Lung, 2008, p. 255) is exercised in ending the D5 conversation as soon as he could and he did not plan any further learning. This reminds us that teachers' agentic actions can be to resist institutional expectations (Paris and Lung, 2008; Roberts and Graham, 2008; Buchanan, 2015). In conversations with high Intentionality, the beginning teacher has an active, agentic role in the conversation. They may initiate the agenda, or make suggestions suggesting a degree of *active regulation* (Bronkhorst, 2013), rather than requiring external regulation. Their voice is heard – they are given, sometimes yielded, space to talk and their views are considered.

The greatest difference between the conversations between Dave and Eric in D4 and D5 is who set the agenda. In D4, Dave drove the setting of targets, whilst Eric coached Dave to develop his thinking in order to craft the target precisely. In D5, in contrast, the agenda of the conversation is more negotiated, and less clear. Eric guided the conversation 'we could talk about…that's what I was really interested in…did you pick up any more…? So maybe it would be interesting to ask Charlotte?' After modelling the type of conversation he desired, Eric stated:

> *So, you know, that's what I'm thinking. Dave, can you pick up the conversation now, start to unpack from Charlotte what frames of reference she's drawing upon in her classroom? Because the whole… You know, this is…*
>
> *D: Yeah. What do, what do you mean, sorry, Eric? In terms of…?*
>
> *E: So I think Charlotte, in that class.*
>
> *D: Yeah.*

E: Is drawing upon lots and lots of different frames of reference, in order to deliver that high quality lesson that we saw. And I think you know enough about the theory of frames of reference now.

D: Yeah.

E: To start to unpick some of those.

D: Yes.

E: So like I've just done. Can you pick up the conversation with Charlotte?

D: Yeah.

E: To try to unpick what it is in that classroom that you're seeing that makes it that high quality?

D: OK, yeah. Would you say, Charlotte, that when you're marking student work, and like you're looking at student data, that's sort of assisting you in your planning? Or what would you say the main sort of… So for me, I think my, I think a lot of the time in my classroom I go based on what I hear.

Half-way through the conversation it is apparent that Dave was still not entirely clear what he is trying to achieve in the conversation. Eric may have wanted him to 'pick up' the conversation, but Dave was unable to do so at this stage, which may reflect his lack of clarity and consequent low valuation of the process, but may also be on account of the specific challenge in accessing experienced teachers' professional craft knowledge (Hagger and McIntyre, 2006).

Admittedly, D4 is not attempting anything as challenging or non-routine as the process of unpacking the FoR of another teacher through a lesson observation and conversation. Instead, it follows the tramlines of institutional guidance and is the second iteration of the termly review process. In this conversation Dave confidently sets the agenda. In line 2 of the transcript Dave asserted: 'so today we're going to set specific objectives for next term.' Eric only *elicited* information or reflection, never *instructing* or *telling* (Hawkey, 1998; Williams *et al*., 1998), as the following examples show.

- *So what would you like me to see, or what would that look like in our next mentoring conversation?*
- *What are your priorities?*
- *Why do you think you didn't do it before? Why haven't you got round to addressing it until now?*
- *What's going to be different about this term? What is going to change? What is going to be different?*
- *What do you think that looks like if you're doing that consistently?*
- *So how are you going to do it?*
- *Have you ever done that before?*

- *What sources can you draw on, or help you can access to know what you're looking for?*

Eric expresses a view that coaching, requires a certain relationship and that the coachee requires a degree of autonomy, motivation and intention:

> *I think that coaching is probably more powerful, if someone is in a place where they can be coached, and what I mean by that, if they are quite autonomous and quite motivated, quite intent on solving problems. If someone is in that place, I personally think that coaching is more powerful than mentoring, because you're letting that person make much more powerful connections in their learning." (Eric MM4 Part C Mentors)*

Eric has clearly identified that Dave is in 'a place where [he] can be coached,' although the analysis suggests this is not true in every conversation.

Mentor Alice's approach is different as she didn't only *elicit* (Blair, 2013), but used a range of interactional moves which account for 51% of the words spoken in the conversation (versus 41% spoken by Eric in D4), such as providing detailed guidance and modelling of the next steps and positive encouragement. In the subsequent mirror meeting Catherine described the conversation as being 'more structured.' In contrast Catherine spoke 77% of the words in D2, perhaps illustrative of her more passive and less 'receptive' state (MM2), suggesting a need for greater external regulation.

Although Catherine and Alice's recorded conversations do not show the same degree of beginning teacher agency as Dave's, Alice demonstrated more Intentionality in the conversation D3 which focussed on two areas of concern (planning for assessment and managing behaviour) that have been negotiated in advance. It is clear that Catherine had been thinking deliberately about these areas in her planning and teaching 'I was really conscious that I needed to do that,' 'thinking about your feedback made me think about it more.' Catherine responded readily to the opportunity to think intentionally about them in the post-lesson conversation. This might suggest that even where it may not be appropriate to hand over full control to the beginning teacher, supporting them to have a clear grasp of the focus – the agenda – may support their Intentionality.

3. <u>The beginning teacher demonstrates high *self-efficacy*: they feel they can achieve the targets (and this will result in an improvement)</u>

   Intentionality is clearly related to the beginning teachers' self-efficacy, and all four of the sources of this – *physiological and affective states; verbal persuasion;*

mastery experiences; vicarious experiences – are apparent in the conversations (Bandura (1977) cited in Pfitzner-Eden, 2016).

The conversations with high levels of Intentionality brim with a sense of the beginning teachers' confident self-efficacy, whilst low Intentionality is tied to expressions of doubt and anxiety. Catherine's D2 conversation is the strongest example of this: in MM2 she described how she was feeling 'quite deflated;' 'feeling anxious and like it was my fault it hadn't gone well.' 'Overwhelmed and like I can't do it'. This seemed to be compounded by her concerns about the expectations of her progress, within a performative programme and school culture. She was frustrated that the observer did not see her doing what she felt she could do already: claiming that she was 'definitely expressing frustration with what I perceive as going backwards in progress.'

In contrast, the target agreed in D3, negotiated with reference to both Catherine's experience (*mastery experience)* and her mentor's *(vicarious experience*) is described by the mentor in low stakes terms as an 'experiment…give it a go', which could be seen as a form of *verbal persuasion*. Pfitzner-Eden (2016) suggested that given beginning teachers do experience low physiological and affective states and that these negatively impact on self-efficacy (indirectly through their cognitive processing), ITE programmes might include support around emotional regulation.

The mentor clearly has a role in supporting self-efficacy, not only through positive encouragement, and sharing their own experience (*vicarious experiences*), but also in helping the beginning teacher to consider what they can do to have successful experiences in the future. Interestingly, this occurs in relation to reviewing previously negative experiences, which traditionally are seen to lead to low-self-efficacy (Pfitzner-Eden, 2016). In reviewing a previously unmet target in D4, Eric challenged Dave to consider what had stopped him meeting this target previously (*mastery experiences),* identifying barriers and identifying the changes needed. He prompted Dave to consider if the plan is 'bullet proof' and encouraged Dave to consider the sources of information he can draw on to support him to achieve the goal. Importantly, Eric agreed to provide the support requested of him by Dave. In this way Eric supported Dave's sense of professional (and proxy) agency and self-efficacy, by looking at new possible ways to make sense of and learn from a negative situation.

In reviewing the ways in which the sources of self-efficacy are present in the four conversations, it is worth considering which are less frequent or absent, as this might help to identify further ways to build Intentionality. Whilst the previous experience *(mastery experiences)* of the beginning teacher is often drawn on, it is often negative experiences which are the starting point. The mentor and beginning teacher identify ways to avoid a particular negative experience happening again. However, self-efficacy is usually seen to be developed through positive previous experiences, which can mediate the three other sources (Pfitzner-Eden, 2016). There may be more opportunity for mentors to draw out strengths and successes, which can be built on and developed, in identifying further learning. Strong evidence of this is present in the wider data set, but not in the four conversations examined in this close-grain analysis.

4. <u>The conversation is focussed on identifying specific and action-based targets, directly linked to their evidence of their current practice. The impacts on the learners are made explicit.</u>

At the close of data collection Dave identified that the most important learning point for him was the value of 'concrete next-steps for each learning episode'

> *because otherwise it goes back to* ***acting on it****; if you don't have* ***next steps,*** *it's easy to forget about them. And then at the* ***next meeting we follow up and discuss how successfully I have achieved those goals****. That was really helpful for me, because otherwise, especially when we just started I remember thinking there is just so much I want to improve on, and get ok at, never mind good at. (*Dave MM6 my emphasis*)*

Here Dave described a model of learning, aligned with *deliberate practice* as described by Bronkhorst and colleagues (2013) in which performance – 'acting on it'– is paramount. As detailed in Chapter 3, Bronkhorst's model of deliberate practice in initial teacher education describes 'continuous progressive refinement of core professional activities' rather than repeated discrete technical drills (Bronkhorst *et al*., 2013).

It is important to note that the feedback provided may not be formal feedback from a mentor or other colleague, but may include teachers' observations of their pupils' response, or 'any information that the student teacher meaningfully interprets in relation to their own performance' (Bronkhorst *et al*., 2013). Both Eric and Alice allowed time to talk about the beginning teachers' perceptions and to reconstruct their practice, which enabled them to unpick their decision making. The degree of focus on

the needs of specific named students, as required in *clinical practice* was clear (Kriewaldt *et al*., 2017). In D3 Alice encouraged Catherine to share the strategies she has already tried in relation to including a specific student who is distracting other learners, before sharing her own ideas. Catherine took her mentors' suggestions and incorporated them with her own greater understanding of the needs and motivations of the particular student.

Both Alice and Eric encourage the beginning teachers to engage in 'anticipatory reflection': to 'anticipate teaching, taking into account their own abilities and the classroom affordance' as advocated by the teacher educator experts interviewed by Bronkhorst and colleagues in relation to promoting *deliberate practice* (2011, p. 11).

I have already discussed that one of the differences between D4 and D5 is the extent to which Dave identifies explicit targets for his learning from the conversations. Dave describes D4 as a:

> *really good meeting…a lot of targets and objectives came out of there…very clear… I think that last conversation definitely felt the most productive and beneficial to me."* (MM4)

What is clear in listening to this meeting, and reflecting on it in light of D5, is how carefully Eric elicits these targets, prompting Dave to identify the relevance of the area of development to his own practice, eliciting specific examples and evidence. Taking one example of a target to 'ensure all students can access homework tasks by explicitly differentiating for the lower ability', he asks him:

> *What's going to change what will be different?... How are you going to do it?... How is your practice as it is at the moment, going to have to change in order for you to meet this objective?... Is this a bullet-proof plan? (C4).*

Whilst Dave seems to recognise how important specific targets are for his learning, he is not able to formulate such targets independently, at least consistently, as D5 demonstrated. A term later however, in his NQT year (D6), Dave identified things he had learnt from the observation of Charlotte, echoing the findings that not all learning is planned intentionally (Bronkhorst *et al*., 2014). However, at the time, he claimed

> *Although the conversations are useful and it does get me to think about it more, I think if there was a specific target that I had to meet in two weeks' time then it might be more beneficial to my practice (D6).*

It may be helpful to support beginning teachers to recognise a wider range of activities, including more open-ended discussions and conversations with colleagues, as opportunities for informal and *deliberative* learning (Eraut, 2004).

5. The mentor recognises the judgements required in teaching and encourages the beginning teacher to have confidence in their developing judgements and take risks in their learning, developing *adaptive expertise*.

The beginning teachers' sense of agency and self-efficacy is mediated by the culture of learning encouraged by the mentor. We have seen that feelings of anxiety about performance result in low self-efficacy, agency and Intentionality. Conversely mentors can support the development of the beginning teachers' own judgements as part of a recognition that expert teaching requires judgement (Soslau, 2012, 2015). In D3 Alice for example reassured Catherine that

> *It's always a load of trade-off's isn't it? And those are not very easy decisions, because you are always going to be missing something out.*
>
> *So you've got to pick your battles haven't you.' 'Experiment with not circulating. And it will be a trade-off. You might find that actually this is having a very negative effect, because when you look at their books you find that so and so have no idea what they are doing. But you might find that it improves the climate, so that's worth the trade-off. But give it a go'*

Eric similarly talks of 'rational decisions' (D2), based on judgement. The role of 'trade-offs' and 'experiments' recognise the role of judgement in teacher decision making and learning, which aims for *adaptive expertise* in response to specific local and personal situations, rather than merely socialisation or efficient delivery.

Learning such as this is only possible where the beginning teachers feels safe to challenge themselves, take risks and adopt an inquiry stance (Anthony, Hunter and Hunter, 2015). In D4 Eric encouraged Dave to:

> *recognise that this is going to push you out of your comfort zone. The comfort zone you've created, the safe, and I guess, like the safe kind of like environment you've created, and the kind of like routines you've got into with your planning, you're going to have to tamper with that…You're going to have to take risks…calculated and managed risks.*

What is being advocated here is not a simplistic version of learning through trial and error, simply through experience but 'calculated and managed' activities, requiring deliberate action and regulation. Eric similarly also used the language of professional judgement:

> *You make a professional judgement as to what the right call is. And if the right call is to have a greater progress on their learning, to support greater progress on their learning in the future, and that is your judgement. Then stick to that judgement (Eric, D2)*

7.3.3 Intentionality in case-studies summary

The case-studies, like Chapter 6 demonstrated the high levels of Intentionality demonstrated by the participant beginning teachers. In Chapter 4 and 5, I suggested that this might be seen to be related to the nature of the data, the ITE programme, school context and wider policy culture of accountability – in particular, the value placed on intentional, planned learning, which I have suggested is the first condition of high Intentionality. However, these case-studies show that the level of Intentionality varies, not just according to the particular beginning teacher, but also in relation to the specific conversation explored. Four further features of high Intentionality were identified in relation to broader evidence: the importance of supporting high levels of both self-efficacy and (professional) agency in the conversations; the focus on specific action-based targets, tied to evidence of classroom practice and the support of early judgement in order that the beginning teacher starts to develop the adaptive metacognition, required for expertise. All of these features align with the description of self-regulated learning offered by Endedijk (2010). A clear implication is that mentors and BTs might be able to create the conditions in which greater Intentionality is possible.

It should be noted that this analysis has not included retrospective regulation, which is an important way in which beginning teachers engage in intentional learning (Endedijk, 2010). There may also be more opportunity for beginning teachers to recognise the value of informal and deliberative (Eraut, 2004) learning opportunities, where pre-planned targets and outcomes are not specified.

7.4 Frame of Reference

Chapter 6 introduced the participants' developing understanding of the Frame of Reference (FoR) dimension. This dimension, which focuses on the range of sources used by the participants to make sense of and shape their experience, was identified as being of particular interest by participants as the data re-presentations (mirror data) suggested their FoR was narrower than they would like it to be. I examined data across all nine participants to show the range of sources used and demonstrated a tendency to draw on sources which were close at hand, and which supported them to resolve current problems of practice. Attention was drawn to the role of the mentor as mediator of the sources, and for some participants the main source beyond their own experience.

This section attends more closely to the FoR of Catherine and Dave in Phase 2 of data collection in relation to three aspects. Firstly, the sources used by Catherine and Dave

are presented in relation to each other and to other participants within the study. Whilst the overall range of sources used by the two participants is fairly similar, there are striking differences in the role of the mentor in mediating these sources, and this is related to their conceptions of effective mentoring and their claims about the processes of beginning teacher learning.

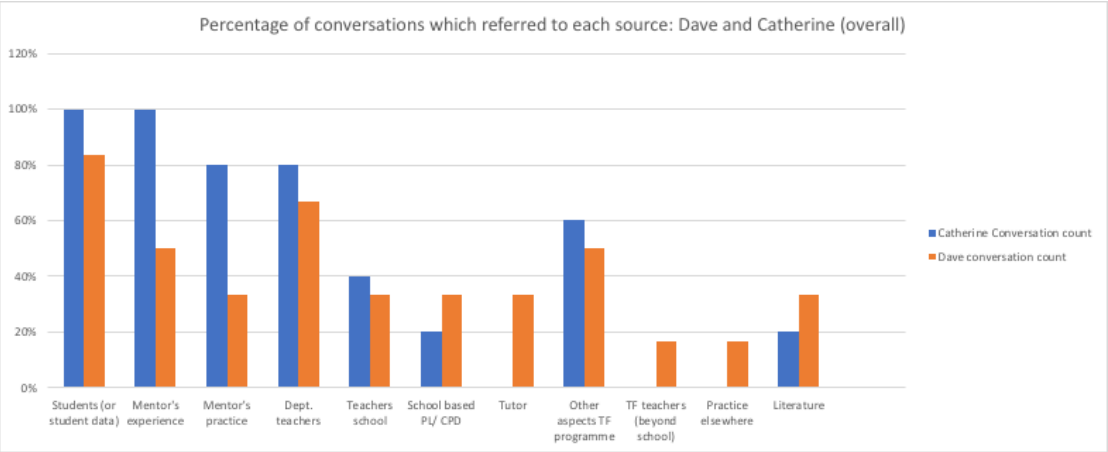
Secondly, I consider how the sources which are used changed over the research period. Building on the description in Chapter 5 of a 'bulging and then narrowing' FoR, I present Catherine and Dave's accounts in relation to the research activities. In particular, I examine the mentors' conceptions of their role and the processes of learning to teach. The ways the sources are used are considered in a number of analytical approaches, including: as stimulus, conceptual tools, resources and badges.

The third section considers the relationship between the FoR dimension and practical theorising (McIntyre, 2006) and professional knowledge (Winch, Oancea and Orchard, 2013), bringing the data into a wider conversation with the literature around the ways in which different sources support beginning teacher learning. I close the chapter by questioning the extent to which the 'problem' of a narrow FoR is a teacher learning problem, or a research methods problem. This leads into Chapter 8 in which I construct a case for the use of OLEF as a secondary stimulus in explicating the processes of learning to teach.

7.4.1 The sources contributing to the Frame of Reference

Like other participants, Dave and Catherine draw primarily on those sources close at hand. Moving beyond the broad break-down of references presented in Chapter 6, this section draws on analysis developed from Burn (2006) to categorise the references into eleven sources which are drawn on in the conversations. Figure 39 shows these categories and the percentage of conversations which referred to each source. It is clear that sources close to the beginning teachers, such as their students, their mentor and other departmental teachers, are a feature of most conversations.

Figure 39: Percentage of conversations which referred to each source



By looking at the percentage of references across conversations (rather than just counting the conversations), it is clear that the students they teach are the most highly referenced source, representing 28 percent of Catherine's references across five conversations and 20 percent of Dave's references. As discussed in relation to Intentionality, the beginning teachers are highly focussed on the learning and progress of individuals in their classes. As work-place learners, it is not surprising that they refer to particular learners as they make sense of their experiences and plan future actions (Eraut, 2004; Endedjik *et al*., 2012).

Learning Departments

Teachers within their department and the mentor form the next largest group of references. The important influence of the mentor, department and school on beginning teacher learning is widely understood as outlined in Chapter 2. The DEBT project, for example, found that sources within the school context were credited as informing learning more often than sources from the wider context (including the university provision; wider literature etc.) (Burn, Mutton and Hagger, 2010).

It comes as little surprise then that the participants in Phase 2 draw on the resources of the department to support them, although there are some interesting variations between Catherine and Dave revealed in the closer analysis. The role of mentor is represented in two sources: Mentor Experience (the mentor sharing her own experience), and Mentor Practice (the mentor sharing her practical resources or describing practical actions). Both of these sources account for the second and third highest number of references for Catherine (26 percent and 23 percent in turn). When considered together they total 49 percent of her total references, so arguably are her highest group of references. Dave's

conversations include references to Mentor Experience and practice in 20 percent of instances, and the departmental teachers make up 18 percent of the references. Dave's greater reference to the departmental teachers (compared to Catherine which are only 10 percent of references) does not seem to be explained by a need to draw on subject specialist advice and resources, given that Eric was a History, rather than Geography specialist. However, his subject specialist colleagues are only referred to as often as his History specialist colleagues, who include his Head of Department and another teacher who had undertaken the Teach First programme.

In Chapter 6, I claimed that participants used the sources instrumentally as resources to solve the problems they were facing. The teachers in Catherine and Dave's departments are largely referred to in relation to sharing their practice, through observation or more often through physical resources. The 'shared area', an electronic folder on the school system is frequently referenced.

'Vygotsky and jargon'

Research-informed literature is only referenced in one (Catherine) or two conversations (Dave). With some irony, Mentor Alice described the school's approach to professional learning as 'quite Kolb like, but without the bit where you add in the research' (P1 Alice MM1). In conflating Kolb's experiential learning cycle, with other cyclical models with explicit reference to an expectation to engage with research, she echoes some of the concerns about school-based teacher learning being internally oriented practical or technical reflections, not connected to the latest research evidence (Hordern, 2014). Alice goes on to explain that 'teachers find it really hard to find time to build reading in and they care less about it because it doesn't always show you, you know it's not always relevant to your practice.' Her mentee in Phase 2, Catherine shares the same concern admitting that:

> *It seems quite intimidating to me, this thing that we have to do in our essays, but I find it, in my mind I've divorced it from practice quite a lot…At the moment I've got a negative attitude towards it. Oh it's tedious. It's not helpful. (Catherine. P2, MM2).*

The professional mentor, Eric also suggests that Dave 'wouldn't go for a book and find strategies for lower EAL speakers and think that's a useful thing. I think he still has this thing about pedagogy being Vygotsky and jargon' (Eric, MM2). In bringing Vygotsky and jargon together, Eric articulates something I have observed previously, with

'Vygotsky' becoming a proxy for hard to understand, irrelevant, old and foreign 'theory'.

These negative attitudes towards research-informed literature cannot simply be attributed to teachers in the school not being interested in engaging with research. There are many counter examples, at least at a school leadership level, such as the recognition of strong research engagement through work with the charity Teacher Development Trust peer audit; involvement in several Education Endowment Foundation trials; collaboration with university partners on Action Research projects for Newly Qualified Teachers, and indeed the support of my own master's and doctoral studies whilst also a senior leader.

Instead I think the negative response reflects an enduring problem with the way that the mediating process of enactment is understood, as a simplistic theory into practice relationship. There are two issues apparent in relation to this. The first is the perceived gap, reflected in the language of 'divorce' or 'relevance' or othering, with reference to exoticised 'othered' theorists. The teachers seem to perceive research-informed literature, not as an offering of suggestions for practice as McIntyre proposed, but rather simply as propositional 'academic' knowledge (McIntyre, 1993). Rather than seeing it as a tool to support sense-making and critical thought (Knight, 2015), the beginning teachers are disappointed that it doesn't offer the practical insight, or strategies they crave as novices.

Catherine shares a desire that it [theory] is 'broken down a little,' that she has opportunities to 'build theory in':

> *It might be nice in our meetings, have an idea or some suggestions of things we might try, just so that we are doing it a little bit…In our last feedback session, Alice was telling me about Bloom's taxonomy, which I hadn't really, obviously I'd heard of it, but not fully engaged with it, and it proved really useful.*

We can see the difference between how she currently perceives theory as something outside and not integrated, as opposed to 'built in;' theoretical versus practical: she would like to be 'doing it a little…engag[ed] with it.' In short we can see her claim that she would like to understand it in relation to her professional practice 'broken down a little,' rather than just referenced ('I'd heard of it'). This may reflect a weakness in the beginning teachers' understanding of the processes of teacher learning and the contribution that research-informed literature may have in creating a 'conceptual framework', including conceptual knowledge and empirical research on teaching and

learning, which informs particular decisions in the context of the classroom (Orchard and Winch, 2015). It could be evidence of the 'discontinuity' (McIntyre, 1990, p. 31; Jackson and Burch, 2016) and lack of cohesion across the three institutions involved in the programme (Teach First, university and school).

The second problem relates to what I can think can effectively be described as the braided nature of teachers' knowledge, which is used for professional action. The classroom is the nexus where different perspectives are brought together, enacted and made sense of. As Fahad explained:

> *When it comes to planning I know why certain things need to be done, for example why a plenary is necessary or why a starter activity is the best way to start a lesson…I know that, I know the importance of that from what I've learned at university. But in terms of actually* ***implementing*** *it, figuring out for myself the best way of doing it, it would be derived from the experience of teaching it in the classroom…. while I do know it, I've learnt about it at university. I have really. It only comes to the forefront to do with classroom teaching, to do with experience* (P1, Fahad).

Sabina similarly suggests that learning happens at the point of 'implementing it' in practice:

> *I still find with reading, it puts things in context for you, but you know the academic to practical isn't always a direct link, so for example, if you look at Visible Learning, you take so much away from that about what works in the classroom and what students respond to but in the heat of the moment in the classroom, you're not necessarily thinking of Hattie. You are not always, it doesn't always pop into your head. Reading is really really useful to understand what I should be doing and there is nothing I have read that I have thought that its wrong, but its* ***implementing*** *that in a practical context*

Whilst some academic reading is seen as difficult to access – as being not relevant, out of date or difficult to make sense of – even academic research, or university-based teaching with clear practical implications, requires 'figuring out' in the particular contexts of the classroom, often dynamically 'in the heat of the moment.' This leads to classroom experience being over-emphasised as the main site of learning (Mutton, Burn and Hagger, 2010).

The low number of references to research-informed literature is also due to the conversational nature of the data. As argued in Chapter 4, references are often referred to in short-hand and implicit ways. In Nana's words: 'It's difficult to index all of your frames of reference within a conversation, especially an informal conversation, I don't think I need to produce a bibliography' (P1). Given that all the participants (with the exception of the SD Salaried teachers in P1) were undertaking the academic PGCE course in addition to their professional qualification (QTS), all of the teacher

participants were writing formal academic essays with reference to a range of literature and their own experience. It may be that the conversations between mentors and beginning teachers are not, at least consistently, opportunities to explore and problematise the different sources in relation to each other, in short, opportunities to engage in practical theorising.

It is clear however, that in this study the beginning teachers seek their mentors' support in helping them to critique and integrate the differing sources in relation to their classroom experience. Chapter 5 reported the finding that in P1 some mentors had not considered their role in relation to external sources, particularly academic reading. One of the implications of practical theorising is the potential challenge it places on beginning teachers to synthesise and theorise competing, differing perspectives, particularly where the sites of learning (the university and school) and the personnel (school-based mentor and university-based tutor) are conceived of as having different positions, roles and prioritising different criteria (McIntyre, 1995). Researchers have highlighted the huge challenges and complexities in supporting mentors to take on the role of 'teacher educator,' with associated skills in supporting adult learning, a mediator for a range resources, including the latest research and having some critical capacity to look beyond their own situated understanding and school context (for example Jackson and Burch, 2016). Whilst the route from experienced teacher to university-based teacher educator is well worn, how often are other school-based mentors drawing on rich and deep academic knowledge in their practice?

Indeed, the main difference between the nature of Catherine and Dave's sources seem to be related to the way the mentors conceive of their role and their claims about their intentions. Overall, Eric is keen for Dave to draw on a wider range of sources and claims that one way to achieve this is by reducing his role as the main provider of experience and practice. He envisages himself as 'more of a coach', rather than a mentor. Dave's references to sources are more evenly distributed across the eleven categories, whilst Catherine's conversations prioritise mentor experience and practice. This is made especially clear in the pie chart representation of the percentage of references (Figure 40a and 40b).

Figure 40a: Percentage of references to each source- Dave

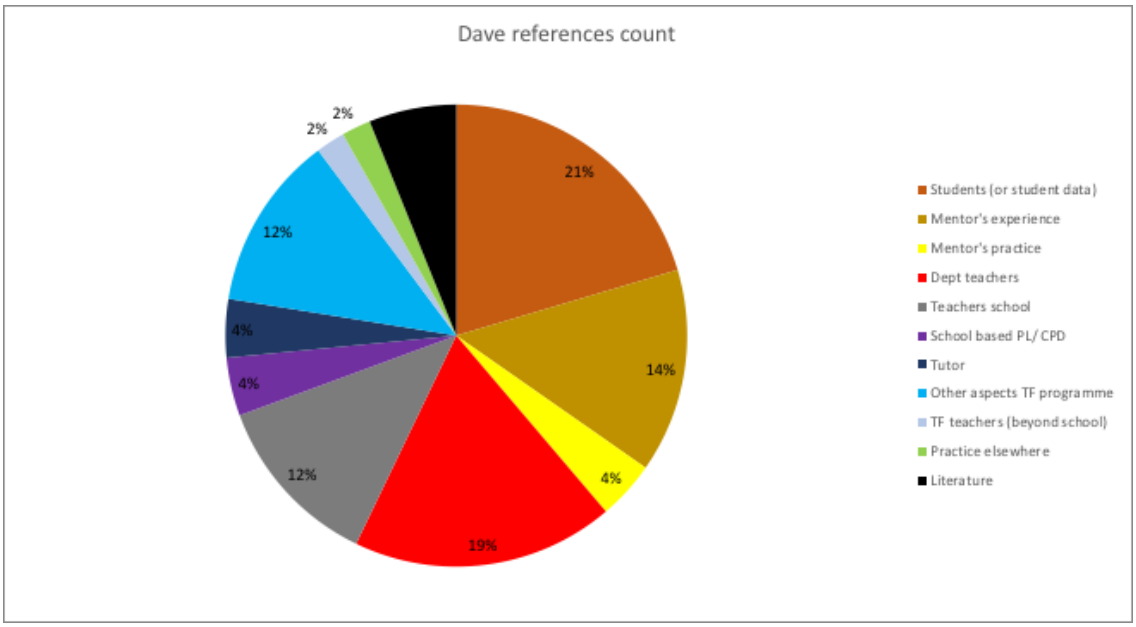
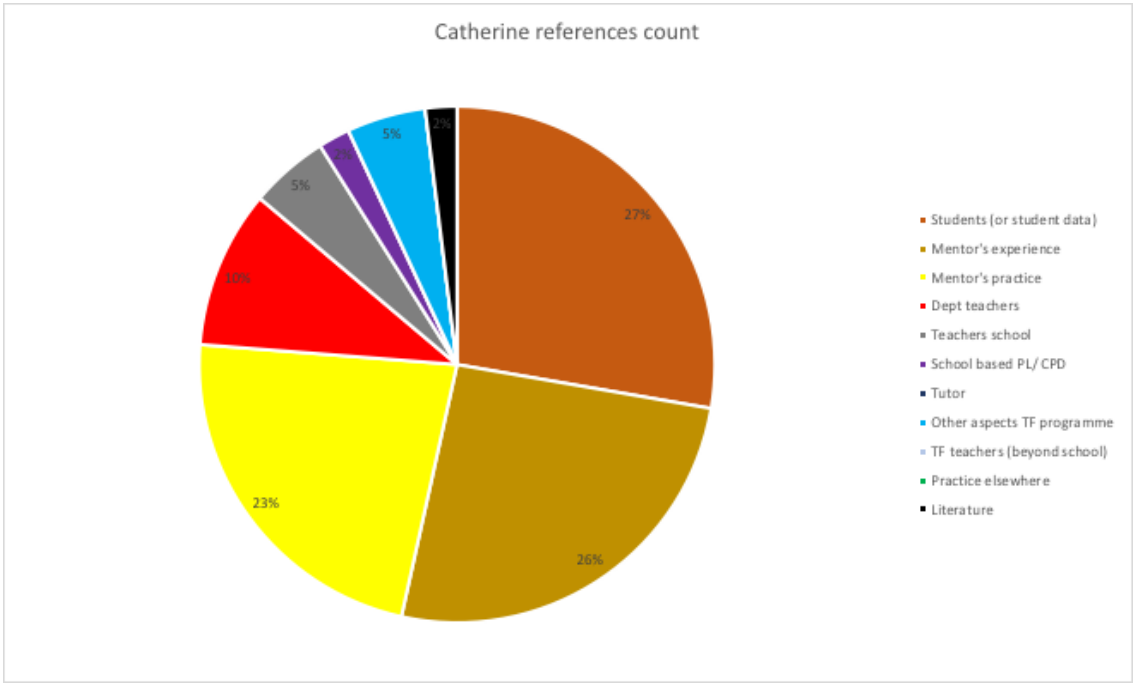


Figure 41b: Percentage of references to each source - Catherine



The difference in the range of sources considered by Dave and Catherine, and the relationship to their conception of the role of the mentor, is particularly apparent when we look at the sources used over time, and in relation to their deliberate actions in response to the research process which is the focus of the next section.

7.4.2 Bulging and contracting Frame of Reference

Despite participants' having claimed an intention to broaden their FoR, analysis of the sources over the research period suggest uneven development. The conversations of Catherine and Dave do show a bulge in the range of sources referred to, but this was not sustained. Catherine's third conversation (D3) and Dave's fourth conversation (D4), included the highest number of sources. These conversations are also those which I identified as being most highly intentional, which might suggest a relationship between Intentionality and the FoR. In fact, it is often in identifying how to achieve particular goals or targets that participants identify sources they can draw on to support them, thereby acting to 'feed' their regulation (Oosterheert and Vermunt, 2003) or to use as instrumental resources. This aligns with the notion of the purpose of ITE being to prepare beginning teachers to go on learning through their career, knowing through whom and where they can find the resources they need as 'resourceful learners' (Edwards, 2010a, p. 72).

<u>The mentor as mediator: removing themselves as a resource</u>

The recognition that the first year should set beginning teachers up to become self-regulating, resourceful agents shapes Eric's conception of his role as a mentor. From the start of the research period Eric shows concern about this role in the conversation claiming 'I'm doing too much talking…if I'm talking for 61% of the time[33]. I need to work on that.' (Eric, MM2). He went onto to explain to Alice:

> *I'm surprised sometimes at how it does look like I'm dominating the conversation, or that I feel like, or sometimes when I'm it, I'm responding, but actually it does look a lot of the time like I am setting the agenda, the direction of the discussion. Whereas sometimes I think Dave thinks he is being really reflective and taking things up himself, so I think that's quite interesting. (MM2)*

In D3 Eric actively resisted sharing his practice with Dave. Only after several periods of silence and Dave's admission: 'I'm really trying [to think of suggestions for what I could do' did Eric change his tactic, saying 'I'll put you out of your misery,' before he shared his ideas. In MM3 Eric's language suggested he was disappointed with his decision:

> ***I'm not** asking you questions. I lead you to the answer I want to give. **I end up giving you** the strategy for what I think will be appropriate for what you are*

[33] 61% refers to the Mirror Data which showed that Eric spoke 61% of the words (rather than time).

*trying to do… But when you come up with the barrier, I take an **easy way through*** (MM3 my emphasis).

In his conversations with Alice he shared his intentions for his mentoring:

I'm interested in how I mentor from the perspective of how I do less talking, giving less information, and drawing more on that person's experiences and ideas to help them. I guess more coaching. I want to become more of a coach, than a mentor (MM3).

In MM4 he shares his ideal mentoring conversation:

For me the holy grail would be, Dave would come in and he would set what the objectives for the meeting are, what he wanted to get out of it, and how we were going to do it, and I was like, lots of listening and reflective, like said to him back what he was saying, so that he thought about it, thought about whether that was helping him achieve his objectives. Because actually what you want is that by next year, or the year after, or in the future they don't need you. They could do it without you and in situations that haven't arisen in that first year. So they can conquer anything (Eric, MM4).

Eric's ambition to be 'more of a coach' is explicitly linked to his hope this will support Dave to be an independent learner, actively self-regulating his own learning. It is important to note however, that his vision of coaching is not only one involving internally oriented 'monological' reflection (Khan, 2012), but involves identifying external resources to support his sense-making and actions.

These intentions are borne out in the data, so that from D4 onwards the mentor's practice disappears as a source in Dave's conversations, although there are some references to Eric's experience. D4 and D6 show high Intentionality with Dave confidently leading aspects of the conversation, setting the agenda or showing a clear sense of what and how he wants to go on learning. However, D5 also shows the limitations, where Dave was unable to make the most of the opportunity to learn from a joint observation of another colleague. In earlier discussion, I suggested that Dave did not fully understand the purpose of this activity, resulting in low levels of Intentionality, and therefore limited use of the source to develop his FoR.

In D6, at the end of the research period, Eric described the conversation in terms of his ideal mentoring conversation, revealing obvious satisfaction:

I think you have really hit all of the things that I wanted to talk to you about on the head, and I didn't need to do that thinking for you. I think you have done it yourself, and I think that is a sign of a very reflective [sic], and I am now looking at the orientations and trying to turn these things into a word. But we should though, because you didn't require that much prompting from me, through that discussion to come up with those targets…I think I have asked you

questions in this feedback, but you have done all the heavy lifting yourself (D6).

Eric's role as a mentor developed through the research period as he deliberately tried to reduce the extent to which he shared his own thinking and practice. He tied this explicitly to the FoR by suggesting that by removing his influence, he would encourage Dave to identify other sources to support his ongoing self-regulated learning. He conceived his role as a 'coach,' asking questions to elicit Dave's thinking – 'the heavy lifting' – and supporting him to identify his own solutions and sources of support.

Eric also linked the role of the coach to someone who was interested in the teacher as a 'teacher learner', rather than what he described as a 'not-quite-there teacher' (Interview Eric).

A lot of my mentoring work before that I think had focused a lot on behaviour or, you know, things they weren't quite doing right yet. And I think that one of the things the project has really helped me to do is to really much more clearly delineate between this is a learner, instead of like a not-quite-there teacher…Well actually a lot of the conversations I've had with maybe more experienced teachers kept the focus around student progress or it tends to focus around reasons why a lesson was good not outstanding. And that learner aspect gets lost in that process. I think I was probably bringing a lot of that to my work with beginning teachers.

So I think one of the biggest points that I've taken away from this is to really sort of think about them in that terms, and to feel comfortable and confident thinking about them in those terms. So that's a big one. And I think in terms of like reality, how does that manifest itself? Well I'm much more comfortable I think now asking questions like 'Why did you do that?' And not kind of, you know: 'You did that, that didn't work very well, you know, what could you do differently?' But actually me being much more interested in the beginning teacher as like a person who makes certain like mental decisions when planning. And it's really made me think about well why are they making those, do they know why they're making those, what do they need to do differently next time?

Eric's claims about the ways his own understanding and actions have changed are important and will be discussed further in Chapter 8. With specific relation to the FoR dimension he reveals the way actions were shaped by the demands of his role as senior leader. In particular, his role in observing more experienced teachers' lessons, focussed on 'student progress' and 'why a lesson was good, not outstanding', echoing the demands of the Ofsted Framework. The research process has in effect broadened his own frame of reference, supporting him to conceive of beginning teachers as cognitive learners who make decisions in their actions. Eric describes this process as getting them to 'really open up and reflect on the inner workings of their brain.' In Vygotskian

terms, the 'object' of Eric's actions has shifted in supporting the teachers to develop from a focus on their performance as 'not-quite-there teachers' to fully competent teachers, towards understanding their thinking and decisions in order to support their learning. Explicating thinking, assumptions and theories of practice are features of models of *clinical practice* (Kriewaldt *et al*., 2017) and Bronkhorst's description of d*eliberate practice* (Bronkhorst *et al*., 2011).

The mentor as mediator: sharing thinking, experience and practice

Catherine approached her mentoring differently, expressing concern about limiting her own sharing of practice and experience, and instead opening up her own thinking as a more experienced teacher. Like Eric she perceived the potential contextual constraint of a dominant model of practice, and she claims this comes into tension with a coaching model.

Alice: *It's hard to be really coaching in the sense like, this sounds really bad, I have quite a clear idea of what I want Catherine to be like as a teacher, but it's because in our school we have quite a - I don't know, there's a way of teaching that, is followed in the school. Not that it's really regimented at all. I feel like maybe that limits me a little bit, because maybe I don't have, I don't have experience in other schools, that maybe my idea of what I want Catherine to be is a bit, what's the word, prescriptive maybe?*

Eric: *Yeah, I know what you mean. There's a way almost that you want the person to teach, which is quite different from–*

Alice: *because it's how we teach in our departments*

Eric: *–as a fully rounded professional, that being different from what it looks like in the classroom (MM3)*

Eric here suggests a conflict between 'the way you want the person to teach' and the ideal of a 'fully rounded professional'– playing into debate around the socialising effects of school versus the professional judgement required by expert teachers (Long, 1997; Ellis, 2010a; Korthagen, 2016).

The importance of Alice sharing her own practice and experience is attested by the data in the conversations. Whilst the percentage of words spoken by Eric decreased over the research period as he actively sought to change his role in mentoring meetings, the percentage spoken by Catherine increased. Similarly, there are more references to her experience in the later conversations than the earlier ones. She followed Eric's trend in reducing the sharing of her practice in later conversations, but, unlike Eric, she continued to use it as a source beyond D3.

In the deliberate attempts to broaden Catherine's FoR, Alice and Catherine make the decision to 'bring in a theory' to support joint-planning, Catherine's teaching, observation and the mentor meeting discussion following this. Their choice of Pauline Gibbon's writing cycle, a scaffolded approach to writing, is telling (Gibbons, 2002). This cycle underpinned the English department's approach to planning lessons and had been introduced in at least two ways to the school through local authority training around supporting EAL learners in the mainstream classroom ten years previously, and through the Teach First English subject studies programme (hosted at the school) at least five years previously. This example reminds us of the complexity of hunting out the origins of particular references. A pedagogical tool developed to support EAL learners in Australia, mediated by professional development leaders in England is then transformed into context-specific planning materials (iteratively and often over a long period) by teachers in the 'shared English area' (a departmental folder on the computer network). When Catherine uses the resources of the department in her own planning and teaching – as she often does – there is no explicit reference to Pauline Gibbons or her model of teaching writing. By sharing the writing cycle with Catherine, Alice supports Catherine to understand the underlying framework of the model materials she has been using. This understanding helps Catherine to 'apply that theory in my planning' (MM3) and use it to evaluate the extent to which it guided her lesson in reality. Sources are mediated, translated and transformed in practice, becoming part of schools' ways of working with little explicit reference to their origin or authorship. When teachers talk about their practice or their experience, this is not a naive craft honed in isolation, but reflects networked, distributed knowledge woven from multiple sources in particular contexts.

At this point the *enactment* process, might best be described as being part of a '*procedural approach'* (Cheng, Tang and Cheng, 2012), in which Catherine tries to use the model to see how workable it is, both in terms of her planning and teaching. She identified that she had missed one of the components of the cycle, due to timing 'so I tried to compensate with the sentence starters.' However, even at this point she was carefully considering the implications of this on her learners, concluding that without the important step of modelling 'I could see the effect of that. I think they would have been able to do it better and more independently if we had spent some time, more time modelling.' She described the process as being one where she had:

> *more input from her [Alice] at the start, but then she allowed me to experiment. Which is good, because you need to make those mistakes in order to learn and grow. (MM3)*

Catherine's description of the process as an 'experiment' and one in which she made decisions to 'leave that bit out' shows that her approach is not just procedural but more *'reflective-adaptive'*, involving personal interpretation and refining approaches (Cheng, Tang and Cheng, 2012). The focus on the impact on the learners aligns with clinical models of teacher learning (Kriewaldt *et al*., 2017), and deliberate practice (Bronkhorst *et al*., 2011).

One of the criticisms of school-based mentoring is the risk that mentors dominate conversations with beginning teachers (Hennissen *et al*., 2008); that they create 'carbon copy' teachers (Rozelle and Wilson, 2012), or share their own practice uncritically (Burn, 2006). Although Catherine and Alice's conversations are rich in discussion of Alice's practice and experience, this isn't shared uncritically or dogmatically. There are no examples of directiveness, a feature of the 'imperator' mentoring style described by Hennison and colleagues (Hennissen *et al*., 2008). Instead Alice seemed to be aware of the risks of prescription, despite having a 'quite a clear sense of what I want Catherine to be like as a teacher' (MM3). As she shared her guidance she cautioned, critiqued, and acknowledged other possibilities. Even in D2, a conversation in which Alice spoke 77 percent of the words she acknowledged:

> *'You don't have to, there are other ways you could do it, but this is quite a visible way of doing it'*
>
> *'Like try it, maybe it won't work for you, but I that I generally find that quite useful.'*
>
> *'Like you mess around and try, but I personally think…I would…'*
>
> *'I think Bloom's [taxonomy] is really useful for sequencing. But I'm sure from your Subject Studies Days and things they have shared other strategies for sequencing.'*

D2 is an interesting example of a conversation in which the low affective state of Catherine, and related Intentionality, may have encouraged Alice to offer more explicit guidance and advice in an effort to be supportive (rather than challenging) and to build Catherine's confidence. Oosterheert and colleagues claim that beginning teachers avoid external information when it feels 'emotionally risky' (Oosterheert, Vermunt and Denessen, 2002) and perhaps we see here the mentor following the same pattern and retracting the range of sources they draw on.

In relation to Intentionality I have previously discussed Alice's use of the metaphor of 'trade-offs' to reinforce the complex judgement required in teacher decision making. She emphasises an experimental approach 'try it…experiment with,' encouraging Catherine to judge for herself the effects of a particular strategy on the learners in her class.

This study does not set out to evaluate mentoring practices or comment on the efficacy of different approaches. Eric's mentoring efforts shifted towards an interest in Dave as a learner and Eric was keen to support Dave's self-regulation. Alice, in contrast, had a strong vision of the teacher she hoped Catherine would become, and navigated sharing strong personal models of this, along with an encouragement to experiment in order to develop Catherine's own decision-making skills, as she was aware of the risks of very localised context-specific prescription. We can see that both Eric and Alice's approaches – fully sharing the mentor's practice and experience and withholding it – were supportive of aspects of *clinical practice* and *deliberate practice,* which I have argued also support Intentionality (Bronkhorst *et al*., 2011; Kriewaldt *et al*., 2017). It is important to observe that the research process, and in particular the role of OLEF as a secondary stimulus, has supported all participants (including myself) to be able to pay careful attention to mentoring practice, by opening it up and stimulating discussion around intentions, motivations and actions. This will be further discussed in Chapter 8

7.4.3 The different ways sources were used

The sources used by beginning teachers can be considered in different ways, based on the type of source they are, how they are used and for what purpose, but all of these classifications belie the multiplicity, complexity and simultaneity of both teacher intentions (Mutton *et al*., 2018) and the mediating processes of reflection and enactment (Clarke and Hollingsworth, 2002). The classification of sources by their nature (using for example the 11 categories developed from Burn 2006) treats them as largely exclusive, although, as I have indicated above, it is often difficult to acknowledge the particular ways in which sources are mediated, translated and transformed into practice. This is particularly true when analysis is limited to the conversational data of this study, rather than being based on access to the ITE teaching materials as Burn's study was. I have therefore argued that it is unhelpful to delineate between teacher's practice or experience versus external sources in ways that belie the complexity of knowledge mobilisation.

I have also suggested that sources can be used with a particular temporal dimension: both 'to make sense' of practice, suggesting a backwards-looking type of reflection, and to 'shape experience', implying an active planning of future action. However, in mentoring conversations teachers are considering both at the same time. Sources are used to make sense of experience *in order* to shape future activities. There is little need for abstract reflection for its own sake, but rather it is highly intentional, to inform future action.

The sources are also used for particular purposes - to achieve particular goals. I suggest there are four ways of using the sources: as stimulus, as conceptual tools, as resources and as badges. Sources as stimulus relate to those sources which are used to stimulate thinking, reframe understanding and 'feed' regulation (whether intentional or non-intentional). Stimuli may provoke 'dynamic' instantaneous moments of sudden understanding (Oosterheert and Vermunt, 2003), like the 'in action' reflection described by Schön (1984). In the classroom of responsive teachers the stimulus is the students (Fairbanks *et al*., 2010; Kavanagh *et al*., 2019) and this seems to be true too in the mentoring conversations analysed in this study. Students, and other sources can also stimulate new ways of understanding and provoke action in longer term ways through mentoring conversations. We can see this in Catherine's careful reconstruction of her students' response to the lesson in order to plan future action in D1.

In D5 Catherine described how working with other Teach First beginning teachers supported her to:

> *realise just how much Dave and I know and have improved over the course of the year. Because they just don't know how it works. You see the surface level, but you don't see the cogs underneath so much (D5, Catherine).*

Here we see her revise and reframe her own self-evaluation based on working with other teachers.

Sources can also be used as conceptual tools to organise and structure thinking. The most obvious example of this would be the writing cycle brought into Catherine's conversation in D4, which provided a scaffold for her own planning and evaluation of a sequence of lessons. Other conceptual tools referred to include Bloom's taxonomy to support sequencing of activities. In this study the beginning teachers requested support from their mentors to 'bring it in' and 'break it down': to make sense of these tools, in order to shape future experience. These requests support Hirst's concern about the 'huge demand' on beginning teachers to 'forge a way through' by practically theorising

(Hirst 1990 cited in McIntyre, 1995). They also support the need for highly skilled and knowledgeable mentors who understand their role in relation to mediating different sources and have the skills and language (such as 'practical theorising') to do so.

Conceptual tools differ from sources as resources, as the latter are more directly used in practice, rather than informing thinking. Resources are the sources most often referred to, being those practical ideas which can be adapted for classroom experience. As Winch and colleagues remind us, technical knowledge is textured with situational understanding and critical reflection (Winch, Oancea and Orchard, 2013). The process of 'borrowing' resources should not be seen as a simple uncontextualised transplanting process, but rather more as a grafting process, involving particular situational understanding which leads to adaptation and transformation of the resource.

Sources also risk being used as badges, collected along the way to indicate membership and worn explicitly, not necessarily informing thoughtful action. In this study there was certainly evidence of some participants collecting and referencing sources without fuller use. However, overall, participants did not value name dropping. As Sabina explained, 'you often don't talk in literature…it ends up coming across a bit pretentious if you talk about that book, I think you refer to things a lot more implicitly.' (Sabina P1).

The value of the four labels is limited by their overlapping nature, with many sources being used in multiple ways at the same time. This seems to be true of all the conceptual labels, reminding us of the complexity of the ways varied, and often invisible, sources are used for multiple purposes.

'Cogs underneath': recognising the complexity of practice

I suggest we can draw on models of the way an understanding of theory develops, as a proxy for the relationship of beginning teachers to all sources. Knight proposed that the five beginning teachers in his study showed progression from viewing theory as prescribed, generalised and accepted, towards being owned, situated and questioned (Knight, 2015). This model proposes a development from conceiving theory (or any account) as propositional knowledge, towards as a process of theorising (McIntyre, 1995).

There are certainly indications of some differences in the ways Catherine make sense of beginning teachers' practice in relation to sources and in their understanding of the concept of FoR. In Cycle 5 participants were invited to consider how they 'draw on and

make sense' of sources in their conversations. Catherine and Alice had observed another teacher (in a different subject) together and the recorded conversation of D5 was their discussion around this. Alice claimed:

> *This is 'drawing on'…you've noticed what they are doing and then compared and contrasted with your own practice. We've identified. Then we're understanding what he's doing and why it's worked.*
>
> *You're noticing a lot more of what is happening in the room. You're noticing what the student is doing and thinking about why they are doing that, so how the teacher has got them to that point. And you are really thinking about how it relates to your practice. And you are not just thinking, 'oh they're really well behaved. They're in rows. I am going to use rows.' You think about why your classrooms is different and why the set-up of the classroom is different and how that could be creating that difference.*

By comparing this recent experience of joint observation to one at the start of the year, Catherine can see her progress from novice noticing to being able to explain and evaluate more fluently:

> *The thing I remember about that [earlier joint observation], was just being astonished at how calm they were, and how focussed. And spending lots of time observing how they were behaving and thinking about why they were behaving that way. And then you helping me breaking down why that was. What she was doing and things like all the equipment is out on the table and walking around, and she has a timer ready to go and that kind of stuff. Cos I was thinking more like "Oh my God! Look at J sitting still!" rather than thinking why is he sitting still.*

This echoes research findings about the differences between novice and expert perception as evidence of understanding. Experts are better able to discern patterns and make sense of what they can see, whereas early teachers may only have a superficial surface-level view of classroom action (Berliner, 2004; Soslau, 2012). As Alice observed *"so you were noticing what the student was doing and I was noticing what the teacher was doing and how they got to that point*." Catherine was also very aware that Alice scaffolded her sense-making:

> *I noticed that his behaviour management was very good, and that the class were very calm. And you said "Did you notice how his tables were arranged?" And I kind of had, but not very explicitly and we talked about that and how having them two by two allowed for easier behaviour management, which is something that I had heard before but not really seen because not many people in the department do that. And then I have implemented that since, because you encouraged me to. So I think that was an element where I had kind of noticed, but you brought that into more perspective for me and I implemented it.*

This emphasises the important role of the mentor as mediator of sense-making – bringing it into perspective, providing scaffolding for Catherine's current understanding.

In discussing the shift in her own understanding, Catherine contrasted her own perspective on the classroom with that of very early beginning teachers – in their first two weeks of their ITE programme:

> *They just don't know how it works. You see the surface level, but you don't see the cogs underneath so much.*

The recognition of the 'cogs' underneath may imply only a technical or practical understanding of 'how' things work. However, other comments suggest an interest in exploring the rationale: 'why it's worked.' This may be considered in relation to her own classroom context (and therefore situated), but we do not have evidence of a wider critique in relation to the values or aims as these are often taken for granted, rather than explicitly discussed.

7.5 Intentionality and Frame of Reference

The goals of the beginning teacher are explicitly focussed on the learning of their students, but this seemingly simplistic intention is at risk of being seen in technical terms. In Catherine's first recorded mentor conversation she discussed how to improve the first five minutes of her lesson. At first glance, this could be dismissed as a technical or procedural target – focussed on creating the conditions for learning in the classroom and managing students and resources. However, if we attend closely to the conversation around this target we can observe her draw on a variety of sources: her mentor's experience; the resources of her department; her own experience and the challenges posed by her tutor. In discussing this technical process, her mentor certainly encouraged practical evaluation – 'What works with that group?' – but she also prompted her to draw on her experience with other students. Alice reinforced the important decision-making process that lies at the heart of professional judgement when she cautioned: 'it depends what you want', before sharing and importantly critiquing, her own practical theory. Alice also began to share the norms and cultural practices of performativity when she suggested 'perhaps when you are being observed by that person [the tutor] then you do a jazzy exciting starter.'

In learning about technical processes, the beginning teachers are also learning how to think like a teacher: how to draw on a range of resources intentionally; to make

decisions and reflect on their impact, in ways that align with conceptions of professional agency (Soini, Pietarinen and Pyhältö, 2016).

7.6 Evidence of textured *professional judgement* and *practical theorising*

Professional judgement – as textured situated understanding, critical reflection and technical knowledge (Winch, Oancea and Orchard, 2013) – can be identified empirically in micro-decisions about teacher actions, but that identification is very difficult. The sources and types of knowledge are braided together. Sources are mediated, translated and transformed, making it hard to identify the origins. Sources are used to 'make sense' and 'shape experience' simultaneously and intentionally for future action. These processes can be dynamic and therefore tacit, or require more structured explicit theorising, often over time across conversation and beyond the data collected in this study, such as in beginning teachers' written assignments or other reflective writing such as journals.

The mentor plays an important role in mediating the sources of knowledge, and scaffolding the sense-making and planning of action. We have seen that this can be achieved in different ways: bringing themselves in as a resource, or withdrawing their experience and practice to support greater self-regulation.

If the use of sources varies according to the particular conversation and seems to be related to mentoring interactions, affective state, and levels of Intentionality, we might question how helpful it is to present teachers 'clustered' into groups based on self-reported behaviour (Oosterheert and Vermunt, 2003), when the findings of this study suggest that Intentionality is far more contextually and temporally contingent.

A final question concerns the way a narrow FoR has been conceived as a teacher learning problem, when it might in fact be a research problem. Are beginning teachers really only concerned with their own experience? Or have our research methods so far not been sufficiently well focused to enable us to identify, access and explicate the more complex processes of learning to teach, attending to the ways in which individuals negotiate their learning in relation to others and the specific socio-cultural context? Self-reporting methods risk generalising and labelling beginning teachers, whilst we know that learning patterns are more idiosyncratic and include within-teacher (intrapsycholgical) variance. Chapters 4 and 5 have furthermore outlined the difficulties in using conversational data. Double stimulation with OLEF goes some way to

supporting the explication and analysis of the FoR. The next chapter concerns the claims of participants about using OLEF to support their learning.

Chapter 8 Findings 4 - The use of OLEF to support a critical examination of learning teaching from experience

This chapter addresses RQs 3 and 4, which consider the use of the Orientations to Learning from Experience Framework (OLEF) as a tool to support the critical examination of learning teaching. The first section reviews the ways OLEF was used as a second stimulus in the research design, including revisiting the Vygotskian concepts of *conflict of motives, consciousness, internalisation* and the more recent analytical concept of *transformative agency* (Haapasaari, Engeström and Kerosuo, 2016). In section 8.2 I draw attention to the ways that transformative agency aligns with the quality criteria for the research outlined in Chapter 4 (4.1.1). In effect, the first two sections set the ground for an analysis of the research in achieving its goals, drawing on both the claims made by the participants and the changes observed (8.3). The chapter closes with an evaluation of the extent to which the research achieved these quality goals.

8.1 The role of OLEF as a second stimulus

The double stimulation method is not only concerned with the outcome or product of the research but is primarily concerned with the process. In the words of Ellis:

> *The researcher's interest is in how they [the participants] use the donated tools, the sense they make of them, the ways in which their activity is shaped by the tool-use and, potentially, the ways in which subjects reshape the meanings of the tools - all of which is studied in relation to how the subjects perceive and are motivated by the object* (Ellis, 2010b, p. 96).

In this study the donated tool is OLEF which acts as a second stimulus. OLEF was offered as a means to explicate or, in Vygotsky's words 'objectivize' (1999), the problem of learning to teach through experience. I hoped this would support the envisioning of actions to enhance learning, and thereby act to resolve the problem of learning teaching from experience. Fundamentally, the process of double stimulation should support action and can therefore be seen to increase agency.

Vygotsky was concerned with studying things in the 'living process' of change (Vygotsky, 1978b, p. 69), but rejected understanding people's responses as involuntary reactions. Instead Vygotsky was interested in volition, which contemporary researchers often relate to the concept of agency (Engeström, Sannino and Virkkunen, 2014b). According to Vygotsky, volition arises when participants struggle to resolve a 'conflict

of motives' (Vygotsky, 1999; Sannino and Laitinen, 2015). In learning teaching, the requirement to teach often leads to a prioritising and overemphasis on learning through practical experience, rather than adopting a more helpful orientation to learning which also draws on other sources within and beyond the context. It can be tempting for beginning teachers to adopt a reactive approach, hoping that more experience in the classroom will lead to improvements, rather than planning and taking deliberate, intentional actions followed by careful evaluation. In other words, beginning teachers experience the tensions depicted in the opposable orientations of OLEF: between adopting a conception of oneself as a learner, and focussing primarily on getting the job done as a teacher.

Consciousness of this conflict of motives is seen by Engeström and colleagues (2014b) to be the first of three transitions which take place in double stimulation. The first transition is from a systematic contradiction to a personally experienced conflict of motives. In the case of the beginning teachers and their mentors, this would be an expression of the tensions between learning through experience alone, and other aspects of OLEF. In doing this, participants personally identify the problem of learning through experience (1st stimulus). This represents the start of a transformation from external to internal, leading to increased consciousness as participants are able to describe their learning and actions using the language of OLEF. Consciousness was seen by Vygotsky as a description of the 'higher mental functions' including subjective, affective and cognitive processes (Vygotsky, 1978a).

The second transition is a movement from experiencing the problem to identifying a second stimulus to help resolve it. In this research, as in Vygotsky's 'experimental-developmental' methods (Vygotsky, 1978b, p. 61) and Engeström's 'Change Laboratories' (Engeström, 2007), the second stimulus was given to the participants, rather than being created or identified by participants. OLEF was offered as a tool which could be used to solve a problem and identify potential goals and actions.

The third transition occurs when the second stimulus progresses from being an internal 'sign' to being implemented and used as a tool in external actions. As the tool is used to make sense and shape action, it is internalised and can be described as 'ingrowing' *(vrashchivanie)* through 'internalization' (Van der Veer and Valsiner, 1991) This might involve adapting or reshaping the tool. Vygotsky suggested that this stage might take a long time, or that some external signs are not internalised (1978: 57-58).

Wertsch has described the process of development following double stimulation in terms of two transformations: the ascendance from abstract concepts to concrete, systematic ones and the internalisation or 'ingrowing' of the tool. According to Wertsch's interpretation of Vygotsky, these processes support the development of consciousness and agency (Wertsch, 1985). The actions provoked by the research are the most obvious way that agency can be identified. However, Engeström and colleagues have identified six expressions of 'transformative agency' in the 'Change Laboratory' which include, but also go beyond taking action.

Following Virkunnen (2006), transformative agency has been defined as 'breaking away from the given frame of action and taking the initiative to transform it.' (cited in Haapasaari, Engeström and Kerosuo, 2016, p. 232). Transformative agency goes beyond individual agency towards a more collective form of agency which has been aligned with the concept of 'relational agency' (Engeström, Sannino and Virkkunen, 2014b). Definitions of 'transformative' and 'relational' agency emphasise the ways that individuals work with others to solve problems (ibid.). Such an emphasis seems appropriate in a study of beginning teachers working with their mentors and focussed primarily on the ways the conversations between them support learning.

The focus on transformative agency as a conceptual tool can be seen as part of the second phase of analyses of double stimulation as provoked by a 'Change Laboratory' design (Haapasaari, Engeström and Kerosuo, 2016). According to these authors, the first phase in the early 2000s focussed on broad categorisation of the main stages of the double stimulation process. The second phase has drawn on more detailed qualitative analysis of transcripts to describe detailed dynamics, including identifying expressions of transformative agency. This has included coding all the expressions of transformative agency and presenting them quantitatively in frequencies or longitudinally over the course of the Change Laboratory settings (Haapasaari and Kerosuo, 2015; Haapasaari, Engeström and Kerosuo, 2016; Englund and Price, 2018).

Six expressions of transformative agency have been identified: 1) explicating; 2) envisaging; 3) committing to action; 4) taking action; 5) criticism; 6) resistance (Haapasaari, Engeström and Kerosuo, 2016). In my analysis, I have collapsed these six forms of transformative agency into three pairs to create three thematic processes: resisting and criticising; explicating and envisioning; committing to and taking action. These themes are explained in further detail in the respective sections below. The

analysis does not take a quantitative approach, for example counting the expressions, but instead focuses on using them as qualitative concepts.

Explicating and envisioning is perhaps the most powerful aspect of the double stimulation method. OLEF has great potential as a tool to explicate and make concrete the complexities and tacit, abstract nature of learning to teach from experience. This ascendance from abstract to concrete is a core focus of Vygotskian methodology. OLEF can provide a language to support participants to identify and take action which they can talk about explicitly. This form of agency might occur at the first and second transition as participants start to personally identify with the conflict of motives and identify OLEF as a potential tool to support them to resolve this.

Committing to and taking action. Agentic action to solve the problem under study is, of course, the main goal of any interventionist design. According to Vygotskian methodology, the tool should be internalised, become 'ingrowing' as it is adapted and reshaped by participants and put to use.

Resistance and criticism could be a visible form of agency at all stages of the process. Criticism usually focuses on negative comments made about the activity under study. Resistance concerns the ways in which OLEF was challenged as a tool to support participants or the ways in which the processes were negotiated by the participants that had not been planned by the researcher. In my analysis it also concerns identifying aspects that constrained participant action. Deciding not to act, or being unable to, despite intentions to do so, reveals important information about the conditions and activity under study.

8.2 The alignment between transformative agency and the quality criteria

Chapter 4 introduced five quality criteria drawing on Anderson and Herr's work (2012a). This section recaps the five quality criteria in turn, demonstrating the ways they align with the concept of transformative agency. Dialogic validity, Democratic validity and Process validity have been drawn together as they focus on the methods and the role of participants and the relationships between them.

8.2.1 Democratic, Dialogic, and Process validity: research which develops new knowledge with participants and supports ongoing learning

Democratic validity concerns the extent to which all those involved in the problem are able to be involved in the research. This includes considering who was involved; the way they were involved, particularly attending to power dynamics, and levels of democratic and dialogic participation. Chapter 4.2.4 considered these issues in relation to participation and my role as researcher, including reflexivity and ethics. In terms of transformative agency, the extent of agency – as revealed through explicating, envisaging, committing to and taking action, and in particular criticism and resistance – offers pertinent ways to explore the extent to which the research was democratic and dialogic.

A final strand of process validity considers how far the process supported ongoing learning and can be seen to be iterative, transparent and reflexive in its methods. In Chapter 4 I argued that the research achieved the transparent iterative and systematically reflexive process demanded of the highest quality of applied and Close to Practice research (Oancea and Furlong, 2007; Wyse *et al*., 2018).

8.2.2 Catalytic validity: research that reorients, focuses, energises and transforms

An important aspect of both catalytic validity, as well as the forms of validity discussed above, are the opportunities for ongoing, sustained and transformative learning for all those involved. Anderson and Herr assert that

> *All involved in the research should deepen their understanding of the social reality under study and should be moved to some action to change it (or to reaffirm their support of it)* (Herr and Anderson, 2012b, p. 9).

This clearly links to the expressions of transformative agency in committing to and taking action. Furthermore, a consideration of catalytic validity relates to Sannino and colleagues' consideration of the sustainability of transformative agency which is discussed below in 8.3.2.

The attention to a process which 'reorients, focuses, and energizes' (Lather 1986 cited in Herr and Anderson, 2012b, p. 9), attends well to the 'explicating and envisaging' potential of double stimulation in the way that it reveals new insights and increases consciousness.

8.2.3 Outcome Validity: research which achieves the resolution of the problem which led to the study

Ultimately all action research seeks to solve the problem under study. Like double stimulation the process starts with something unresolved – specifically a conflict of motives. In judging the extent to which the process has achieved its goals, both action research and double stimulation consider how far the problem has been resolved. Engeström's model of the expansive learning cycle undertaken in double stimulation conceives of it culminating in 'consolidating the outcomes into a new stable form of practice' (1987 cited in Engeström, Sannino and Virkkunen, 2014a, p. 123). Sannino and colleagues' discussions about the sustainability of transformative agency, with a focus on the 'tangible developments' which it leads to, are relevant here (Sannino, Engeström and Lemos, 2016, p. 629).

In contrast to the ideal of completeness, closure and stability, Anderson and Herr also suggest that:

> *outcome validity also acknowledges the fact that rigorous action research, rather than simply solving a problem, forces the researcher to reframe the problem in a more complex way, often leading to a new set of questions or problems* (Herr and Anderson, 2012a, p. 8).

The focus on 'reframing' echoes the potential of double stimulation as a means of 'explicating and envisaging' the activity under study. Anderson and Herr here suggest that the process of 'reframing' might affect the researcher, but in double stimulation the process reorients all the participants enabling new insights and increased consciousness.

In summary, there is much overlap between the validity quality criteria and expressions of transformative agency. The main difference seems to be the that whilst transformative agency includes resistance (to action), action research does not have this explicit focus, perhaps taking for granted the agency of the participants involved.

8.3 Changes observed (and claims about them).

This section concerns the changes observed and how they are related to OLEF. The analysis is structured around the three thematic expressions of transformative agency, identified by Engeström and colleagues (Engeström, Sannino and Virkkunen, 2014b). The validity quality criteria are integrated into the analysis where they are judged to be helpful.

8.3.1 Explicating and Envisaging

Three aspects of the research design supported the participants to explicate their actions and envisage new ones. Firstly, the research process posited a question not considered by some participants previously: how do beginning teachers learn to teach through experience? The very focus of the research itself – on beginning teachers' learning – prompted some participants to consider the goals or object of their activity and consider the object in new ways as Chapter 7 described.

Furthermore, the participatory nature of the research enhanced the process, providing collaborative opportunities and the time and space to make sense. For Catherine in particular, as a beginning teacher whose wellbeing was challenged by the intense programme of ITE, the opportunity to talk with other beginning teachers, and to consider previous research supported her to put her own experience into a broader perspective – over time and in relation to other participants.

> *And it's quite difficult when it feels like you are relentlessly, you feel like you are relentlessly underperforming, and then you come to this and you think about it and you discuss it and you look back to where you were when you recorded the conversation, you realise you have already improved. It kind of allows you to see that it is a process and it's not like never ending drudgery. It's nice to have that perspective. Other people have done this. It's a thing that happens*. (Catherine, MM5)

Secondly, the mirror data (acting as first stimulus) offered new insights into participant action. Like other promoted forms of collaborative, enquiry-based professional learning (CUREE, 2012; BERA-RSA, 2014), the mirror data provided artefacts of practice and therefore an evidence base upon which to explore their actions. The research process created a space for the mentor and the beginning teacher to consider the ways they organised their conversations and, as discussed in Chapter 7, the role of the mentor. Catherine, for example noted:

> *It's also helped to think about who is talking, and who is leading, has helped develop my relationship with Alice a lot, in that she, after the first meeting, was like "I was talking too much" and the next time we deliberately made it so that I was leading, and that helped me to think about myself more and be more independent. And we've ended up with more of an equilibrium in our discussions. I'm not sure that would have happened in our discussions anyway*. (Catherine, MM5 talking to Dave).

This quotation reveals some of the challenges in being able to attribute the process to the changes observed. Catherine's use of 'we've ended up' suggests a passivity,

inevitability, countered by her description of 'deliberately made it so'. The final line provides a reasonable assessment that whilst we cannot be sure that the research process alone can explain this change, it probably supported it.

Other participants certainly provide supporting evidence that the process helped them to think explicitly about their actions. Alice, in her work with Will in Phase 1 explained

> *It made me think about my mentoring role, just looking at the conversation. I mean you know through training how that's supposed to go, in theory. I think especially because I think we got on so well, it didn't always feel professional! I don't know, sometimes it's like we're sitting having a chat and sometimes you really do just want to do that moaning and talking. And looking at the conversations we were having did make me try and think that you're supposed to be in there with a certain hat on and are you always guiding that conversation back to where it's supposed to be? And I think the answer was not all the time, but I hope that after the first time we did it, it did make me think about that and so obviously that is massively useful.*

Beginning teachers, like Sabina, also valued the opportunity to explore and 'unravel' practice:

> *I wish we could do this after every observation. [Tessa: Why?] Because we have reflected on a lesson, we've reflected on our reflections, we've gone round in a cycle to the point where we have completely unravelled the conversation and that depth of reflection is something we don't have the time to do normally (Sabina Phase 1).*

Here Sabina describes how the layers of activity – from teaching a lesson and its subsequent post-lesson 'reflective' conversation to the mirror meeting in which they discussed the post-lesson conversation – provided an iterative opportunity, bringing 'depth' to their discussions.

Sabina did not, in the quotation above, mention the contribution that OLEF brought to the process. However, OLEF itself acting as the second stimulus, provided an overarching theoretical framework, particularly a model and language through which participants could examine their actions, but also envisage new ones. The role of OLEF is the third aspect of the research process which supported explication and envisaging. Importantly, OLEF focuses on the beginning teacher as a learner, offering a 'structure' for their practice as learning teachers. Whilst ITE programmes use performance rubrics and progression models, they tend to focus on the behavioural practices of teachers. Eric felt that these other frameworks:

> *don't quite get to the nub of the decision making or the thought processes of beginning teachers and what they are. Why they think in certain ways, why they don't think in certain ways and what they need to. So it's like I sort of bring it*

back to what I talked about at the beginning. Sort of seeing them as learners rather than as not-quite-there teachers (Interview, Cycle 6).

In Phase 1 Nana similarly felt the framework was more helpful than others

because it's more representative of everyday practice, if you are really reflecting on each different aspect you can really tailor your practice at the most microscopic level. (Nana Phase 1, Cycle 2)

Here Nana identifies not only that it is 'representative' of practice, in its descriptive and explanatory nature, but also supports him to act: to 'tailor your practice.'

Other beginning teachers and their mentors similarly identified the value of OLEF in the opportunities it created to diagnose the challenges faced by beginning teachers, and to support them in identifying possible next steps in their actions. Eric, for example, identified the value of the FoR dimension in broadening both his own, and Dave's views of what might support Dave's learning. He described it as a helpful way to 'diagnose. For me to understand why someone's finding it hard to improve' (Eric, MM5 talking to Alice). In a later meeting he described the value in:

having the tools you need to deconstruct that [problem the beginning teacher is facing] and then what you need to do to move forward. And it's often not the case that the mentor knows the answers, and you are the person that are going to be coming up with the answers for you. There is not one answer. So actually having continuums is a very useful stimulus or tool in order to help that person find solutions for themselves. And then if they can make progress on that within these sort of parameters. I think that is a useful medium, you refer to them as a stimulus Tessa, as a way to start a conversation, and a way to guide it. And then actually there can be progress on that stimulus, that you can evaluate in the future. I know it's not super scientific, but if its enabling you to improve your practice, that's really valuable for me (Eric, Interview, cycle 6).

In this final interview, Eric identified the potential of the process for explicating, or 'deconstruct[ing]' and envisaging 'what you need to move forward…to find solutions'.

The research process can therefore be seen to have demonstrated its catalytic validity in focusing, re-orientating and energising participants. This occurred in three ways: through the posing a question which put the learning of beginning teachers at its centre; through opportunities for collaborative sense-making; and by using OLEF as a second stimulus.

8.3.2 Committing to and taking action

The framing of the research as 'action research' alongside the highly intentional levels of activity (as described in Chapter 6) may underpin the action orientation that participants took in the study. Even within the early meetings of Phase 1 and 2,

participants were prompted to consider actions they might take, and they identified them readily. Indeed, in Cycle 1 I noted in a personal memo a worry about the extent to which the participants wanted to take action, without first exploring the situation. The actions taken, however, were oriented in various different directions – towards different goals, including the learning of the students, the learning of the teacher and the learning of the mentor. The multiple goals being pursued by beginning teachers, in addition to my own research goals, meant that at times the actions seem decoupled from their goals or unhelpful. At other times actions were identified but remained as aspirations rather than being enacted.

Following an activity theory perspective informed by Leont'ev, Wertsch suggests that a focus on tool-mediated actions provides a '"manageable microcosm" within which consciousness [as a higher mental order] may be studied' (Wertsch, 1985, p. 207). Leont'ev's logic proposed that if actions and operations (more routine actions) are determined by the goals and conditions, then by revealing goals and actions we can understand the nature of the activity and consider the conditions (Leont'ev 1981 pp. 62-3 cited in Wertsch, 1985, p. 204).

Four broad goals can be identified: improving beginning teacher learning by moving along the OLEF continuums; developing mentor practice; improving student learning; and completing the research process. The goals are related to each other, but different participants prioritised different goals. Eric and Catherine focussed on their mentoring practice, linking this to improved beginning teacher learning and student learning. My own goals were to complete the research process through the development of (mentor and beginning) teacher learning. The beginning teachers, whilst at times acknowledging the relationship between their own learning and their students' learning, often took the more direct 'short-cut' approach to work on their students' learning, as discussed in Chapter 7.

In mentor and beginning teacher actions, OLEF was used not only (in Engeström's 1999 terms) as a "what" and "how" artefact, that is by describing positively-orientated beginning teacher learning, but also supported "why" and "where to" processes, as it was used to explain and diagnose challenges for beginning teachers and support them to identify future actions. OLEF was accepted by participants as offering a helpful model of the activity of beginning teacher learning and participants were motivated to support beginning teacher progression along the continuums of each dimension. Alice described

'not using it to analyse the conversations but to really like change and manipulate your conversations' (MM2). She went on to propose:

> *In your meetings you can actively focus on one of these so you can make that the focus and if it's the focus of the meeting, it is actually changing the meeting, does that really change the meeting?... so we are actively focussed on this, so that would be higher, and then it would generally change this over time. And definitely the same with Intentionality, like I said, I didn't know I was driving the actions forward so much. So I want to focus on actually focussing on encouraging Catherine to be more intentional, rather than just directing her to particular things. (Alice, MM2)*

Alice clearly makes the link between her mentoring actions and the effect they would have on Catherine's orientations.

Eric, as described in Chapter 7, also focussed on his own mentoring, withdrawing the sharing of his experience and practice from Dave, in order to prompt him to draw on a broader range of sources and to be more intentional. Similarly, in Chapter 5 I discussed the way that Jannath developed her approach to mentoring, moving like Eric in the direction of opening up the space for her mentee to identify his own solutions and reducing her levels of direction.

These goal-directed actions are clearly related to the research process and particularly OLEF, suggesting that OLEF is being used as a tool, supporting increased consciousness and self-mastery. The concepts of OLEF, such as Intentionality and FoR were used by participants, beyond the mirror meetings themselves in their mentoring conversations showing 'decontextualisation' (Wertsch, 1985) and therefore internalisation.

Within the wider research community, attention is starting to be paid to the durability or sustainability of the changes identified in formative interventions (Haapasaari and Kerosuo, 2015; Sannino, Engeström and Lemos, 2016; Englund and Price, 2018). Sannino and colleagues suggest there are two ways to assess this. The first is the character of the agency generated and the extent to which it is 'authored and owned' by participants. The second is the 'materiality', that is to say 'tangible developments' in action or methods of analysis (2016, p. 629). This focus on sustainability relates to an evaluation of the catalytic and outcome validity of the research. It is worth noting that empirical investigation has demonstrated that the development of transformative agency in formative interventions tends to be 'gradual' (Paris and Lung, 2008, p. 201) or 'evolving', resulting in 'stepwise practical improvements' rather than a 'radical

overall change of the object and model of the activity' (Haapasaari and Kerosuo, 2015, p. 258).

In relation to the epistemic actions of the expansive learning cycle, the research in this thesis might be seen as not having reached the seventh action of 'consolidating the outcomes into a new stable form of practice' (Engeström, Sannino and Virkkunen, 2014b). Whilst the participants identified ways they would continue their actions beyond the research period, including working with other beginning teachers and mentors to share OLEF and their activities so far, I have no evidence that this happened. During the process, even with the best will, participants tended to prioritise their teaching commitments and actions associated with these, rather than the learning-focussed actions of the research process. This suggests that, like participants in the studies cited above, the overall focus, or object, of the activity system on student learning and progress through teaching, had not radically shifted for the beginning teacher participants (Paris and Lung, 2008; Haapasaari and Kerosuo, 2015).

8.3.3 Criticism and resistance

Whilst criticism and resistance can be conceived as 'negative' forces, both are seen as forms of transformative agency. In the analyses of previous studies focussed on formative interventions, criticism is the most prevalent expression of transformative agency, comprising criticising of the current activity and identifying a reason for change (Haapasaari and Kerosuo, 2015; Haapasaari, Engeström and Kerosuo, 2016; Englund and Price, 2018). Criticism was identified by Haapasaari and colleagues as an additional form of transformative agency, building on the five forms previously identified by Engeström (Haapasaari, Engeström and Kerosuo, 2016). In a longitudinal analysis, the authors found that high levels of criticism related to a 'turning point' in the levels of transformative agency where the participants 'took the reins' (ibid. p. 257).

In contrast, expressions of resistance – that is resisting the change, suggestion or intervention – have varied across studies. Englund and Price reported 'relatively high frequency of resistance', comprising 13% of the total expressions of transformative agency (23 expressions) (2018, p. 197), whereas Haapasaari and colleagues (2016) identified only 2% of the expressions to be resisting.

In this study the main source of criticism of the activity related to the time available for thinking and learning. This was acknowledged as a constraint by all participants and reveals something of the conditions in which the activity is undertaken. It reveals

something too of the object of the activity, as the dominant focus was on teaching and student performance (rather than the learning of the teacher). Getting things done, 'being a teacher' tended to involve the shorter-term goals of planning lessons, teaching and marking. This focus reminds us that in work-place learning, little distinction is made between securing student learning goals and the teacher's learning goals (Endedjik *et al*., 2012; Bronkhorst, 2013).

There was very little other criticism, which might be because the main people involved in the activity – the mentors and senior leaders – were involved in the discussions. The asymmetric power relations may have resulted in beginning teachers not feeling they could raise concerns about the ways school policies or culture affected their learning. Similarly, the mentors and senior leaders may have felt defensive, or that professionalism required them to limit their criticism. If this were the case, it raises questions about the levels of democratic participation and the extent to which participants were able to contribute fully. This might equally explain why there was little resistance to the intervention. Beginning teacher participants on the whole seemed to be keen to engage in the planned activities, but did not really 'take the reins' in driving future actions.

Eric's involvement reveals an interesting paradox. Eric, more than any other participant committed himself to the research, consistently stepping in to support the research when other mentors (such as Dave's Subject Mentor) withdrew and when the research period needed to be extended. However, some of his actions can also be seen in terms of resistance to the process. Eric's decision to change his mentoring was in response to consideration of how to develop the FoR and for some of the period of data collection, I couldn't understand the link he had made between his own mentoring goals – to be more like a coach – and FoR. It felt like he was resisting and using the process for his own purposes, which is of course what he was doing. In the final interview Eric responded to my thanks for his involvement by admitting:

> *I did see it very much from a selfish point of view, my own professional development, and I hope I haven't screwed up any of your research!*

To which I replied:

> *[Laughs] I think that's one of the things, isn't it, you can't screw it up, because it's exploratory and it's all around what does happen when you introduce OLEF into schools, and attempt to work with mentors and beginning teachers with it (Final Interview).*

Eric's decision to use the process to pursue his own goals, should not be seen as an aberration from the process, but rather an active part of the study, demonstrating a form of transformative agency and revealing how he used and reshaped the tool. It reveals his understanding of the powerful interplay between mentor actions and teachers' learning, showing he is alert to the extent to which the mentor's decisions or 'talk acts' in the conversations mediate beginning teachers' opportunities for learning. He rejected OLEF's primary focus on the orientations of the beginning teachers, and instead recognised the relational interplay which is particularly apparent in a study which uses mentoring conversations as the main data.

The paradox may be unravelled by considering that Eric's resistance, as a form of transformative agency, was supported by the level of investment he had in the process. He was committed to making it work, not only in terms of my research goals, but for himself, and the teachers he supported. Eric's participation and the extent of his agency is related to the ways he links action and meaning (Bloomer and Hodkinson, 2000). In terms of durability as revealed by the extent of Transformative Agency and materiality, Eric 'took the reins' and both his and Alice's conversations changed during the research process, suggesting tangible outcomes.

The beginning teachers and their mentors similarly claimed that their orientations had shifted over the research period, developing into a more helpful approach to learning through experience, although my close analysis of Intentionality and FoR suggested that this was far from a straightforward linear process (Chapter 7). It was clear that the beginning teachers had gained an increased awareness of their approach to learning and were recognised what might support further learning, but enactment is harder to demonstrate. In MM6 I shared a summary of some of the learning participants had identified in previous mirror meetings (Figure 42).

Figure 42: Shared in Cycle 6 mirror meeting

What have we learnt?

- How beginning teachers (BTs) approach learning from experience (using OLEF framework)
  - they vary in terms of their response to feedback, intentionality, aspiration, the frame of reference they draw on
- A model of BT progression – the continuums, which can be used for evaluation and target setting
- That BTs are learners (as well as teachers), and there are some patterns in terms of BT progression and experiences. BTs and mentors need to recognise that they are not 'the finished article' and learning is on-going and continuous
- That learning as a BT can be emotional (with sometimes strong sense of failure) and these affective elements impact on the learning
- That mentors and BTs can shape the conversation they have actively – deciding on the balance of talk and responsibility
- That BTs value really specific, concrete next steps from each learning episode
- That BTs (as novices) observe in different ways and notice different things to more experienced teachers. Their mentors can scaffold and support this "noticing" (through, for example, joint observation) and help them use the observation to support them to make sense of their experience.
- To explore our thinking and practice using a transcript as evidence
- That BTs can draw on a range of sources to support them to make sense of their experience, and they can "draw on" and "make sense" of this in different ways and to different degrees.
- That there are a wide range of sources that BTs can draw on, within their departments, the school and beyond, to help them make sense of their experience.
- …

The mentors acknowledged these learning points as ideals or beliefs but were also aware of the challenge of acting on them.

Eric: *We've done a great job - look at all these learning points! We've done a great job.*

Tessa: *Is that a tone of sarcasm Eric?!*

Eric: *I'm not, it's just if I lived and breathed all of these things, I'd be a much better teacher*

Alice: *We obviously all believe these things. But it's that thing – how do we actually act on them and make it happen?... maybe we are conscious of them, but we are not acting on them. I'm not acting on what I think in practice. Like this one, "Mentors and BTs can shape the*

> *conversation" as a mentor I found that continuum really useful it helped me think about my role as a mentor. Could we give it to mentors, before they begin mentoring?*

The contrast between being 'conscious' and 'acting on what I think', reveals that Eric and Alice are not only experiencing a conflict of motives, but even once committed find it hard to act. Their actions are constrained not only by their beliefs, but other aspects of the activity. Whilst one of the greatest strengths of OLEF is the focus on an individual teacher's agency to orientate themselves, thereby increasing their consciousness and self-regulation, there is the risk that the relational, reciprocal structural role of the context, and in particular the mentor, and the ways they act to 'constrain' learning are not fully accounted for.

8.4 Closing ideas

OLEF acted as a 'what,' 'how, 'why,' and 'where to' artefact (Engeström 1999), supporting several forms of transformative agency. The strongest expression was explication and envisaging, which demonstrates the value of OLEF acting as a second stimulus in providing a theoretical framework to give structure and language to the complex processes under investigation. Participants considered their roles and practice in new ways and OLEF supported them to identify goals and take some actions.

Unlike other frameworks used in ITE, OLEF focusses on teacher approaches, orientations and beliefs: recognising the role of the individual acting in and, on their context, negotiating their practice. The use of OLEF as a double stimulus supports agency and consciousness by encouraging an awareness of the cognitive, self-regulatory and affective aspects of learning (not just the performance aspects).

However, the study has also revealed the limitations of using a framework which focuses so centrally on beginning teachers' own self-regulation. Despite being strongly grounded in socio-cultural understandings of learning, the framework itself prioritises the beginning teacher's agency, rather than recognising the extent to which such agency is relational and interdependent on the contexts and particularly the way the mentor conceives of her role. By studying the ways participants pursued OLEF-mediated and (intentional) goal-directed actions, the development of teachers' learning was revealed to all the participants, including the researcher.

Chapter 9 Conclusions and implications

This chapter begins by summarising the findings in relation to each of the Research Questions and highlighting the study's contribution to knowledge (9.1). Next, the practical implications are drawn out for beginning teachers and those who support them (9.2). The implications for researchers are offered in the next section (9.3). In thinking about the implications, I have considered the educational landscape at the time of writing, rather than the time of data collection which began several years ago. In particular, I have considered the findings in light of the considerable redesign of the Teach First ITE programme since 2017. Information about this has been gleaned through published blogs, articles and personal correspondence. The discussion is also framed by the launch of the English government's Early Career Framework (Department for Education, 2019a), which includes an entitlement for newly qualified teachers (NQT) to two years of statutory induction with a programme of development, including mentoring. The framework is set to be launched in an early 'roll-out' to schools in particular areas of the North East, North West and Yorkshire in September 2020, before involving all NQTs from September 2021.

Overall, I claim that the study offers both methodological and substantive contributions to knowledge. In terms of its methodological offer, this study shows that the Orientations to Learning from Experience Framework (OLEF) can be used not only as a 'what' artefact – as a descriptive analytical framework – but also as a 'how', 'why', and 'where to' artefact to support the actions and learning of beginning teachers and their mentors. I have demonstrated how OLEF can be used as an effective double stimulus in formative interventions. Furthermore, the study provides a model for mentor and beginning-teacher learning as a form of practice-developing research.

The OLEF framework has not only been used in new ways, but it has been bolstered and elaborated by drawing in new concepts through the literature review and empirical analysis. I have aligned the dimensions in the OLEF framework with other fertile concepts such as self-regulation, deliberate practice, practical theorising and self-efficacy and drawn on larger-scale quantitative Learning Patterns research. This conceptual development offers researchers and practitioners the opportunity to explore the OLEF dimensions in new ways. The study supports calls for a continued focus on the idiosyncratic and individual learning patterns of beginning teachers and especially intrapersonal variation.

The research process has revealed the potential of using OLEF to support teachers' self-regulation. However, it has also drawn attention to the risk of using OLEF within a narrow definition of self-regulation which does not acknowledge the complex interplay between a person and their social situation, and between deliberate and unplanned learning. The use of OLEF at once offered an attractive opportunity for beginning teachers to take increasing responsibility and professional agency for their learning in conceiving how they could orientate themselves positively, but this process has also drawn attention to the relational nature of beginning teacher learning and particularly the role of the mentor, and wider community. I have suggested that the focus on planned deliberate practice, risks overlooking the importance of a *deliberative,* but unplanned, approach to learning which recognises the value of learning through work-place practice and the focus on the outcomes for their students.

The findings may be starting points for further investigation by practitioners. Furthermore, factors which supported increased Intentionality and a broader Frame of Reference within this study are identified, which could inform programme design for the learning of beginning teachers and their mentors.

9.1 Findings in relation to each of the Research Questions

9.1.1 RQ1: Can the 'Orientations to Learning from Experience Framework' (OLEF) be applied beyond the scope of the original research context?

Phase 1 of the research demonstrated that OLEF was relevant to a new context, using new methods, over a decade after its creation. This is the only study that I am aware of that has used OLEF in empirical research, since it was developed by the DEBT project. The findings show that orientations to learning from experience can be revealed by routine conversations between beginning teachers and their mentors in employment-based routes of Initial Teacher Education (ITE). OLEF provided a helpful tool, as both an analytical framework and a secondary stimulus, in discussions between teachers about learning teaching, including the ways in which mentors can support such learning.

Effective, educative mentoring conversations, which focussed on the beginning teacher's learning provided rich data around the OLEF dimensions. Within Phase 2 of the study participants actively used the concepts and ideas of OLEF to shape their practice. Even when conversations were short or did not provide extensive data, they

still provided effective *mirror data*, stimulating participants in the mirror meeting which followed to reveal their thinking and actions in relation to the OLEF dimensions. Phase 1 therefore demonstrated the importance of the double stimulation design.

Furthermore, participants in Phase 1 largely agreed with the descriptions of their approaches to learning constructed using the conversational data (D), suggesting a high degree of validity. Where participants' own conceptions of the beginning teachers' learning differed from the data presentations, the mirror meeting offered the participants opportunities to address any areas they felt were not fairly represented and to provide further information, if needed. Through double stimulation participants had the opportunity to explicate their broader knowledge of teacher learning. Furthermore, as a researcher I had the opportunity to probe thinking and seek clarification about any areas of ambiguity in order to deepen my interpretations.

The opportunity to engage over time in multiple cycles of data capture and review supported participants to study learning as it occurred and as such, was more holistic than a one-off data collection exercise. Although generally in Phase 1 there was less data available to explore the Frame of Reference (FoR) and Attitude to Context (AtC) dimensions, in Phase 2 participants were interested to explore and develop their FoR further, leading to deeper opportunities to make sense of this dimension. Furthermore, all participants took active steps to change their practice in order to learn, embracing the catalytic potential of the process and enabling research into the process of change.

Chapter 4 outlined the limitations of the research design in terms of providing data relevant to OLEF. These can be seen both in relation to the RQs and in comparison with the original DEBT design. The use of 'naturally occurring' conversations between mentor and beginning teachers in addition to mirror meetings, rather than a research interview, created and revealed different power dynamics which needed to be acknowledged. My role as someone privileged with 'insider' status and knowledge precluded some aspects of the context being fully articulated by other participants (affecting the extent of data around AtC for example). On the other hand, my professional role provided contextualised understanding and established trusting relationships, particularly with the mentors. The balance between contextualised understanding or 'being a native' and critical distance increased as the research developed, not only on account of less time spent in school, but also as my understanding was informed by secondary reading and careful primary analysis. This

commitment to reflexivity was not always a comfortable process, as Cook reminds us in her description of the 'messy area' in rigorous research (2009, p. 190).

Fewer participants were involved than in the original DEBT research (DEBT n=25) with only four teacher participants taking part in the longer Phase 2 of the study (although 16 were involved overall). The findings are not presented with any claim to generalisability, rather they focus attention on the ways that individuals negotiate the very personal and particular process of learning teaching. OLEF is offered as a way to explore learning teaching with participants, and in this study the mirror data resonated with participants (Tracy, 2010, p. 845). The involvement of the mentors, who have such a central role in beginning teacher learning, in a collaborative research process, strengthened multiple forms of validity (as outlined in Chapter 4 and evaluated in Chapter 8) and enabled the research to illuminate the social processes of learning to teach. In particular, the action orientation of the study and the use of OLEF as a tool for participants supported catalytic validity.

Overall, the research design, which involved iteratively capturing learning in action, along with collaborative sense-making analysis opportunities through double stimulation in the mirror meetings, enabled rich and resonant data analysis of OLEF and promoted ongoing participant learning. The study has demonstrated the potential of OLEF to act as an effective double stimulus, enabling high quality close-to-practice research.

9.1.2 RQ2 What are the orientations to learning from experience of beginning teachers on employment-based routes?

Intentionality

Chapter 5 reported the finding that the beginning teacher participants of the study were highly intentional in their mentoring conversations which tended to focus on planning future improvement. Like other work-place learners (Eraut, 2004; Endedjik *et al*., 2012; Bronkhorst. *et al*., 2013) – including the participants in the DEBT study (Burn *et al*., 2000), and more experienced teachers (Brown and McIntyre, 1993) – the beginning teachers in this study prioritised the learning (or cognitive achievement) of their students, with their own learning considered less directly. Intentionality was found to vary across conversations, with more variance within participants, than across them. This claim supports Vermunt and Donche's call for attention to intrapersonal (or

interpsychological) variance, rather than claiming that learning patterns are more stable (Vermunt and Donche, 2017).

In Chapter 6, I identified five features which supported higher levels of Intentionality across the two-case study participants:

1) Higher levels of intentionality were apparent when Intentional learning was valued and the conversation was seen as an opportunity for planning learning and active retrospection (or 'active retrospective regulation' (Endedjik *et al*., 2012)). This often took place through reviewing and setting targets for development, in relation to a programme assessment framework. This process was supported by the national discourse of accountability or 'ofstedisation' (Roberts, 2019). However, individual participants also needed to link their action to meaning – to perceive a 'relatedness' (Valsiner 1994 cited in Billet, 2008). Without this there were lower levels of Intentionality.

2) Higher Intentionality required the beginning teacher to have an active, agentic role in the conversation. This did not necessarily only occur when the mentor withheld their own practice and experience to enable the beginning teacher to identify their own solutions in a 'coaching' model of mentoring. Higher levels of Intentionality could also be achieved through the beginning teacher being aware of (and where possible, setting) the agenda for the conversation and being given space in the conversation to share their thinking and ideas.

3) Intentionality was higher when the beginning teacher demonstrated high self-efficacy (Bandura, 2001), feeling they could achieve the target and that this would result in an improvement. All four sources of self-efficacy (Pfitzner-Eden, 2016) were found in conversations. Mentors were important in contributing two of these: vicarious experiences and verbal persuasion. Unlike previous research on self-efficacy which suggests that only positive mastery experiences support self-efficacy (Pfitzner-Eden, 2016), there was some evidence that negative experiences or problems of practice could also support its development.

4) Intentionality was increased by conversations which focussed on identifying specific and action-based targets, directly linked to evidence of beginning teachers' current practice and the impacts on the student. This aligns with models of deliberate practice which emphasise 'continuous progressive

refinement', drawing on feedback from students, other colleagues or any other informative source (Bronkhorst *et al*., 2013). 'Anticipatory reflection' – envisaging and planning teaching in relation to an awareness of their own abilities and contexts took place in Intentional conversations (Bronkhorst *et al*., 2011). A focus on specific named students, as advocated by models of clinical practice (Kriewaldt *et al*., 2017) supported Intentionality. However, this study also found evidence of the 'informal' or unplanned nature of some work-place learning (Eraut, 2004), whereby teachers were able to identify learning over a term after an activity which they had, at the time, claimed was not particularly rich in learning. This suggests that beginning teachers may benefit from a broader understanding of learning than that advocated by a deliberate practice model.

5) In conversations with expressions of higher Intentionality, the mentor recognised that judgement is required in teaching (Soslau, 2012, 2015) and encouraged the beginning teacher to have confidence in their developing judgements and take risks in their learning. Soslau argues that this supports future adaptive expertise (ibid.).

Drawing on the literature review (Chapter 2) and the findings, I suggest that Intentionality might be helpfully aligned with Endedjik and colleagues' definition of self-regulation (2010). Intentional learning that is highly deliberative is not just focussed on explicit teacher-learning goals, but also on work-place goals, including prioritising their students' outcomes (Eraut, 2004; Endedijk *et al*., 2012). It can occur in relation to the past (*retrospective regulation)* as well as the present and be future oriented (Endedijk, 2010)). It requires beginning teachers to show personal responsibility and *self-regulation* (Endedijk, 2010), which includes *professional agency* (Soini, Pietarinen and Pyhältö, 2016) to draw on others, and external sources as resources.

Aspiration

The beginning teachers in Phase 2 were positioned by participants as highly Aspirational. This was the strongest dimension across the three participants in 18 data points. I argue that Aspiration – for themselves and their learners – drove Intentionality, making a tentative claim about the direction of relationships between the five dimensions of OLEF (Figure 37, Chapter 6-192). High levels of Aspiration within a

performative and high performing context revealed, and may have contributed to, some anxiety, negativity and feelings of self-doubt. Participants were highly focussed on their 'progress,' and that of their students and this was particularly evident where the mentor also had school leadership responsibilities.

At the beginning of their NQT year, participants reported a greater acceptance of the long-term and continuous nature of teacher learning, rather than frustration at not being where they wanted to be. This development may relate to their longer experience; a renewed confidence following successfully gaining the high stakes QTS award, or indeed increased energy at the start of the academic year. Participants also related this to the research process in supporting them to review their progress over time and in relation to other participants.

Frame of Reference

Despite the challenges in researching the FoR dimension (as reported in Chapters 4 and 5), this study found that FoR might most helpfully be conceived not as one dimension – an enlarging of the FoR which encourages the use of a wider range of reference*s* – but rather as two dimensions. The second dimension intersects with the first (range of sources dimension) to prompt consideration of how the sources are used to 'draw on' and 'shape and make sense' of experience (Figure 34, Chapter 6-172). This dimension supported participants to consider not only what they were using, but how they were using it to shape and make sense of their experience.

In relation to the first dimension, participants' deliberate attempts to increase the FoR led to an initial bulging as a larger number of references were sought, but the range subsequently contracted to prioritise sources which were in close proximity and directly related to problems of practice. Sources close to hand – their students, mentor and departmental teachers were referred to in most conversations. Research-informed literature was only referenced in one or two conversations for each beginning teacher. The mentors felt it was 'unnatural' to refer to it, although they did make steps to do so. I suggested that this reflected the challenges in understanding the mediating process of enactment. Too often, busy teachers look to research for easy answers in a simplistic theory-into-practice model. Furthermore, participants expressed a desire for support from their mentors to engage in practical theorising. Whilst the overall range of sources

used by the two participants was fairly similar, the role of the mentor was very different.

Phase 1 revealed that some mentors had not considered their role in mediating other sources in relation to beginning teacher learning, focussing only on the ways they shared their own experience and practice. In Phase 2 this narrow conception of mentoring was experimented with by Alice and Eric. Whilst Alice continued to share her own experience and practice, she did so critically, emphasising the 'trade-offs' and encouraging experimentation, thereby encouraging Catherine to develop her own judgements. Alice and Catherine also experimented to 'bring a theory in' to use in relation to their planning, teaching and lesson evaluation.

Eric was concerned to limit his own sharing, to become more 'like a coach' and increase Dave's FoR and self-regulation through supporting him to identify his own solutions and sources of support. Both Eric and Alice's approaches, despite being different in the way they conceived of the role of the mentor in mediating sources, supported aspects of clinical and deliberate practice, which I have argued also support Intentionality.

Attitude to Context

In Chapter 4, I identified three challenges to the collection of data around AtC which was the least frequently coded dimension across the study. Following Burn and colleagues (2015), I considered the features of context in terms of school, faculty or department, and students, in addition to the ITE programme itself. I presented evidence about which aspects were seen to 'constrain' and 'afford' learning. The school-level context was rarely discussed, as everyone taking part was embedded in it. At a programme-level, the university involvement was presented as 'separate' and 'divorced,' although on at least one occasion the 'other perspective' was welcomed. Although the nature of the departments in which Catherine and Dave taught was very different, both beginning teachers valued the opportunities to learn within them, drawing heavily on the teachers and shared resources as sources to make sense of their experience. Students were discussed in relation to particular problems of practice, motivating improvement.

Overall, many aspects which I might see as potentially constraining, were not reported as such by participants, perhaps because the conversations were being conducted with their mentors – experienced colleagues, some of whom also had management

responsibilities. In Phase 1 Will spoke openly about his internal 'battle' to present his positive approach, whilst privately blaming the context. Other affordances were also not acknowledged, or only came to light in relation to experience in another school which provided 'fresh eyes,' reminding us of the shared context. Without my perspective as someone who was aware of the broader context, but also acted beyond it with more detachment, there is a risk that the AtC dimension might have been weakly described. At points it was hard to negotiate my interpretive role. I prioritised the beginning teacher and mentor participants' perspective and authority, which at times meant setting aside my own views, despite sometimes feeling that I knew more than what was included in the conversational data.

At the end of the period of data collection, Dave claimed that he felt he had 'moved ahead massively' in relation to AtC as 'I am the one who can change it.' This statement reveals powerfully the potential of OLEF to support a sense of agency and self-regulation. Dave felt he had improved and would continue to do so if he adopted an intentional, proactive stance to his learning, which capitalised on the affordances of the context.

Response to Feedback

Chapter 5 reported the findings related to the Response to Feedback (RtF), based on the 14 (out of 24 recorded) conversations between a beginning teacher and mentor which took place after a lesson observation. Overall, beginning teachers responded very positively, showing humility, a desire to learn, and positive relationships. However, the analysis also revealed how high-stakes, performative and often emotionally involved the observation and feedback process was.

The observation process was seen as being high-stakes, both because it was often associated with the assessment process and also because the beginning teachers valued highly the feedback which followed. The observation was described as a 'trial' by one participant, a term which captures their perception of the extent to which they felt that judgements of their capabilities rested upon it. This was tied up with the sense that beginning teachers had to 'show progress' in each observation, as a result of the prevailing accountability culture.

The data also revealed the extent to which beginning teachers, at times, deliberately considered how they should present themselves to their mentors – withholding anxieties or not acknowledging constraints. This seemed to be tied up with a sense of

professional identity as an employed teacher. Their decisions about what to say and how to respond were shaped by the process and nature of the context, particularly their relationship with the mentor.

A summary in relation to RQ2

Overall the beginning teachers in this study were found to be highly intentional, driven by high aspirations for their students and themselves. Their RtF and AtC were positive and professional, although there was some evidence that this was part of a performative professionalism, based on a sense of what was required by the nature of their employed status. Participants in the main study identified that their FoR could be extended and they sought their mentors support in 'bringing in' and 'breaking down' external sources. Mentors did not consistently see this as part of their role and some expressed doubts about their capacity to do so in terms of their own knowledge and the time available to them. The participants drew heavily on the experience and resources of those around them, tending to prioritise sources in close proximity which addressed immediate problems of practice.

The fact that there was more intrapersonal than interpersonal variance highlights the importance of studying beginning teacher learning longitudinally, in development, rather than through one-off data points.

9.1.3 RQ3: How do mentors and teachers use OLEF as a reflective tool to support the critical examination of, and reflection on the processes of learning to teach?

RA4: What are the effects, if any, of beginning teachers and mentors exploring (their orientations to) learning by using OLEF?

This study has shown how OLEF can act as a powerful tool to support beginning teachers and their mentors to make sense of, and develop, their learning. As a double stimulus, OLEF acted as a 'what', 'why', 'how' and 'where to' artefact (Engeström, 1999), enabling participants not only to explicate the complex processes of learning, but also to envisage, commit to and take action to improve their learning.

What and why?

In terms of the three expressive forms of transformative agency (Haapasaari, Engeström and Kerosuo, 2016), the role of OLEF in explicating and envisaging teacher learning was very apparent. Expressions of explication and envisaging were prompted by three aspects of the research design. First, the research question put the learning of beginning teachers at the heart of the conversation, stimulating participants to consider

the purpose, or in Vygotskian terms, 'the object' of their activity. Mentor participants admitted that they had previously tended to focus on the performance aspects of learning teaching, conceiving beginning teachers as 'not-quite-there teachers', rather than considering them as learners. Second, the research process offered collaborative sense-making opportunities to investigate and 'unravel' the social practice of learning teaching, enabling the sharing of tacit knowledge and prompting mentors, in particular, to consider the ways in which their actions afforded or constrained beginning teacher learning and the participants' interdependence. Third, OLEF as the secondary stimulus provided a theoretical framework through which participants could examine and plan their actions. Participants really valued the structure and language provided by OLEF to support them to articulate the complex processes of learning teaching under investigation.

In chapter 6, I drew attention to the challenges in empirically identifying evidence of *professional judgement* (Winch, Oancea and Orchard, 2013) and *practical theorising*, neither of which have yet been fully operationalised explicitly as analytical tools in empirical work, although the concept of practical theorising strongly influenced doctoral work by Burn (2003) and Davies (1997). A forthcoming book may support further understanding of the way that practical theorising can be a helpful concept for describing the braided, mediated, and tacit nature of teacher's knowledge and the process of its development (Burn, Mutton and Thompson, forthcoming.). This study has demonstrated the role of the mirror meeting in enabling participants' opportunities to analyse data related to their own practice, in relation to OLEF as a second stimulus, and how this supported participants to start to 'unravel' and explicate their learning and mentoring.

How and where-to?

As well as providing an initial framework for making sense of learning teaching, OLEF also supported participants to explain and diagnose the challenges beginning teachers were facing and to identify actions to support their progress. In particular, participants wanted to explore whether enlarging the beginning teachers' FoR would support further learning. Through this focus on taking deliberate steps to improve the FoR, Intentionality was also explored, as outlined in Chapter 6. In Vygotskian terms, by taking goal-directed actions, OLEF was used as a tool to increase the beginning teachers' consciousness and self-mastery. The steps taken to develop the FoR led to a

temporary extension of the number of sources drawn on to inform the FoR, but this was not sustained and the range was later reduced. The conception that learning teaching should involve drawing on a range of sources (i.e. an awareness of the FoR dimension of OLEF) however remained, albeit largely relating to proximal sources within, rather than beyond the school and programme.

Overall, whilst the research process offered an opportunity to make sense of, envisage and take some actions, participants prioritised being a teacher and their work-place goals. Whilst the learning of their students is an appropriate goal for beginning teachers, participants (like other work-place learners) did not prioritise their learning as a means to achieve this goal, but rather focussed on the close-to-hand and immediate performance tasks. It seems that whilst the research process led to some changes, as was the case with previous empirical research on the double stimulus method (Paris and Lung, 2008; Haapasaari and Kerosuo, 2015), it did not lead to a systematic overhaul or transformation of the activity, as the overall focus (or 'object' of the activity system) had not radically shifted.

OLEF places teacher orientations – their beliefs, attitudes and practices – at its heart, mapping the way for individuals to act in and on their context. This study has shown that the research process supported expressions of transformative agency as it increased participant consciousness and their potential for self-regulation. However, participants were also aware that being 'conscious' and 'acting on what I think' are not the same and the process revealed the extent to which their actions were constrained by the relational and reciprocal role of their context. In particular, the mentors recognised the ways in which their own actions – their mentoring practices – acted to afford and constrain beginning teachers' learning and used and reshaped OLEF to focus on their actions. In doing so, they called attention to the dialectic between personal and social practice (Edwards, 2017), reinforcing the relational and social nature of beginning teacher learning (Billett, 2006; McIntosh, 2015).

Whilst OLEF privileges the role of the beginning teacher, the research process actively involved the mentors. In researching beginning teacher learning through social practice, this study reinforces the social and relational nature of that learning. Without acknowledging the ways in which the context, including the mentors, acts to constrain learning, there is a risk that OLEF places huge demands on the beginning teacher to self-regulate alone; to 'capitalise' on the features of the context, rather than blame

them. There is a risk that, we ask beginning teachers to 'lean-in' (to borrow Sandberg's call to women (Sandberg, 2013)) following a post-feminist and neoliberal model of individual achievement (Rottenberg, 2014), without recognising the constraints and the relational, negotiated and structural nature of learning (Billett, 2006). As a result of the involvement of the mentors, participants were able to identify how beginning teachers might draw on their mentor as a resource, or broker, and the role of the mentor in mediating their learning. This supported the development of a more collective, relational agency. Returning to the concept of professional agency, as defined by Soini and her Finnish colleagues (2016 p.382), or to a broader conception of self-regulation which recognises that in directing their learning beginning teachers may 'ask for help, search and use external sources to feed their learning, learn in cooperation with others and use their environment for feedback' (Endedijk, 2010, p. 156), this research has reinforced the importance of (a more) relational intentionality.

9.2 Implications for beginning teachers and those who support their learning

This study has taken up the DEBT authors' invitation to offer mentors and beginning teachers the:

> *space, time and encouragement to articulate and critically examine, their differing conceptions of the process of learning to teach* (Hagger *et al*., 2008).

In doing so, it has demonstrated the way that OLEF can be used as a second stimulus to support the critical examination of learning and thereby make a substantial contribution to our knowledge of teacher learning, particularly on employment-based routes such as the Teach First programme and School Direct Salaried. In this section the implications of the research are outlined for beginning teachers and those that support their learning.

9.2.1 A professional learning orientation

One implication of this research is that the professional practice and learning processes of teachers need to be at the heart of ITE design. This needs to be recognised in supporting beginning teachers to develop a full vision of what professional practice entails and to participate in it. Professional practice should not only be reduced to a technicist understanding of what teachers do – the ways they organise time, resources and children – but rooted in an understanding of the ways they think and the decisions they make; that is to say, in the processes of exercising professional judgement.

Teachers make complex decisions in response to specific situations, drawing on a range of sources. Beginning teachers need ways to explicate experienced teachers' tacit situational understanding. When beginning teachers and their mentors talk about their learning and decision making they need a shared language to support this articulation. OLEF provides a model for some aspects of this process of articulation, particularly attending to intentional decision making and the range of sources upon which teachers can draw to inform their decisions. Practical theorising is another concept which is helpful in giving shape to the process and braids together the practical and higher functions of cognition and judgement. Mentoring, such as that provided by Alice, which involved sharing practice and experience explicitly, does not necessarily lead to a directive or narrow view of practice, provided that the mentor shares the process of making decisions as well as their rationale and is open to alternative perspectives. Mentors can also share a range of sources beyond their own experience and practice, but this requires mentors to be confident and capable in this role. For example, mentors would benefit from being part of professional communities such as subject associations or other professional organisations and having access to (and an understanding) of a range of research.

The process of teacher learning may be complex and contingent, but simpler patterns, representation and models act to create frameworks to help the development of contextualised and personal decisions. Beginning teachers need support and encouragement to develop confidence in their professional judgement. A sense of self-efficacy supports this professional agency. Mentors can offer the four sources of self-efficacy through their conversations and thereby support its development.

Like all professional (work-place) learners, beginning teachers, and their mentors, prioritise their students' learning and outcomes. Whilst this emphasis can be viewed in terms of an imposing accountability agenda, that agenda also serves to focus their attention on the students they teach, rather than on aspects of their own performance. Such a focus is helpful in supporting clinical practice approaches to teacher learning or an enquiry stance. However, there is a risk that in focussing on their students, beginning teachers eschew their own identification as learners and prioritise 'getting the job done'. As Burn and colleagues argue, this risk may be reduced where experienced teachers are themselves role-models in learning (Burn, Hagger and Mutton, 2015). This study has demonstrated a way in which mentors might assume this role: through the use of OLEF itself. In this study all the mentors engaged in identifying their own development

priorities and experimented with their practice in order to learn more about mentoring and beginning teacher learning. Other long term, practice-developing enquiry models of professional learning may support this too.

9.2.2 Intentional self-regulated learning

The study has shown that beginning teachers and their mentors valued a model of learning which placed the learners' attitudes and beliefs at its heart. The model supported increased self-regulation, as beginning teachers strived to position themselves helpfully in terms of the OLEF dimensions. The process of development was enacted deliberately through intentional target setting and action. This process supported professional agency as beginning teachers took increased responsibility for their learning: 'perceiving themselves as an active learner, who is able to act intentionally, make decisions and reflect on their impact' (Soini, Pietarinen and Pyhältö, 2016, p. 382).

Opportunities for self-regulation occurred in all time periods – in, on and for action. The mirror meetings, like mentoring conversations, offered opportunities for regulation of their learning as beginning teachers reflected 'in' the action of their learning and engaged in problem solving, sometimes provoking spontaneous moments of realisation. In considering their mentoring conversations, and the teaching actions discussed within them, the teachers also had the opportunity to self-regulate in relation to past experiences, retrospectively through their evaluations and reflections on action. Furthermore, beginning teachers were very action-oriented and focussed on identifying future improvements they would make, thereby demonstrating a future-oriented (or prospective) regulation for learning.

Beginning teachers in this study were highly motivated to improve their students' learning (a proxy for teacher and school accountability) and to be successful in terms of the formal assessment processes. This performance orientation leads to the risk of 'judgementoring' which Hobson and Malderez (2016) have suggested is detrimental to beginning teacher learning. Since mentors are also involved in the formal assessment of beginning teachers, this seems unavoidable. If the framework for assessment is narrow – such as in a heavily prescribed set of competencies and knowledge statements – there is a risk that some, reproduction-oriented beginning teachers will only seek success in relation to these criteria, without attending to the full complexities of teaching and learning. Interestingly, the Learning Patterns research suggested that those teachers on

the employment-based routes, may be more 'meaning' oriented, rather than reproduction-oriented, which the researchers suggest might be due to the richness of their experiences (Endedjik, Donche and Oosterheert, 2014).

In planning for (future) learning, the beginning teachers valued plans that were specific and action-based, including 'concrete' targets. This aligns with a recent statement from Teach First about what 'teacher educators need to know' including 'how to identify small, concrete, actionable steps' (Craster, 2019b, 2019a). Whilst the Teach First support materials at the time of data collection included guidance about targets being 'specific, time-bounded, agreed and attainable' (Teach First n.d., p. 60), after the period of this study, Teach First redeveloped their programme model for beginning teachers to include formal introduction of an adapted version of Bambrick-Santoya's '5 Ps model for the feedback' of the Participant Development Leads employed by Teach First[34] (Craster, 2019c). Whilst not an explicit part of the programme during the study, a deliberate practice model (or more specifically an instructional or incremental coaching model) of teacher education was gaining some traction in various Free Schools, Multi-Academy Trusts and non-governmental organisations such as Future Leaders[35], Ark and Oasis Multi -Trusts and Torquay Academy (Matthews, 2016). It is possible that the participants of this study experienced some aspects of this in their interactions with Leadership Development Officers.

In the last year Teach First have published blogs and articles explaining their teacher education approach (For example Craster, 2019b, 2019a). Included in their recommendations is the recognition of the role of deliberate practice. There may be a role for 'deliberate practice' opportunities, including practising discrete 'approximations of practice'. However, I would argue that the full benefits of learning from full and complex practice, as provided by an employment-based route, should be harnessed and that a wider definition of deliberate practice, such as that provided by Bronkhorst (2013), may be more useful.

Furthermore, deliberate, intentional learning is not enough. Teachers need to recognise that a substantial amount of their learning may be unplanned (Endedijik et al. 2012). As

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[34] Participant Development Leads were a new role created as part of the 2017 redesign. During the period of this study this role was undertaken by Leadership Development Officers.
[35] Now part of the Ambition Institute, a self-defined graduate school of education which is a merger of the Institute for Expert Teaching, Ambition School Leadership (formally Future Leaders and Teaching Leaders) (*Our history | Ambition Institute*, n.d.).

such, the opportunities to self-regulate occur during the unplanned learning – through metacognitive monitoring – and afterwards, retrospectively in evaluations. This requires beginning teachers to conceive of teacher learning as broader than an intentional, deliberate practice model, perhaps returning to Eraut's definition of deliberative learning, which includes work-based activities with learning as a 'probable by-product' (2004: 251). Whilst this has not been the focus of the study, I suggest that the role of the mentor in this form of learning may be in supporting the teacher to explicate the learning as a form of 'guided practice in the skills and habits of reflection' which will be more useful as they become more experienced (McIntyre, 1993, p. 44), and to identify how they might continuously refine their practice as advocated by Endedijk's model of self-regulation (Endedijk, 2014).

It is noticeable that in Teach First's publications about their teacher education pedagogy references to the concept of the 'reflective practitioner' are absent,' which marks a distinctive shift from previous models of ITE (Furlong et. al, 2000). In the moves towards an action-oriented, deliberate practice model of teacher learning, there is a risk that the cognitive processes of self-regulation that are not future oriented – those associated with ongoing metacognitive monitoring are overlooked. Similarly, retrospective evaluation – reflection in and on action – may be neglected. This could threaten any claim to be supporting teachers to develop their professional judgement.

However, other documents in the post-2017 Teach First curriculum refer repeatedly to reflection, and the participants' formal assignments reinforce the importance of the integration of theory and practice (Teach First, 2018a). The first module of the programme focuses on an 'emerging philosophy of teaching and learning' (ibid.). Furthermore, the academic qualification is a 'Diploma' rather than 'Certificate' level, leading to more credits at Masters level. The programme can therefore not be described as purely professional or practice-based and not engaging with theory.

This study has shown that the potential for the conversations between mentors and beginning teachers to provide space and time for practical theorising was rarely realised, although participants saw the value in it. Supporting mentors to develop the skills and confidence to enjoy this aspect of the role may require significant, long-term, intensive development opportunities (Langdon, 2014). The new Early Career Framework entitlement for NQTs to receive mentoring for two years offers an

opportunity to reconceptualise the role of the mentor. Whether this will be realised through the delivery plans is yet to be seen.

As an employment-based route which brings together masters-level university-based accreditation and Lemov's model of 'deliberate practice' approach, Teach First also has the potential to bring together distinctively different approaches to learning, drawing on the benefits of both and on the differing expertise of schools, universities and Teach First. However, Hirst's (1990) critique that the Oxford Internship programme (as one of the original innovations in school-centred teacher education) put the beginning teachers under immense pressure to negotiate the divided system, may also be true here. The school and university settings can be seen as different ecosystems, each with differing priorities and cultures. The requirement to thrive and develop in both terrains requires a kind of 'amphibious' or 'hybrid' (Jackson and Burch, 2016) nature. Beginning teachers would therefore clearly benefit from highly skilled and expert teacher educators, able to support their development within and across both sites. The Teach First 'Participant Development Lead' role, conceived as a teacher educator role, employed by Teach First and orchestrating other support, was developed to provide this kind of support.[36]

There also remains the question of how to support teachers to become adaptive and professional experts, and when the appropriate time is to introduce the full complexities of work to beginning teachers. Some professional learning leaders, including the Executive Director for Programme Development at Teach First, have argued that beginning teachers – as novices – should first master the 'gatekeeper' skills before being introduced to more complex concepts as they become more expert (Moore, 2019). The leaders of a school-led (SCITT) ITE programme in a recent study had a similar approach, leading Burn and colleagues to question when practical theorising is best introduced (Burn *et al*., 2017; Burn and Mutton, 2018). A problem with a focus on specific, tightly-bound, discrete areas of practice is that teaching and learning are far messier and a teacher, especially one learning on an employment-based route, will encounter complexity in their initial interactions. Therefore, a programme of learning which can be responsive to the emerging challenges and problems of practice encountered by a beginning teacher would be highly beneficial. A highly skilled teacher

[36] Although it is noticeable that this ambition may be challenging given that the job description requires only 2 years of experience mentoring. Furthermore, masters level qualifications (which might be an indicator of research engagement) and 'knowledge of evidence-based teaching' are only 'desirable', rather than 'essential' requirements (Teach First, 2017). This role involves brokering more expert specialist support, including from the subject-specialist university tutor.

educator – with regular informal and formal opportunities to support them – such as a mentor could lead such a programme.

This section has argued that framing teacher learning in terms of self-regulation, and acknowledging that this occurs at all three time periods, may be a helpful way of bringing together the metacognitive, motivational and intentional aspects of learning. Such framing would need to draw on a full definition of self-regulation which recognises the ways in which an agentic person draws on others to support them and acknowledges the importance of learning to teach as a relational social practice.

9.2.3 Recognising the relational and extending the Frame of Reference

Whilst bringing to the fore the individual's agency, this study's findings also reinforce our understanding of the ways that learning is mediated by context, and particularly by the mentors. As such, it supports previous research which presents professional learning as relational and negotiated (Billet, 2008). There are several implications of this finding that relate to the role of the mentor and the opportunities created by the school environment.

Firstly, a mentor as the primary person with whom the beginning teacher engages, needs to support the beginning teacher to recognise the role that their self-regulation and intentions can play and attend to the emotive and affective aspects of learning, as discussed above. Mentors need to consider carefully how to support learning opportunities, including the mentor meetings, observations and feedback as well as supporting beginning teachers to recognise the potential of unplanned, deliberative learning in the activities in which they engage, such as planning, teaching and assessment. Mentors can be learning role models, not only by actively seeking out formal learning opportunities, but also by taking an interested inquiry stance to their own practice, for example, by reviewing their practice in light of classroom evidence or other research.

As a key partner in the beginning teachers' learning, the mentor can support them to identify the ways they can achieve their goals through the mentor – as a form of proxy agency. For example, encouraging beginning teachers to seek guidance from their mentors about other teachers that they might observe to see examples of a particular strategy, or prompting them to request feedback from their mentor on a specific aspect of their practice. Mentors should recognise that they (and their practice and experience) are not the only sources of learning and be active in supporting beginning teachers to

identify other sources of learning, both within the school and beyond. In doing so, they support the beginning teacher to extend their FoR and support them to build up a repertoire of sources from which they can continue to learn as they gain more experience, and in contexts or phases of their career in which they have less formal support.

At the points where mentors share their experience and practice, they can support beginning teachers to consider these ideas as suggestions for practice and encourage them to consider them critically – in light of their own experiences and values and other evidence. This process might helpfully be considered as practical theorising (McIntyre, 1993). Mentors can powerfully model the process of making complex decisions by explaining their rationales – opening up their practice – and explicitly sharing how they make professional judgements.

Whilst I have used definitions of professional agency and self-regulation which explicitly highlight the relational aspect of intentionality, other researchers have distinguished between 'self-regulation' and 'co-regulation'. Alexander for example questions the extent to which 'self-regulation' research processes rely on scaffolding provided externally, identifying this as an area of further research (Alexander, 2018). Finnish researchers Saariaho and colleagues define co-regulation as 'planning, monitoring and evaluation of learning in collaboration with others' (2015, p. 45). The research group has explored how beginning teachers on primary undergraduate courses co-regulate with their colleagues, peers and the students in the classroom. Co-regulation was found to lead to more 'systematic, proactive and critical reflection,' rather than self-regulation which was more task and outcome focused. The beginning teachers applied self-regulation more frequently, but were prompted to co-regulate when 'solving highly complex challenging problems' (ibid., p. 54). Opportunities to integrate theory and practice, supported by teacher educators in teaching practice stimulated this. Schunk and Mullen's (2013) work in bringing together the research on academic (university-based) mentoring with self-regulation offers future direction for both researchers and practitioners in teacher education to explore the ways that mentoring can support self-regulation. In particular, their model for the ways that mentoring mediates the self-regulation of both mentors and protégés (or in our case, beginning teachers) offers an interesting way to conceive of the collaborative learning process offered by the mirror meeting process.

Beyond the mentor, the beginning teacher participants in this study drew heavily on the resources of the whole department. This supports previous research which has suggested that mentoring might be conceived as a departmental rather than individual role (Burn, Mutton and Hagger, 2010; Burn, 2012). Not only does this offer an opportunity to broaden the FoR of the beginning teacher, it may also distribute the responsibility for the beginning teacher across several more experienced colleagues. Relatively inexperienced peers also were seen to act as a helpful resource.

Above all, mentors and all those involved in ITE, need to recognise the relational nature of learning and the importance of establishing positive, supportive and trusting relationships. Beginning teachers' orientations were contingent and varied throughout the research period and teacher educators need to be responsive to this, knowing when to push and challenge beginning teachers' self-regulation and also recognising where a beginning teacher may need more reassurance and practical guidance. Just as with their students in the classroom, this degree of responsiveness, flexibility and adaptiveness may be the hallmarks of their professional judgement.

9.3 Implications for researchers

9.3.1 Practice-developing and close-to-practice research

This study has reinforced the importance of making sense of complex practices with participants in action. It is only through collaborative sense-making in particular contexts that we can fully understand the relationship between a person and the social situation. Teacher learning is dynamic and fluid and cannot be reduced to profiles based on self-reports or short-term data collection, but is best served by longer term, practice-developing or close-to practice research.

However participant sense-making is not enough on its own. Teachers, like other participants, require tools to support their sense-making and provide new ways to examine their practice. In this study my perspective, along with OLEF as a tool, acted to illuminate and stimulate new understandings. This requirement for a critical, or 'outside' perspective does not preclude practitioners from engaging in their own sense-making, but I would suggest that some external sources are used to support it. This might be through research-engaged reading, or the use of a theoretical framework, or it might be facilitated by an initiator researcher, as in this study.

9.3.2 Focus on the meso-level- the ways relationships act to afford and constrain learning

As Edwards (2010) reminds researchers, an awareness of the dialectic between the individual and the social makes deciding on the particular research focus and object challenging. We cannot hope to study all at once and must put some aspects in the 'background' as the contexts for those that receive more focussed attention (Edwards, 2010b, p. 142). In identifying a focus for teacher learning research I suggest that more attention is needed on the meso-level: on the ways that relationships act to afford and constrain learning. Beginning teachers are not powerlessly subject to institutional guidance, cultures or policy, but rather this process is relational and negotiated, or resisted to a certain extent (Paris and Lung, 2008; Roberts and Graham, 2008). A policy or institutional focus is not sufficient to support a full understanding of teacher learning. Instead we need to look at the way that policies are enacted and negotiated through attention to the social practices.

Similarly, individuals act agentively and in relationship to their own histories, values and desires. Attention to individuals' orientations is vital, but it cannot be explained without a focus on the social. Beginning teachers' approaches particularly are co-constructed in relation to their mentors, departments, schools, university partner and national contexts and beyond.

In planning the original research, my intention was to focus on beginning teachers themselves, but I could not avoid attention to the mentors as a primary relational influence on their learning. This study has opened up the semi-private and personal conversations between beginning teachers and their mentors for examination. As Chapter 2 demonstrated, little research on mentoring is based on analysis of actual mentoring conversations in the recent English context, and certainly not on employment-based routes. Researchers have called for further attention to the ways that mentors support self-regulation (or are involved co-regulation) (Alexander, 2018), as well as the development of professional agency through individual trajectories of learning teaching (Heikonen *et al*., 2020).

Furthermore, and perhaps most excitingly, it is at the meso-level that Close-to-Practice research can support development by explicating the opportunities for relational and proxy agency and co-regulation.

9.3.3 Research instruments as stimulus – objectivising the process and opening up opportunities for transformative agency.

This study has demonstrated how OLEF can be used as a double stimulus. In doing so, it suggests the potential for other theoretically-derived frameworks or research instruments to be used as stimuli in practice-developing research.

The research has also connected socio-cultural research undertaken in a qualitative tradition with other forms of psychological research which focus on quantitative analysis, such as the Learning Patterns research. There is much potential for mixed-methods research, harnessing the advantages of both large-scale, more generalisable research along with close attention to particular small-scale contexts which enable ongoing learning for all involved. I am interested to explore how research instruments, beyond OLEF – such as the Revised Inventory of Learning to Teach (Endedijk *et al*., n.d.) could be used as a double stimulus to support the explication, envisaging and action to support beginning teacher learning.

9.4 Summary of chapter

This study has succeeded in picking up the DEBT research team's invitation to offer mentors and beginning teachers the space and time to consider the processes of learning to teach (Hagger *et al*., 2008, p. 175). In using OLEF to do so, it has shown the value of the original framework as a means of describing approaches to learning and, by showing the ways it aligns with other concepts, I have brought OLEF into a broader conversation about learning. Furthermore, the use of OLEF in the study has demonstrated its potential as a second stimulus to support participants to explicate, envisage and take-action to support their learning.

As highly intentional and aspirational learners and teachers, the participants were strongly focussed on ways they could self-regulate their learning towards more positive orientations of learning through experience. This process reinforced the relational nature of beginning teacher learning, which is negotiated in light of the particular contextual affordances. In particular, the importance of the mentor in scaffolding learning and supporting their agency was highlighted. The demands of mentors having the expertise and opportunity to act as educative mentors, or teacher educators, was reinforced by this close-to-practice study which offered a rare glimpse into the conversations between beginning teachers and their mentors, as well as with each other during their learning.

Experience teaches, but it is vital that teachers on employment-based programmes and those that work with them, can articulate how this process happens and what supports it. The OLEF framework as a double stimulus provided a way for participants to make sense of learning through, for and about experience. The role of the beginning teachers, alongside their mentors, as active self-regulating learners engaged in complex professional judgements needs to be at the heart of the vision for the practice experience.

Appendices

Appendix A A summary of the main ITE routes featured in the study

ITE Route	Qualifications on successful completion	Teaching and employment status	Organisations involved	Formal learning organization and assessment	Key people involved
TF (Pre 2017 redesign)	QTS and PGCE	Employed by school as an unqualified teacher. Spends 5 days in a Second School Placement (SSP), a contrasting school and 1 day in a primary school.	TF Regional HEIs Employing school	6 week residential Summer Institute including 10 days in school (Extended School Centred Learning). 4 weeks are organized regionally. 2 weeks are held nationally. 6 days release from school for Subject Studies. Leadership Development Programme Conferences (minimum 2). Weekly meetings with Subject Mentors (SM) and a programme of school-based learning organized by the Professional Mentor (PM). Half-termly meetings with Leadership Development Officers (LDO). Assessment: 6 written assignments- 2 Reflective Journal Assignments (RJA1-2) and 4 Written Assignments (WA1-4). Online portfolio “blue sky”, including journal, 17 formal observations, termly reviews and pupil impact data.	School based: Subject Mentor (SM) and Professional Mentor (PM). HEI based: Subject Tutor (ST) and Professional Tutor (PT) TF based: Leadership Development Officer (LDO)

School Direct Salaried	QTS	Employed by School as an unqualified teacher. Spends one month in a second school placement	HEI Employing School	15 days at HEI. 10 days Professional Studies and 5 days subject-specific. Weekly meeting with SM and weekly school-based observation. Weekly programme of school-based learning organised by the Professional Mentor (PM). Assessment by portfolio of evidence, including journal and formal observations and reviews.	School based: Subject Mentor (SM) and Professional Mentor (PM) HEI based: Subject Tutor (ST) and Professional Tutor (PT)
PGCE (Internship model)	QTS and PGCE	Intern (unpaid) student. Term 1 joint weeks between school 1 and HEI. Term 2 primarily in School 1. Term 3 primarily in School 2.	HEI Placement schools	120 days in school. 47 days at the University plus 13 days independent study. Weekly meetings with the SM and weekly school-based Professional Development Programme organized by the PT. University and school-based programmes, which are closely integrated, comprise curriculum (subject) and Professional Development Programme (PDP) work. 6 CT visits to school at assessment points and 'formal checks' of progress. Assessment: Teaching is formally assessed against the Course Assessment Descriptors (closely linked to the Teachers' Standards) at each of the four assessment points. Academic work comprises 4 assignments.	School based: Subject Mentor (SM) and Professional Tutor (PT) HEI based: Curriculum (subject) Tutor (CT) and General Tutor

Appendix B A continuum of participation

Adapted from Heron, *Cooperative Inquiry* (1996) pp. 23-27.

	Participation in decisions (research thinking and decision making) Political participation		Participation in experience (action being researched) Epistemic participation	
	Researcher	**Subject**	**Researcher**	**Subject**
Traditional qualitative design. Researcher studies subjects in their own setting in terms of subjects' own constructs	Full	Partial	Partial	Full
Supported Action Inquiry Person A facilitates Person B to inquire into their own experiences	Partial	Full	Nil	Full
Partial Form Co-operative Inquiry Researcher/ participants collaborates on research and planning. Participant is fully involved in the action; researcher acts as an ethnographer	Full	Full	Partial	Full
Full Form Co-operative Inquiry Researchers and participants take full part in decision making and action experience (can be 'initiated' by a researcher and recognises that the researcher has, initially, more method design/ research skills and experience)	Full	Full	Full	Full

Appendix C An overview of data collected and the tools of analysis.

Data	Data details	Number collected	Tools of analysis
Participant demographic details	Includes pseudonym, BT experience in schools prior to ITE course, mentor experience	At the start of involvement x 9	Descriptive statistics and summary table (see Table 6 and Table 7).
BT-mentor conversations	Participants self-audio-record conversations using mobile phone or digital Dictaphone.	24	Full transcription (see Appendix L). Elaborative coding for OLEF dimensions in NVivo. Pen portraits created for Cycle 1 and selected quotations for cycles 1 & 2 as *Mirror data* (see Appendix G) Basic descriptive summary will include length of conversation, nature of conversation (mentor meeting or observation) and when it took place (see Table 9 for example).
Mirror data - Pen portraits	Researcher-crafted pen portraits based on BT-mentor conversations.	12	Participant comments recorded in MM and on OLEF dimension capture sheet (see Appendix M)
Mirror data- selected quotations	Researcher selected quotations from transcriptions of BT-mentor conversations	12	

Annotated OLEF dimensions	Participant annotations of OLEF dimensions during MMs.	15 (P1:8; P2: 7)	In P1- Congruence table (see Figure 31: Number of 'wider knowledge' dimensions that were different from 'based on the data'.) to identify apparent discrepancies between data and wider knowledge. In P2 any observations noted in MM memo.	2.1, 2.2, 3.2, 3.3
MM conversation	Researcher audio-recorded meetings with participants	20	Selective transcript (Appendix I) Inductive thematic coding and deductive coding using RQ, including Deductive coding for transformative agency.	
Researcher journal and memos	Researcher recording ongoing decisions, ethical questions and observations	Ongoing		All
Interview with Eric	End of data collection: Phone interview with Eric	December Year 4	Full transcript. Inductive thematic coding and deductive coding using RQs	

Appendix D Participant Information sheet

UNIVERSITY OF OXFORD

> *"We need to ensure that all student teachers have the space, time and encouragement to articulate and critically examine, their differing conceptions of the process of learning to teach….mentors are the best placed to provide student teachers with individual attention of this kind*. (Hagger et al. 2008: 175)

What helps you learn to teach?

How does experience teach?

Would you be interested to explore how you approach your learning?

As part of a PhD research project exploring teachers' orientations to learning from experience, I am looking for mentors and beginning teachers on school-based routes (such as School Direct or Teach First) to volunteer to join an Action Research enquiry group.

What would this involve?

- Audio-recording and sharing conversations between a beginning teacher and their mentor (one per half-term).
- Meeting each half-term to discuss the analysis - to share your thoughts about whether it offers a helpful way to make sense of your learning or to suggest other ideas
- You would be invited to participate in the research design, suggesting how the research could develop to help you improve your learning, or to meet your particular interests.

Volunteer participants can withdraw from the research at any time

Why would I want to do this?

- Research conducted in the University of Oxford's Department of Education suggests that beginning teachers approach learning from experience in different ways. They concluded that beginning teachers should have the chance to explore this and suggested that this would further enhance their learning
- Your participation would support a study seeking to offer a rare glimpse into the learning of teachers on school-based teacher education routes. There are very few studies that currently offer this. As more and more teachers train through school-based routes, such as Teach First and School Direct, it is really important that we know what supports their learning.
- You would have the opportunity to reflect on and explore your own mentoring conversations and learning as a teacher. You would do this within a group of other teachers/ mentors doing similar programmes and learn from them. In previous projects participants have really valued this time together.
- Throughout the project I will be explicit about the research decisions I am making and this may help you to learn more about educational research. You could have the opportunity to get involved in research design and analysis, supported by the lead researcher.

For more information, please contact: Tessa.Blair@education.ox.ac.uk

Appendix E Participant Consent Form (P1 Example)

TESSA BLAIR

Department for Education, 15 Norham Gardens, Oxford OX11 1XX
Tessa.blair@education.ox.ac.uk



Participatory Action Research Project- Orientations to Learning from Experience

Thank you for agreeing to take part in this research project as part of my DPhil dissertation at the University of Oxford. The research will be shared with my tutors at the university and will be published only as a university thesis. If you have any concerns about the research at any stage, you can contact my supervisors: Katharine.Burn@education.ox.ac.uk

The research will explore teacher learning in mentor-teacher conversations. In particular it is interested to explore how mentors and BTs can use the Orientations to Learning from Experience Framework (OLEF) to discuss their learning. The project will continue for the rest of this academic year. This research is part of a proposal for a longer term participatory research project. You will be invited to take part in this study, but are not obliged to.

You should understand that you can withdraw at any stage of the research, without needing to explain your reasons. I will ask for your ongoing consent to be involved in the research every term.

As the research is participatory, you will have the opportunity to shape the emerging research design and will play an active part in the analysis. For this reason, the full details should be seen as provisional and will be agreed by the research group. I have included on the final page a provisional timeline of activities.

My commitments to you

- to be mindful of the ethics involved in research- to be open and honest and put your interests above my research
- to open my mentoring practice up for exploration and be open to challenge or alternative views
- to promote learning opportunities for the group, through for example, sharing wider research or experience, where appropriate
- to store data you share with me securely and using pseudonyms
- to use pseudonyms when referring to you in the research so that you will not be identifiable beyond the research group, or beyond our school context if relevant
- to seek further permission if I want to share the research data or writings that result from it more widely than stated above*

TESSA BLAIR

Department for Education, 15 Norham Gardens, Oxford OX11 1XX
Tessa.blair@education.ox.ac.uk

UNIVERSITY OF OXFORD

What I ask you to commit

- to share some background information about your qualifications, training programme and employing school. This information will be stored separately from other data.
- to record and share one post-observed lesson 'feedback' session with the research group each term (2 in total- once per term)
- to engage in the analysis of the dialogue by, for example, listening to the audio recordings. I anticipate that this should take no more than 1 hour per cycle (2 in total- once per half-term)
- to meet with the research group to share our reflections and discuss the analysis at a mutually agreeable time (2 times- once per term). This will be recorded and the conversation will be analysed.
- To be open to the learning opportunities the research provides and prepared to share your opinions and engage critically with other group members.
- To respect the confidence of other members of the research group- keeping information within the research group

I _____ (Name) understand the research proposal and consent to be involved as described. I understand that I can withdraw at any time.

Date_____

Signed _____

** If you are happy for your data to be used beyond the ways described above e.g. in publications and for training purposes please tick this box [ ]*

Supervisors: Dr. Katharine Burn & Professor Ian Menter. Contact Katharine.burn@education.ox.ac.uk

Appendix F Structured Ethical Reflection

Based on a template shared by Professor Mary Bryden, April 2013, ARCIO Seminar, Bristol. The template included the first row (in bold). Values and ethical questions were added by Tessa Blair.

Value	**Research Partnerships**	**Research Questions**	**Funds**	**Planning the research**	**Gathering Data**	**Analysis**	**Dissemination**
Openness/ involvement	Who is included? Who feels they can't be included? How can I include as many as want to be involved, without putting pressure on people to comply (given my senior leader role in the school?)	Am I prepared to change the focus as the research develops? Can other people inquire into their own 'problems/ issues?' Whose questions will be most important?	Will money prevent anyone from being involved? e.g. recording equipment?	Can I involve people at the planning stage? – how much 'political participation?' is possible? How can I create iterative opportunities to review the 'plan' and methods as the research develops? (e.g. through Action Research loops)	Will I encourage self-editing? Does 'self-presentation' matter or is consciousness-raising more important? Am I interested in a 'natural' account or happy for participants to self-select and choose what to present?	How can I encourage all participants to be involved in the analysis? How can I make this as easy/ accessible as possible (not technically presented e.g. visual presentations of data; simple continuum scale)? How can support participants to make sense for themselves?	How can I share the research findings (and protect anonymity?) e.g. dissemination to other teachers and mentors in accessible ways, so that it has impact beyond the project? Will participants want a copy of the final report? Will they want to read/ edit/ co-write? How can I support participants to share the research findings within their community?
Critical thinking and challenge	How can I ensure that participants feel they can challenge each other,	Am I prepared to have my hunches challenged? How strong			How can I encourage teachers to talk about their learning honestly, without worrying about upsetting the mentors	How can I encourage all participants to consider the data openly with an inquiry stance? How can I ensure that all voices	How will I present participants- warts and all? Will participants have the opportunity to member-check? Will I account for their responses in the final

	themselves (reflexively) and me?- Can I model this openness to challenge?	are my gut feelings about this? Am I prepared to find out things I don't like?			they have important relationships with?	are heard? How can I minimise my voice being heard more loudly? How can I avoid participants colluding together to produce what they think I want?	report? Whose voice will be heard the loudest?
Learning	Who will volunteer?- problems of self-selected. Will it be people who feel confident already?- will those who might most benefit from learning opportunities not volunteer?	*See Openness Qs above*	N/A	How can I ensure I learn as much from the process?- Can I open up learning opportunities about research process to participants? How can I ensure that decisions I make are explained, in context of research learning, to them?	I hope the data collection and analysis will be learning-full opportunities for the participants. How can I ensure the richness of the data is made the most of? – analysis training skills- am I confident enough with NVivo etc?		How can I allow others to share from the research? Dissemination for training purposes by the research group? Will the group be prepared to share their data and learning with other mentors/ teachers?

Appendix G An excerpt from a pen-portrait.

This pen portrait of Will is based on two conversations with his mentor in P1.

Intentionality

Will and his mentor spend considerable time clarifying the learning intentions for his students. These have been carefully formulated and informed by his assessment of the students' prior learning ("*I had highlighted a line in their books so I'd thought about which line they were going to be improving").* Through the conversation and on reflection Will can see that he had lacked some clarity in the lesson outcomes and that the students were not very clear.

> *"But I think one of things I feel like didn't work, was that I think it was a bit too much for them to hold. I think because I got them to think persuasive techniques they had learnt before, it was, but then asked them to focus on the punctuation I think that was a bit confusing for that class and tying the two together didn't quite sort of work…I don't think I was clear enough about marrying those two concepts…I don't think I was entirely clear."*

It is less clear from the conversation if Will has considered his own learning goals for the lesson experience. However he does clearly outline the things he want to improve in the future and these transcend the particular observed lessons into more general goals:

> *"I think that the thing that I keep needing to work on, and is particularly with the lower ability classes, and I still do get it wrong and it's the same with Year 7 as well I still get Year 7 lessons wrong sometimes, and it is because there are still those kind of, stepping stones that I miss out."*

It's clear that Will is proactive in recognising what he hopes to learn from his mentor as he asks for specific advice on a student, based on an earlier issue (not relevant to the specific meeting) and that he is following up on advice from another colleague to seek his mentor's guidance.

These goals he sets are specific actions (talk to the student and try the post-it note), but no specific time-frame or follow-up is identified.

FoR

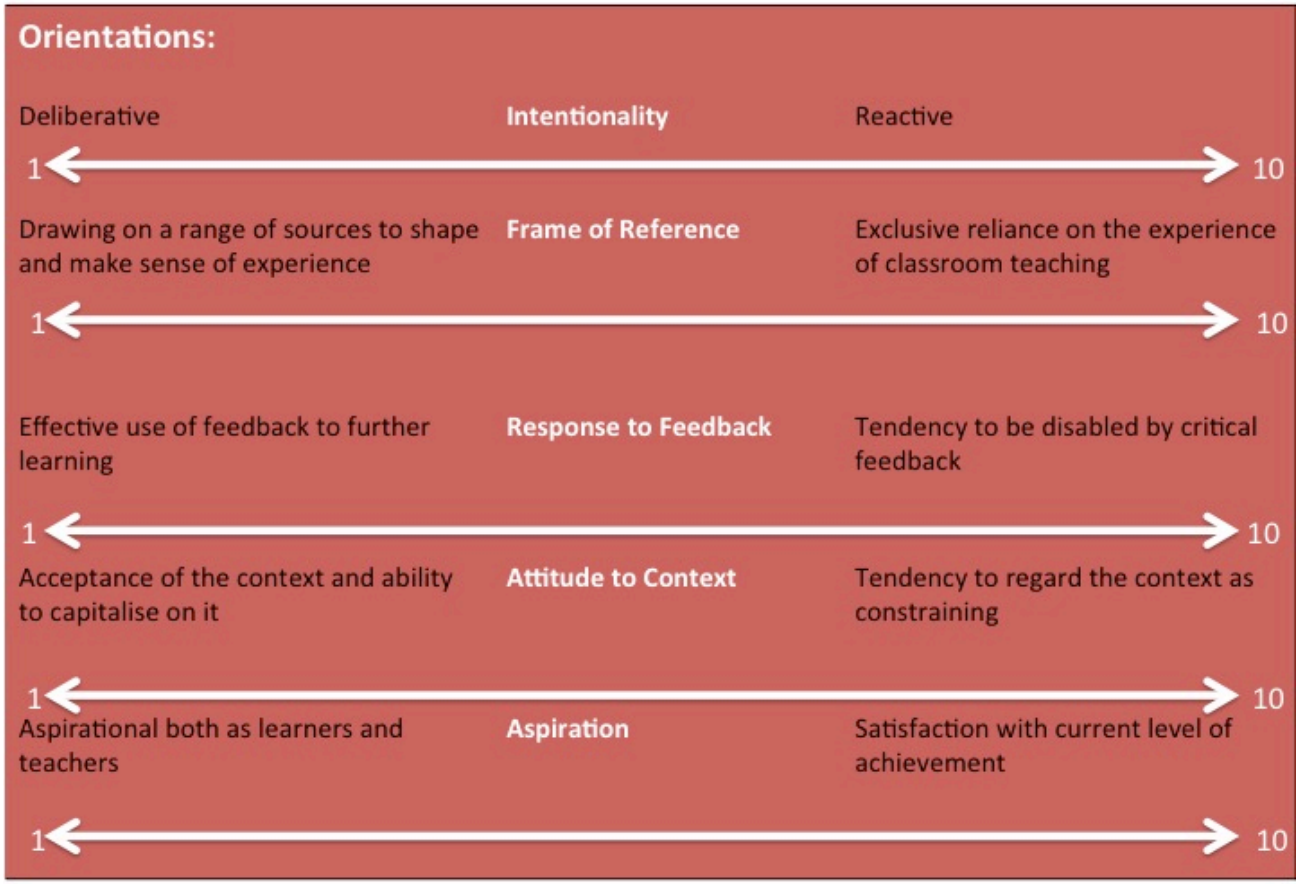
FoR includes SEN information (which includes practical pedagogical strategies, such as "*what is on his notes as in not kind of able to retain verbal information for a long time, so the advice is to break everything down into chunks, like step by step instructions; make sure there's enough visual clues.")* He also draws on his experience of supporting students with similar SEN ("*I think very much like R. in Year 10, that's how I think of it, I mean I know they're not the same person but that's how I think about it").*

He refers to another specialist SEN colleague and the mentor and him discuss learning from a recent PL briefing wherein the mentor had shared some strategies

> *"That is a good idea, but I also like, I mean, it feels tidy to me, the idea of using post-its, cos that's something I want to, that's something I want to do generally*.

Appendix H OLEF Capture sheet

Please note that in this version '1' represents the most helpful orientation. In subsequent analysis this position was labelled 10 to support graphical representation.



Appendix I An excerpt from a Selective transcript MM 1: Dave and Eric[37]

Researcher Preamble (up to 8 mins)

- Discusses pseudonym. Happy with 'Dave'
- Tessa consent form 'sign your life away'- undermines important process?
- See slides for content
- Helpful: 'none of this is a test'; talking through steps in analysis; 'this isn't you, or the truth…a snapshot…a glimpse…specific data…stimulus…rather than the truth…your views on learning are as valid as mine…open to challenge'
- Less helpful: skimming through orientations? Definitions requested later on- has to be done at some point. Might be better later on as can deal with one at a time.
- Both participants have read/ listened to it in advance.

Review the pen portrait. Does the data support these descriptions?- is it a fair or valid description? (9' 15" –14'50")

- Silent reading of it- should I encourage 'think aloud' (other pairs talk about it straight away)
- (12'40") cringing- shushing and mentor response 'reading it back it was quite head on.' Dave: 'it was a good realisation.' Tessa: 'reading it back in black and white always seems more harsh without tone'
- (14 mins) comments? Dave 'quite accurate and fair. I agree what has been said, particularly in regard to "I felt comfortable being honest",…I definitely realised that I do have areas for improvement. Overall I think it's a fair representation'

Based on this data (with researcher hat on) where would you position BT on OLEF framework? (15')

- Third person rationale explained

Intentionality

- Dave asks for clarification of definition of *Intentionality*. Tessa provides definition.
- Mentor can give examples of *Intentionality* from data
- Mentor 'start at 1. What evidence is there against it?'- approach to positioning.
- Dave starts to talk about his 'reactive' behaviour in the classroom during observation (rather than planning volume)
- Really discursive here- mentor and BT unpicking together; thinking out loud (rather than presenting views already):
    - Dave: 'can you think of any moments where I was more reactive?'
    - Mentor 'what did you think was out of your control?'-Tessa: were there any elements that you couldn't plan for because they are out of control? Dave: low level disruption I didn't plan for, reactive
    - Tessa: I disagree you're thinking really carefully about what you can do, and how you can manage that
    - Mentor: can't find any. 'I think you're thinking about all aspects of what is happening, all aspects of your practice…listening, thinking about it and then putting into words what you were going to do about it'
    - Tessa: how deliberative are these targets? (final paragraph quoted)- I felt there were a lot of targets. A lot of things you were working on. I think if I was a BT I…

[37] Use of quotation marks: single quotes denotes words spoken in mirror meeting. Double quotes refers to reported speech from the original BT/ mentor conversation or mirror data. No quotes = parahrases

Appendix J Excerpts from a reflective memo after MM

Cycle 2 MM (MM) Memo

Observations around methods (and RQ1)

Mentor/ BT data

- 3 conversations provided- observation conversation or mentor meeting depending on Cycle 1

MM

- Only 2 BT participant pairs involved. 1 BT was unwell on the day of the MM and suspended from school shortly afterwards, so unable to complete catch-up activity (due to return imminently).
- Timings managed and kept to plan
- Participants understanding of dimensions was fairly secure. One query made by BT participant addressed by mentor.
- All felt the pen portraits were fair descriptions based on data
- Although there were differences between data presentation and 'wider knowledge' (Catherine 40% congruence; Dave 20% congruence; 6+ dimensions and 1- across two conversations including 4 + dimensions in Catherine Cycle 2). This is a slight 1% improvement in congruence from Cycle 1 (but represents only 2 conversations rather than 3).
- C discussed how the data captured a particular emotional state- overwhelmed, which affected her capacity to learn.
-

Observations around participation

- 1 participant pair unable to take part
- It was less clear how prepared participants were 1 (of 2) pairs read the transcript as part of the activities- suggesting they needed to familiarise themselves
- All participants managed to position based on selected quotations (before using pen portrait), but few comments were made about transcripts alone.
- Participants readily engaged in the activities, following instructions carefully and every participant contributed actively to discussions- mentors seemed to dominate less.
- Participants chose not to, or found it hard to compare the cycle with previous (and lack of providing cycle 1 capture sheet made this hard). Change over time should be more obvious as data progresses.
- In plenary (part 3) session two potential developments were identified: a) around fleshing out dimension continuums with descriptors or data to develop understanding of these; b) taking action to shift orientations on a dimension in the mentor meeting (particularly around *Intentionality* and FoR). Group agreed on (b) focused on FoR. See capture sheet for more details.
-

Observations around BT learning/ OLE

(substantive)

- FoR and AtC remain dimensions where less data is available in original data, but more likely to be present in MM.
- In Cycle 1 three participants position their orientations as broadly helpful (ie <5) overall. In Cycle 2 Catherine's data average is <5 (5.7), but wider knowledge 4.4
- If we take the average position for each dimension across all data points (including data, pen portrait and wider knowledge where available), all participants over both cycles FoR and AtC >5 and particularly unhelpful according to the data.
- *RtF* and *Aspiration* are dimensions with joint lowest (most helpful) =2 (avg) in data and wider.

Observations around researcher role- what am I doing and try to do in the conversation

- In Part 1and 2 I played a very small role in conversations- timing reminders and at points clarifying or providing information requested. In Part 1 I sat with Catherine and Alice and observed & with the mentors in Part 2.
- In part 3 I chaired the discussion- eliciting views, identifying advantages and disadvantages (informed by wider knowledge of research) summarising and inviting agreement on next steps. Due to short time available (15 minutes) I tried to do this efficiently, considering at times whether to invite participant views and voices, or sum up myself. I was aware that I could have asked probing follow-up questions of participants to explain their thinking more clearly, or fully at times.

NB In addition to only presenting half of this memo (as an excerpt), one sentence of this memo was edited to make a participant less identifiable, and protect confidential information.

Appendix K End Interview with Eric

1. Thank you for your involvement in the research project- stepping in to support Dave and also recording additional conversations at the end.

2. Do you have any comments about if (and how) the research has influenced your work as a mentor?
    a. How?
    b. Give examples?
    c. Do you think that [impact] will be sustained beyond the research activities?
    d. Have you shared your experiences/ ideas with other mentors?

3. Based on your recent recorded conversations with BT participants, did you notice anything relevant to our work around OLEF?
    a. Any changes in orientations towards learning from experience?
    b. Are there any specific ways in which you think the focus on OLEF was different from seeking to promote BT reflection more generally?

4. What were the end of year ITE assessments (final grades) for the BT participants?

5. In terms of BT's and mentors' use of OLEF, how might the research project be improved, if we were going to do it again?

Appendix L An example of one page of a Mentor Meeting transcript

D3 Catherine and Alice Mentor Meeting

Alice: So Year 7 observation. What do you think had improved from the last time?

Catherine: Just trying to remember the lesson. So it was assessment planning wasn't it for the discussion? I think I was clearer with the learning objectives and what they were doing it for and what they had to do. I think I was also quite a lot calmer in this observation so behaviour management was better, still not perfect but better

Alice: Which bits do you think were better, in terms of behaviour?

Catherine: I was more consistent with happy face sad face and that worked quite well. I did a lot more positive praising. I was really conscious that I needed to do that. Actually thinking about it, your feedback made me think about it more. Because I had forgotten the positive praise a bit I think, because my target had been to be more authoritative, so I was trying to be really authoritative but actually its about finding that balance [laugh in response to coughing from mentor.] So its about trying to find that balance between being stern enough and them not thinking is nihilistic and awful.

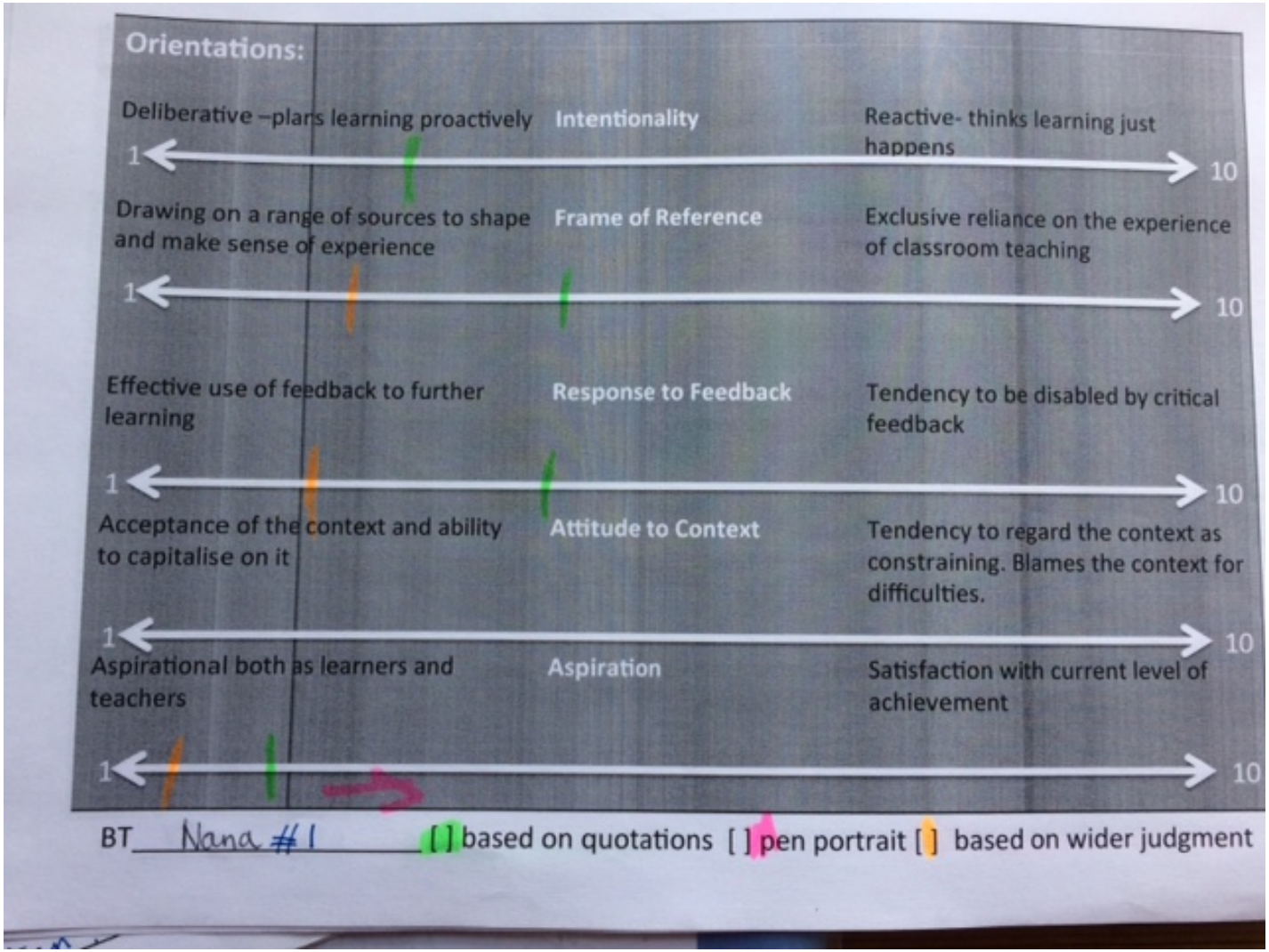
Alice: Yeah I really agree. When you were doing the positives. The first part of the lesson, the starter and when they were reading their books and things. They were so so much calmer. And when you were putting the ticks on the board it was like a magic trick, they just-

Catherine: They love it!

Alice: -went to absolute silence. And everyone was reading their books perfectly and it was a really nice calm start. And then you were just kind of monitoring rather than rushing around handing stuff out everywhere-

Catherine: Oh yeah that's another thing I got the kids to hand the books out, which is better, and again I've been doing that a lot more now, just thinking actually at the first five minutes just stand still somewhere. And that's better, because I feel-

Appendix M An example of an annotated OLEF sheet



Appendix N Analytic Planning Worksheet using 5 level QDA methods

An example of the use of the Analytic Planning Worksheet for one stage of the analysis.

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<table>
<tr><td>
Analytic Planning Worksheet</td><td colspan="2">PROJECT: OLEF
Analysis Phase: Catherine's OLEF</td></tr>
<tr><td>Level 1: OBJECTIVES & METHODOLOGY</td><td>OBJECTIVES

RQ3-3.1 In what ways, if any, do the beginning teachers' orientations to learning from experience appear to change during the research process?

Describe Catherine's OLEF over data collection period</td><td>GUIDING METHODOLOGY

Using OLEF framework as double stimulus in Action Research approach</td></tr>
<tr><td rowspan="2">Level 2: OVERALL ANALYTIC PLAN</td><td colspan="2">CURRENT CONCEPTUAL FRAMEWORK: OLEF</td></tr>
<tr><td colspan="2">PRIOR COMPLETED: Transcription of cycles 1-6 Catherine; Coding using OLEF dimensions as nodes for cycles 1-5
CURRENT: Catherine's OLEF as a case-study
NEXT ANTICIPATED: discussion of C's OLEF in relation to secondary literature; Compare to other participants</td></tr>
</table>

Level 2: ***ANALYTIC TASKS***	***Level 3: TRANSLATION***	***Level 4 and 5: Tools used*** *(organized as steps)*
Reorganise data to support analysis	UNITS: Participants, Phase, cycle, data type, PURPOSE: Organise for analysis POSSIBLE COMPONENTS: case and source classification; folders; sets; fine names; auto-coding CHOSEN COMPONENTS: folders for data type; source attributes: phase, cycle, participant; case attribute: BT/ Mentor; sets for each phase, cycle and participant. Auto-coding using heading levels for case attributes. EXPLANATION: As there are only two types of data this creates a simple way to organize in folders. Attribute values are efficient ways to code for factual information. Sets provide flexible short-cuts to different components. Rename file names to provide simple snapshot of data characteristics.	1. Import Catherine D4 and D6 data. 2. Import mirror meeting data involving Catherine & import memos done so far. 3. Reorganise data into two folders: mirror meetings; BT/ Mentor meetings 4. Source attributes: phase, cycle, 5. Create sets: Pilot Phase; Main Phase; Cycle 1-6; By Participant. 6. Rename file names: Phase Cycle Participant Data Type e.g. *Phase 1 Nana Mirror.* .
Explore Catherine's OLEF in cycle 6	UNITS: cycle 6 data: MM6 and D6; OLEF PURPOSE: describe Catherine's OLEF in cycle 6 POSSIBLE COMPONENTS: nodes, mind maps, memos, annotation CHOSEN COMPONENTS: nodes and memos	1. Code Catherine D6 at existing OLEF nodes 2. Retrieve node references 3. Create memo summarizing D6

	EXPLANATION: Use existing OLEF nodes to code. Create memo to summarise OLEF.	
Compare Catherine's OLEF across cycles 1-6	UNITS: D1-6 MM1-6, OLEF PURPOSE: Compare and contrast POSSIBLE COMPONENTS: set (cycle1-6); annotations, memo; matrix coding; compare sources diagram CHOSEN COMPONENTS Matrix coding cycles Vs dimensions; memos EXPLANATION: data already prepared at node/ attribute level. The matrix coding will provide an organised way into data-supporting systematic analysis.	1. Matrix coding: dimension nodes as rows, and the attribute-values for each of the 6 cycles as columns. Use the AND operator and run the query. Count coded references to provide index into data. 2. Create memos summarizing OLEF across the cycles by dimension (x5 these are already done including cycle 1-5, but need substantial reworking)
Summarise Catherine's OLEF over time (identifying changes where relevant)	UNITS: D1-6; MM1-6; PURPOSE: Summary (preparation for findings chapter) POSSIBLE COMPONENTS: memo; concept map; annotations CHOSEN COMPONENTS: memo EXPLANATION	1. Use memo to summarise change over time (Catherine overview document currently includes data cycle 1-5). 2. Create node "good quotation" or annotations code for key excerpts that I am likely to use in the chapter.

REFLECTIONS

Appendix O Targets set in P2

D	Targets/ next steps[38] Stated by beginning teacher Suggested by mentor initially	Teacher Aim (Burn *et al.*, 2000, 2003)
Catherine		
1	• Change Y10 seating plan "*slightly, not very much, but slightly change"* • Put specific named students on report Y10 • Use hands-up rule more consistently Y10 • "Active listening" strategies- students note taking Y8 • first five minutes- visible positive reinforcement (ticks on board) for those doing starter & use of timer Y8 • key words starter for Y8 (already doing with Y9) • experimenting with hats as visible reminder of talk expectations (productive conversation; presentation; listening)	Pupils action
2	• planning: sequencing of the tasks (using Blooms to support) • positive reinforcement	Pupil achievement-cognitive Pupil action and state
3	• *"trying to find that balance between being stern enough and them [students] not thinking its nihilistic and awful."* (Previous target set by PT had been to be "more authoritative") • sticker chart to motivate a student • experiment with not circulating to support individuals (monitor and scan whole class & positively reinforce instead) • *"I need to be at a stage where I can manage the room at the beginning, get a really settled environment, and then I can maintain it while I can circulate" – "maximise 1-1 time"* • more modelling of writing expectations	Pupil action and state Pupil achievement-cognitive
4	• ("developing evaluative skills): more structured self assessment *("thirty seconds to check commas, you have a minute to check it for spelling mistakes…")* • using student work as models • differentiation – challenge cards and scaffolding (word banks) • make it more explicit what the learners are doing and why	Pupil achievement-cognitive
5	• tactical ignoring- "creating a hook", "*ignoring bits of conversation"* • experimenting with class layout • observing other teachers	Pupil action Self-learning

[38] these may not be the formally recorded targets, but those spoken aloud.

Miles		
D	**Targets/ next steps**[39] Stated by beginning teacher • Suggested by mentor initially	**Teacher Aim** (Burn *et al*., 2000, 2003)
2	• **KS3 HWK** John: "evidencing your setting HWK and holding kids accountable for HWK, and you being accountable for that as well" • **KS3 Assessment grids**. John: "Cos obviously the more, we can build that in. And the more that that becomes, just becomes part of your lesson, then the more you are ticking those, the more you are making assessment more regularly part of your lessons. And beginning to build in a culture of assessment for learning. Which is something I think you are probably something you are improving on"; John: "I want to put something about assessment [TS6]…because that's the standard you wanted to focus on most"; Miles: "I think that really goes with what TF now really expects this term" • **Organising BTEC folders & long term planning.** John: "We need to kind of take a long-term approach to. We need to do that together really, but it's definitely worth you thinking about. And that is going to. And I think that's really useful for you in terms of your developing the way you plan lessons anyway, thinking about the long-term ways." • "**Having high expectations of group music making in samba and specifically matching the appropriate level of challenge for higher ability Y8s)"**	Ingredients (*Technical Rationality*) Pupil achievement-coverage Pupil achievement - cognitive
6	• Continuing to **improve routines and transitions** (during periods of class refocus) *"I would happy for 80-85%, and then hopefully, maybe if I add some extra praise, some kind of rewards, names on the board, ticks on the boards that might encourage that 15% 20% too."* • **Gauging student progress:** "*get more pupils to play in that slot. So I think that's maybe something I will try out"* • "*Yeah I think that's* ***[communicating student outcomes]*** *probably the next stage of what I need to be doing with that kind of class. Its taken me a while to get routines, but now they are there this is kind of my next focus, if that makes sense."* • ***"I guess knowing what pupils are where, in terms of what pathway they are on, and then focussing on specific students and making sure they know specifically where they should be by the end of the lesson…Or make them more accountable for their progress"***	Pupil actions and state Pupil achievement-cognitive Pupil knowledge

[39] these may not be the formally recorded targets, but those spoken aloud.

D	Targets/ next steps[40] Stated by beginning teacher • Suggested by mentor initially	Teacher Aim (Burn *et al*., 2000, 2003)
Dave		
1	• Extension tasks- Differentiation in order to avoid low level disruption • Objectives- student clarity • Non-verbal behaviour management- consistently using happy/ sad face board	Pupil achievement- cognitive. Pupil actions and state
2	• Checking for learning • Understanding difference between objectives and outcomes	Pupil knowledge and pupil achievement- cognitive. Self-learning
3	• AFL- student understanding- "need to know what individual students were able to do at the end of that lesson"; "challenge students and also get a better understanding of where they are" •	Pupil knowledge and pupil achievement- cognitive
4	• Planning homework- homework timetable • Differentiation (TS5)- identifying LA students making less progress and adopting strategies to support their progress • (TS4) "Promote a love of learning and children's intellectual curiosity is something I'd like to develop"- enquiry based learning.	Pupil achievement- coverage Pupil achievement- cognitive Pupil state
5	• "One thing I think I really liked that you did, which I'm going to use more, is just using the whiteboard. I noticed just how much you use it, and I hardly ever use my whiteboard."	Ingredients
6	• Managing transitions and pace: "It's definitely been a bit of a weakness of mine, the pace, and struggling to get to the end, and knowing how long tasks take, so that's something that I would like to work on in the future still" • "Target 2: use more quick fire ways, more AfL strategies, to gain understanding of low ability" • "trying to discover students' prior knowledge is earlier in the lesson to then assist me in order to be able to stretch and differentiate" • Student objectives-"Making those outcomes really clear, and making sure I know what I want certain students to achieve. And making sure that when I am planning, I'm making sure that I probably spending, honestly spending that extra ten minutes planning, putting that extra effort in, to be really clear in my mind what I want from them"	Pupil state Pupil knowledge Self-learning

[40] these may not be the formally recorded targets, but those spoken aloud.

Appendix P Sources identified (*FoR*)

Phase 1 Participant	**Sources used**
Ellie	• Feedback from university tutor • Subject studies • School-based professional studies programme
Will	• Formal observations of others • Formal CPD in the school • Informal observations of others • feedback, comments or suggestions by mentors and university tutors • Other teachers, including teachers on the same programme (BTs) • placements in another school (SSP)- • school documentation, such as SEN information (which includes practical pedagogical strategies) • Experience with other students • the mentor meeting itself
Fahad	• Previous placements
Sabina	• Second School placement • Mentor recommended reading • Mentor comments, suggestions and feedback
Nana	• Mentor comments, suggestions and feedback • University tutor observation and meeting • Youtube videos
Sebastian	• School resource ie scheme of learning • RJA2 & WA4 (university assignment) • Reading- Doug Lemov • AfL self-audit • Observations by university tutor

Main Phase participants

Conversation	Sources used (beyond classroom teaching)	What are they doing with this? How is it used? "draw on …make sense"
Catherine		
1	• Planning and marking • School based mentors- SM and PM • Subject department (sharing resources) • University tutors • BT's experience of learning at school	Used as resources, concrete ideas to use in classroom- practical Used to make sense of why a strategy might/ not work, in terms of the effect on the learner
2		
3	• Subject mentor • Subject specific pedagogical guidance (writing cycle- Pauline Gibbons and Pie Corbett) • Students and parents	Used to provide a model for planning, and used to evaluate planning and teaching To gain greater insight into student motivation
4	• Students • School based mentors- SM and PM • LDO- video observation of body language	To gain greater insight into student motivation Mentor probes and challenges thinking more- extending thinking Used to provide alternative, more objective, perspective on her teaching
5	• Joint observation with mentor of colleague in school (in another subject) • Subject mentor • "what they teach"= HEI/ TF guidance- notice how othered • working with TF trainees (SCL)	Used to provide practical ideas, and to evaluate own experiences and in light of differing guidance (ITE programme) More as critical friend/ joint discussion, although mentor still scaffolding/ extending thinking and understanding. Used to compare and contrast with their own understanding and practice- how far they have come

Dave		
Conversation	**Sources used (beyond classroom teaching)**	**What are they doing with this? How is it used?** **"draw on …make sense"**
1	• Mentor – observation of • PM Eric	• Exploring models seen (promoted by Eric): *"I've noticed (mentor) will just take a really non-acceptance approach to it…stops talking. Can be just a stare. Can just be a reiterate her expectations."* • Sharing strategies (managing voice levels; non-verbal reminders etc) • Mentor elicits reflection and offers suggestion
2	• Eric planning meeting • Extended School Centred Learning (Summer Institute school-based learning) • Reading- Embedded Formative Assessment, Dylan Williams • PM Eric	• Planning meeting- five lesson objective; planning backwards • Using a strategy seen there • Suggested by Eric as a way to help him make sense of the difference between intentions and outcomes (material not used in conversation itself)
3	• Feedback from PT observation • L's strategy- observed or shared in some way • PM Eric	• Setting targets that drive the focus of the conversation • A strategy to adopt • Suggestions and ideas shared. Mentor challenging thinking and assumptions
4	• Termly Review • Student progress data • Head of Department • "literature"	• Driving the conversation- setting targets and reviewing them • To inform targets- to focus attention • Identified as a future source of support- data analysis

	• SEN team	• Identified as future source of support *"to help aid me in that, and think about different ways of motivating them, and making sure that tasks are accessible."*
	• Other teachers, who teach the same (students)	• Identified as future source of support-*"to see if they have specific strategies"*
	• WA3- reading around differentiation	• Future source of support "*to see what methods they adopt"* • Future source of support: (sometimes see as separate)
	• Observation of L • Observation of M *"she probably has more enthusiasm when teaching it, which probably does brush off on the students*"	• *Strategy adopted: "I tried this in a lesson observation with L, and which went quite well actually, students were more engaged than they were normally"* • To contrast with his own experience.
	• WA2 "*I can go back to WA2 for this as well, because this is where I planned a scheme of work which only focused on one class, and used enquiry based learning. And to an extent it worked, but you know, I quite heavily reflected on that throughout my essay, and I did quite a lot of reading on enquiry*	• Future source of support *"go back to that and thinking about how I can use it for a range of classrooms"*

	based learning at the time as well, so be useful to go back to that. Like Margaret Roberts for example is like kind of the founder of enquiry based learning in geography, so maybe just going back to that and thinking about how I can use it for a range of classrooms." • "*speaking to other teachers who've tried out similar approaches in lessons, and see what routines they use in the classroom."* • *"C…speaking to C, how did you do that, how did you manage that?"* • *Speaking to other teachers abut other ways of methods"* • *Speaking to the SEN and EAL team "drawing on people who have a greater understanding than I do of their needs"* • *PM*	• "see what routines they use in the classroom" • Future source of support: Strategies to use • Coaching to elicit and stretch

5	• Charlotte's lesson and discussion afterwards "*using another FoR by observing Charlotte teach a lesson, so that helps my own learning. But then also thinking about what frames of learning that Charlotte herself might draw on, again to add frames of references to myself"* • PM	• Identify the *FoR* she draws on • Compare to his own practice • Identify strategies he can use • Provides a model, scaffolds conversation
6	• Charlotte's lesson (C5)- • Second School Placement • EFA project (whole school CPD) – hinge questions • PM Eric	• Informs the delivery of his lesson *"so I think I had that at the back of my mind to keep moving, with kids that can get off task"* • Used a strategy- 10:1 ratio for praise "*it was something I wanted to do"* • Eric reminds him- encourages use • Mentor eliciting mainly

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