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Teacher, Learner, Person: Understanding Student Teacher Learning in the Primary Foundation Subjects

Jennifer Huntsley

A thesis submitted to the University of Huddersfield in partial fulfilment of the requirements for the degree of PhD

Date

26th September 2025

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Ethics Declaration

I enrolled as a PhD student on 18th September 2017 and data collection commenced in December 2019. Ethical approval was granted by the University of Huddersfield's then School of Education and Professional Development, following the appropriate ethics policies at the time. This was prior to the April 2020 update to the university's Research Ethics and Integrity Framework.

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Abstract

This thesis investigates what and how student teachers learn to teach the primary foundation subjects in Initial Teacher Education (ITE) in England. Despite their role in providing a broad and balanced curriculum, the foundation subjects are often marginalised in both schools and ITE, raising questions about how student teachers develop the knowledge and confidence to teach them.

The study is located within a constructivist paradigm and adopts a qualitative case study design. The data comprised student teachers' written reflections and recorded conversations, generated as part of their ITE programme. Reflexive Thematic Analysis was used to interpret how student teachers described their experiences of learning to teach the foundation subjects across university and school contexts. The analysis was informed by existing literature on teacher knowledge, learning, and reflection, which provided sensitising concepts for interpretation.

Findings suggest that student teachers understood their learning through three lenses: *teacher, learner* and *person*. Through the teacher lens, student teachers foreground their perceived professional responsibilities and their enactment in practice. Through the learner lens, student teachers reflect on the relational, affective, and situated conditions that support learning. Through the person lens, student teachers reflect on their biographies, values, and identities. University reflections were often characterised by single lens reflections, whereas placement reflections encompassed multiple and overlapping stances. These insights led to the development of the Overlapping Lens Model of Student Teacher Reflection, which describes how reflection, learning and knowledge are in dynamic relation.

The Overlapping Lens model constitutes the thesis' original contribution to knowledge. It offers a conceptual framework to describe the nature of student teachers' reflections, learning and knowledge, based on critical depth and research paradigms of teacher learning. The Overlapping Lens model emphasises the fluidity of reflective levels within individual instances of reflection. Furthermore, the model gives insight into student teachers conceptualisations of learning and knowledge in the primary foundation subjects, implying diverse and varying perspectives, even within single accounts. This is distinct from existing models, which tend to imply that reflection occurs at discrete levels and fail to acknowledge inconsistencies in the student teachers' paradigmatic assumptions that underpin their perspectives on learning and teaching.

1. Introduction

How best to prepare teachers remains a central question in education (Anderson et al., 2025; König et al., 2024). In England, Initial Teacher Education (ITE) encompasses multiple routes (Department for Education, 2024c), all of which implement curricula that include elements of formal preparation and experiences of school-based practice. Often, the site of formal preparation (commonly, the university) is positioned as a space for engaging with research, theory and critical reflection, while schools are perceived to provide the immediacy or classroom experience and immersion in professional cultures (Murray, 2015; Van Vuuren, 2020). Learning to teach the primary foundation subjects takes place across both these sites: universities may introduce student teachers to subject identities, pedagogical frameworks and theoretical perspectives, while schools offer opportunities for student teachers to enact, apply, and refine their practice in the foundation subjects (Misra & Webster, 2015). Preparedness to teach the foundation subjects therefore depends on how student teachers experience, connect, and reconcile learning across these two contexts. This study explores how they make sense of their knowledge and learning within and across both sites.

1.1. Learning to teach in England

To theorise these processes, this chapter first considers broader perspectives on learning to teach in England. Lofthouse et al (2021) suggest two broad categories of learning to teach: *enquiry* and *adherence*. Through enquiry, learning involves making sense of teaching; knowledge is complex and uncertain, and learning is perceived as a long struggle. The adherence perspective views knowledge as certain, where learning

occurs ‘in flight’ and involves doing the right thing (Lofthouse et al., 2021, p. 694). The conceptualisation of learning to teach as a process of enquiry aligns with academic perceptions of the teacher as an agentic professional, whereas adherence more closely aligns with recent education policy in England (Lofthouse et al., 2021). This section considers the differences in these conceptualisations of student teacher learning in relation to prevalent societal and cultural perspectives.

1.1.1. Learning to make sense of teaching

The Universities’ Council for the Education of Teachers (UCET) is a UK organisation representing higher education institutions engaged in teacher education and educational research. It acts as a collective voice for the university sector in shaping policy and promoting the intellectual dimensions of teaching (e.g., La Velle et al., 2019). In their vision for high quality teacher education, UCET (2020) position teachers as intellectually curious, responsible professionals. Teachers should hold epistemic agency, where they understand knowledge, policy and practice as ‘contestable, provisional and contingent’ (p.2). This implies that teachers challenge fixed views of knowledge and recognise the situated and contextual nature of practice. It suggests that “good” teachers are those who are questioning, reflective and flexible in their thinking. This aligns with calls for teachers to be *research literate* and ‘discerning consumers’ of research who are able to critically appraise its implications (BERA-RSA, 2014, p. 5). Teacher learning is framed as engagement with knowledge sources, including research, peers and direct experience, leading to competence and confidence in the professional, thoughtful and intellectual endeavour that is teaching. This positions knowledge as underpinning the teacher’s practice and implies that student teacher learning is a cognitive, relational and reflective

process. The roles of knowledge and reflection are further emphasised in UCET's (2020) assertion that practice involves teachers making informed decisions. Such decisions should be based on (self) critical interrogation of theories and research that underpin, challenge, or illuminate practice. Again, this builds on the work of BERA-RSA (2014), who suggest that through ongoing processes of self-reflection and engagement in research, teachers may be empowered to enhance their practice.

1.1.2. Learning to do the right thing

Learning to teach as *adherence* aligns with conceptualisations of teaching as a craft (Winch et al., 2015). In contrast to the enquiry perspective, this challenges the importance of the teacher's critical engagement with research. Craft-based views portray teacher learning as the acquisition of the technical knowledge needed to enact practice, learned from imitating experts in the field. Here, conceptual knowledge is derived from experience and 'commonsense' – the homilies and maxims that are mediated through teacher conversations, often infused with the unconscious repetition of historical or discredited theories (Winch et al., 2015, p. 209).

A similar but distinct view of the teacher is that of the *executive technician* (Winch et al., 2015). Like teaching as a craft, this view frames teacher learning as the acquisition of technical knowledge. However, rather than rejecting research, this view positions educational research as a source of knowledge for determining "what works" in the classroom. Teachers are expected to implement protocols that have been determined through research, but they are not expected to engage in critical discernment or interpretation themselves. This leads Winch et al (2015) to describe craft and technical views of teaching as 'two sides of the same coin' (p.209), as both reject the notion of

uncertainty in knowledge claims. As previously established, this is directly at odds with learning to teach as enquiry, where knowledge is viewed as uncertain and complex (Lofthouse et al., 2021).

1.1.3. England's policy landscape

The landscape of educational policy in England strongly aligns with the perspective of learning to teach as adherence (Lofthouse et al., 2021). Indeed, Michael Gove (2011), then Secretary of State for Education, explicitly stated: 'Teaching is a craft and it is best learnt as an apprentice'. This is illustrative of the shift in educational policy that was ushered in by the Coalition Government as they came to power in 2010 (Mutton & Burn, 2024). Building on policies and structures established by the previous Labour Government, under the Coalition Government there was a significant increase in the number of school-based routes to teacher qualification (Mutton & Burn, 2024). In turn, this led to reduced influence of universities, on the grounds that contextualised, practice-based routes would better prepare student teachers for the realities of teaching (Mutton & Burn, 2024). Reform of the Teachers' Standards (Department for Education, 2011) emphasised assessment of student teachers' behaviours over intellectual engagement (Turu Porcel, 2020), further underscoring adherence as the dominant conceptualisation of student teacher learning in the English policy landscape.

As well as craft-based perspectives, executive technician views are also evident. Recent policies have emphasised evidence-based practice (e.g., Goldacre, 2013), which aims to reduce educational inequalities through the application of scientific research findings. This has led to the development of government funded, research-based 'toolkits' for teachers (e.g., Education Endowment Foundation, 2025). This is indicative of the "what

works" approach, which values educational research that can demonstrate a measurable "impact" on learning through economically viable teaching strategies (Menter, 2021b). This strongly aligns with the view of the teacher as an executive technician, responsible for implementing the teaching strategies identified in research-based toolkits to raise pupil attainment. However, such toolkits are described as 'panaceas and snake oil', based on research that valorises Randomised Control Trials (RCTs) over all other approaches (Menter, 2021a, p. 26). Likewise, the "what works" approach is strongly criticised for overlooking the moral and ethical dimension of teaching (Biesta, 2007b; 2010).

These changes have had significant implications for university ITE provision. Following the rise in diverse routes into teaching, tighter regulation of the ITE curriculum was introduced in order to address concerns around inconsistencies in provision (Mutton & Burn, 2024). The Initial Teacher Training Early Career Framework (ITTECF) (Department for Education, 2024b) is suggested to provide a golden thread from ITE to the first years as a qualified teacher (Department for Education, 2022; Greening, 2017). Positioned as 'the minimum entitlement' for student teachers, it sets out a series of 'know that' and 'know how to' statements, built from 'the best available evidence from this country and around the world, assured by the Education Endowment Foundation' (Department for Education, 2024b, p. 4).

The ITTECF and its predecessors, the Early Career Framework (ECF) (Department for Education, 2019a) and the Core Content Framework (CCF) (Department for Education, 2019b), include an extensive reference list, providing the research evidence that underpins its content. In line with the "what works" stance, the research is consistently

'underpinned with scientistic assumptions', with 'an overwhelming focus on identifying causal mechanisms in education' (Hordern & Brooks, 2023, pp. 810–811). As such, moral and philosophical debates of education are replaced by evidence, through this process of 'scientification' (Helgetun & Menter, 2022, p. 98). Student teacher learning is equated to the acquisition of skills and information, and the personal and emotional aspects of teaching are all but ignored (Vickers-Hulse et al., 2024).

Hordern et al (2024) argue that the prescriptive framework of the ITTECF implies that questions of teacher expertise have been resolved, thus placing them 'beyond debate' (p. 614). Universities might be considered well-positioned to debate questions of teacher expertise, given that they provide safe environments for challenge and critique (UCET, 2020). However, all ITE providers are assessed by their fidelity to the ITTECF (Ofsted, 2024a), with the risk of losing accreditation should they be judged unfavourably. Therefore, the professional view of teaching, where knowledge is recognised as contestable and contingent, is directly undermined by the drive for 'consistency as a proxy of quality' (Mutton & Burn, 2024, p. 221). This underscores how the conceptualisation of learning to teach as adherence is entrenched in England's educational policies and has direct influence in shaping university ITE provision. As adherence, teaching is the implementation of technical procedures, and learning to teach is acquisition of the required knowledge and skills. However, these procedures are based upon the ITTECF, which represents 'an imaginary notion of instructional practice that does not fully grasp the context of teacher's work' (Hordern & Brooks, 2024, p. 5). As enquiry, teaching is a complex endeavour, encompassing personal, intellectual, practical and moral dimensions. Learning to teach involves cognitive, relational and

reflective engagement. Despite this, student teachers are granted entry to the profession through assessment of their adherence to pre-defined procedures (Department for Education, 2011), and the quality of ITE provision is judged by the same measures (Ofsted, 2024a). This leaves teacher educators and student teachers potentially caught in the gap between adherence and enquiry, where those who view learning to teach as enquiry must engage in acts of resistance if their practice is to align with their principles (Pierlejewski, 2025).

Teacher educators might enact a 'shadow curriculum' in spaces that are invisible to regulators, such as in their classroom discussions or in the embodiment of ideologies in their teaching practice (Pierlejewski, 2025, p. 330). However, student teachers are unlikely to be able to resist in this way. Firstly, student teachers learn their practice in school settings that may be unfamiliar to them, where they have low social capital and little knowledge of the setting's established values and procedures. Secondly, their relatively lower experience means that they are less likely to know where or how it is "safe" to resist. This is compounded by the high-stakes nature of assessment procedures, where failure to adhere could lead to significant professional and financial loss. Furthermore, this loss is borne by the student teacher individually, whereas the risk for teacher educators is more likely to be at an institutional level. It is therefore pertinent to study the ways in which student teachers make sense of their knowledge and learning throughout their ITE.

This study purposively adopts the language of the writer's theoretical stance of student teacher learning as enquiry and resist conceptualisations of learning as adherence. Initial Teacher *Education* (ITE), rather than Initial Teacher *Training* (ITT), is used to describe

the routes into qualifying as a teacher. The term *training* holds technicist implications, where teaching is reduced to the acquisition of skills and behaviours (Harrison-Palmer, 2022). By contrast, *education* reflects a broader, more holistic conceptualisation that encompasses intellectual, moral and relational dimensions of learning to teach (Mutton & Burn, 2024). ITE is also the preferred terminology within the academic profession and literature (e.g., UCET, 2020), whereas ITT has been more closely associated with government policies that frame teaching as a craft or technical occupation (e.g., Department for Education, 2021). Likewise, the term *student teachers* is used rather than *trainees*, to emphasise their dual role as both learners and developing professionals (Beck, 2006).

1.2. Learning to teach the foundation subjects

In England, pupils are entitled to a 'balanced and broadly based' curriculum that promotes spiritual, moral, cultural, mental and physical development alongside preparing pupils for later life (Department for Education, 2013, p. 5). With the establishment of the National Curriculum for pupils aged over 5 years, subjects were categorised as *core* – English, mathematics, and science – and *foundation* – history, geography, design and technology (D&T), music, art and physical education (PE) (Education Reform Act, 1988). It established that religious education (RE) should be taught in schools, with a locally agreed syllabus informed by a standing advisory council (Education Reform Act, 1988). Since then, through various reforms, the foundation subjects now also include computing and languages, with schools also required to make provision for personal, social, health and economic education (PSHE) (Department for Education, 2013).

In the Early Years Foundation Stage (EYFS), for children aged 3-5 years, three prime areas and four specific areas are set out (Department for Education, 2024a). The prime areas are:

- communication and language
- physical development (PD)
- personal social and emotional development (PSED)

The specific areas are:

- literacy
- mathematics
- understanding the world (UTW)
- expressive arts and design (EAD)

For brevity, this study takes 'the foundation subjects' to mean the non-core subjects of KS1 and KS2, including PSHE, and the EYFS areas of PD, PSED, EAD and UTW.

1.2.1. In primary schools

Currently, the National Curriculum (Department for Education, 2013) is positioned as one component of the broader school curriculum, which should extend beyond statutory requirements. Across the programmes of study for each subject, the National Curriculum claims to outline the 'essential knowledge' needed to be an 'educated citizen', introducing pupils to 'the best that has been thought and said' and engendering 'an appreciation of human creativity and achievement' (Department for Education, 2013, p. 6).

Despite this, there is a long history of the diminishment of the foundation subjects, both in schools and in ITE. As far back as 1990, "practical" subjects are described as marginalised within the curriculum, with subjects like PE, art, and music perceived as low status by pupils, teachers and policy makers (Sparkes et al., 1990). More recently, Barnes and Scoffham (2017) draw attention to how this low status is reflected in government documentation, for example, through the relative lack of detail in the National Curriculum programmes of study for foundation subjects compared to core subjects (Department for Education, 2013). High-stakes statutory assessments are suggested to have led to curriculum narrowing or distortion, where more teaching time is devoted to subjects that are tested (Looney, 2009; West, 2010). This is particularly pronounced for children from already marginalised groups, such as those deemed lower-attainers (Hargreaves et al., 2023) or those growing up in poverty (Wrigley, 2014).

In response to concerns regarding the narrowing of the curriculum, the Ofsted inspection framework (2019a) gives increased priority to the school curriculum's breadth and depth. It emphasises the entitlement of all pupils, including the most disadvantaged, to a broad and balanced curriculum, warning against disproportionate emphasis on core subjects at the expense of foundation subjects. This entitlement is framed as a matter of inclusion and equity, with Ofsted highlighting that disadvantaged pupils are disproportionately harmed when access to a full curriculum is restricted (Ofsted, 2019a). Schools are therefore expected to articulate a coherent curriculum intent, with carefully sequenced content that ensures cumulative progression in children's learning. Ofsted explicitly frames learning as a change in long-term memory: 'if nothing has been altered in long-term memory, nothing has been learned' (Ofsted, 2019a). Curriculum implementation is

therefore judged on its capacity to secure knowledge over time. Likewise, assessment is expected to be curriculum-embedded, designed to check what pupils can remember and apply. Finally, the framework underscores the importance of teacher expertise in content and pedagogical knowledge for each subject.

Recent evaluation suggests that primary school curriculums are now broader and more ambitious, with significant improvements to the mapping and sequencing of the knowledge and skills taught in the foundation subjects (Ofsted, 2025). There is evidence that schools are giving greater attention to inclusion in the foundation subjects and the ways in which teachers can secure changes in long-term memory. Subject leaders are suggested to have greater curricular responsibility and developed greater expertise. That said, Ofsted (2025) remain concerned about variable leadership expertise, especially in smaller schools where limited staffing means a smaller pool of staff expertise and teachers being required to lead multiple subjects.

1.2.2. In university ITE

Although Ofsted's (2025) increased scrutiny of the foundation subjects seems to have shifted school-level practice towards a broader and more ambitious curriculum, far less is known about how these policy priorities have translated into ITE. Consequently, while schools are under pressure to demonstrate coherence, breadth and inclusion in the foundation subjects, it remains unclear how student teachers are being prepared to meet these expectations. There is evidence that the low status of the foundation subjects is reproduced through university ITE programmes, where foundation subjects are allocated significantly less curriculum time than core subjects (Duncombe et al., 2016; Pratt & Atkinson, 2020). This means that, despite ongoing calls to prioritise subject knowledge

development (e.g., Carter, 2015; Ofsted, 2019a), there are significant concerns regarding student teachers' knowledge in the foundation subjects (Barnes & Scoffham, 2017; Catling, 2017; Duncombe et al., 2016; Pratt & Atkinson, 2020).

There is relatively little research concerning the conceptual or theoretical underpinning for learning to teach the foundation subjects in university ITE. Research tends to focus on a specific subject (e.g., Duncombe et al., 2016; Wilberforce & Pratt, 2019), rather than represent 'the holistic nature of how primary teachers work across an extended range of curriculum subjects simultaneously, and the demands this makes of them' (Pope, 2019, p. 294). Indeed, Davis and Boerst (2014) challenge the view of primary teachers as generalists, emphasising the requirement to hold 'extensive expertise' (p. 6) across many foundation subjects.

Catling (2017) suggests that, in university ITE, the foundation subjects are often part of one module, but taught discretely. Based on their work in teaching such a module, teacher educators Misra and Webster (2015) propose that learning to teach each primary foundation subject involves:

- subject identity: substantive and disciplinary knowledge of the subject, being a member of that community of practice
- subject pedagogy: how the subject is learned and effective teaching approaches
- the teachers' toolkit: resources and teaching ideas that can be applied in practice

Misra & Webster, 2015, p. 41

This approach was found to be a valuable scaffold in primary ITE programmes, helping student teachers compare pedagogies across foundation subjects (Misra & Webster, 2015). That said, while it enhanced appreciation of the theoretical dimensions, most

student teachers still prioritised its practical toolkit, especially undergraduates with less teaching experience. Some student teachers suggested that the theoretical elements should be taught earlier in the programme, before the placement's time pressures and accountability shifted their focus towards more instrumental aspects of teaching.

This aligns with more recent research (Thomson & Vainker, 2022) that suggests university teacher educators adopt one of two approaches: either a theory-based approach that provides student teachers with a conceptual framework to underpin their teaching, or a more practical approach that provides a beginning repertoire of techniques to develop in practice. Often, the rationale for the theory-based approach is justified by the need to prepare student teachers to be critically reflective curriculum makers (Thomson & Vainker, 2022, p. 23). This aligns with the enquiry view of learning to teach, where the teacher is an agentic professional (Lofthouse et al., 2021; UCET, 2020). The practical approach was also based on the need to prepare student teachers to develop their practice in school, with the belief that developing practical techniques would increase student teachers' confidence to "have a go" (Thomson & Vainker, 2022). This emphasises the personal and relational aspects of learning, implying that the enquiry perspective underpins university practices in preparing student teachers to teach the foundation subjects.

The school-based placement is often regarded by universities as an important means through which student teachers learn to teach the foundation subjects, compensating for the comparatively limited time allocated in university-based ITE curricula (Thomson & Vainker, 2022). This is concerning, as opportunities to teach foundation subjects during the placement are suggested to be limited, and rarely prioritised for monitoring (Caldwell

et al., 2021; Thomson & Vainker, 2022), which raises questions about the extent to which student teachers are prepared to teach the foundation subjects. It suggests that student teacher learning is more likely to be shaped by school cultures, agendas and expertise than a clearly articulated ITE curriculum (Becher & Orland-Barak, 2018; Thomson & Vainker, 2022). Ofsted's recent renewed focus on the foundation subjects may mean that student teachers are now more likely to encounter thoughtfully sequenced curriculum frameworks and greater levels of subject expertise in their placement settings (Ofsted, 2025). However, this remains set against a policy landscape of learning to teach as adherence, characterised by a "what works" approach, and systemic conditions that oppress critical engagement with research, theory and existing practice.

Learning to teach the primary foundation subjects can be seen as illustrative of the tension between learning to teach as enquiry or adherence. Universities have the opportunity to teach student teachers about the identity of each of the foundation subjects (Misra & Webster, 2015): the disciplinary theories and conceptual frameworks that might empower student teachers to become epistemic agents and active curriculum makers (Thomson & Vainker, 2022; UCET, 2020). However, universities must also prepare student teachers for the contexts in which they will teach; indeed, due to university time constraints, student teachers must often learn how to teach the foundation subjects *within* these contexts (Becher & Orland-Barak, 2018; Thomson & Vainker, 2022). Little is known about how student teachers make sense of learning to teach the foundation subjects, particularly across university and school-based learning experiences. This study seeks to address this gap.

1.3. Statement of the problem

Teacher knowledge has often been conceptualised as comprising both theoretical and practical elements, a distinction that underpins the long-standing notion of the "theory-practice gap" in ITE (Dewey, 1904; Korthagen, 2001; Murray, 2015). Universities have traditionally been viewed as the sites of transmitting formal, research-based knowledge, while schools have been seen as the contexts where practical knowledge is learned and applied (Van Vuuren, 2020). However, this binary has been widely critiqued for oversimplifying the complex, situated and dynamic nature of professional knowledge (Biesta, 2010; Hermansen & Mausethagen, 2023; Korthagen, 2016; Schön, 1983). Instead, student teachers are suggested to learn through the creation of epistemic relations between a diverse range of knowledge resources across both university and placement contexts (Heikkilä & Hermansen, 2024). This study therefore attends to how student teachers reflect upon and ascribe meaning to their university-based and school-based experiences.

There is relatively little research that captures the ways that student teachers themselves understand and reflect on their learning in relation to the foundation subjects, particularly in the university setting. Most studies have focused on individual subjects (e.g., Wilberforce & Pratt, 2019) or on structural aspects of provision (e.g., Catling, 2017), rather than on student teachers' voices and experiences across the curriculum as a whole. This study therefore addresses a critical gap by investigating student teachers' reflections on their learning to teach the foundation subjects in both university ITE and the school-based placement, seeking to understand how their knowledge changes and the processes by which they learn.

The study views knowledge, learning and reflection as central concepts of student teachers' experiences in learning to teach the foundation subjects. Broadly, it is assumed that knowledge underpins the content and pedagogy of teaching; learning describes how student teachers engage with and construct this knowledge across different contexts; and reflection enables learning to happen. In Chapter 2, the nature of student teacher knowledge, learning and reflection are explored in detail.

1.4. Purpose and aims of the study

The research was guided by the following aims:

- To understand what and how student teachers learn to teach in the primary foundation subjects during their university-based and school-based experiences
- To compare how the student teachers' knowledge and learning change between university-based and school-based experiences

From this, three research questions were derived:

1. How do student teachers' reflections on university-based experiences illustrate the ways they make sense of learning to teach the primary foundation subjects?
2. How do student teachers' reflections on school-based placement experiences illustrate the ways they make sense of learning to teach the primary foundation subjects?
3. In what ways do student teachers' knowledge, learning and reflection change as they move between university and placement settings?

1.5. Thesis outline

The thesis is organised into six chapters:

Chapter 1 – Introduction

This chapter has set out the context of initial teacher education in England, focusing on the tension between two ways of conceptualising learning to teach: *enquiry* (making sense of teaching as a complex endeavour) and *adherence* (doing the right thing by following set rules and practices). It has explained why the study is needed and introduces the research aims and questions.

Chapter 2 – Literature Review

This chapter reviews research on three key ideas that underpin the study: knowledge, learning and reflection. It explores definitions of student teacher knowledge, perspectives on student teacher learning, and the role of reflection. Four paradigms of student teacher learning are established, as are four depth levels of reflection. This chapter outlines the conceptual framework that guides the study.

Chapter 3 – Methodology – This chapter describes how the research was designed and carried out. It explains the constructivist stance taken, the case study approach, and the collection of naturally occurring documentary data. It outlines how the data were analysed using Reflexive Thematic Analysis and discusses issues of ethics, quality and researcher positionality.

Chapter 4 – Findings and Discussion for University Reflections

This chapter presents findings from student teachers' reflections on their university-based experiences. It introduces three *lenses* – person, learner and teacher – as the stances student teachers took in making sense of their learning. This chapter connects these lenses with the depth levels of reflection and paradigms of learning to teach that were established in the literature review.

Chapter 5 – Findings and Discussion for Placement Reflections

This chapter presents findings from student teachers' reflections on their school-based placement. It shows that reflections in this setting were more complex, often overlapping across lenses. This chapter develops the idea of an *overlapping lens model*, illustrating how student teachers connected knowledge, learning, and reflection in practice.

Chapter 6 – Discussion and Conclusions

This chapter brings together the findings and discussion to answer the research questions. It highlights the original contribution of the study: *the overlapping lens model of student teacher reflection*. The chapter discusses the study's implications for initial teacher education, policy, and future research.

2. Literature Review

This chapter reviews the relevant literature, focusing on the three interrelated concepts of knowledge, learning, and reflection. These concepts provide the framework for understanding how student teachers make sense of teaching and learning the foundation subjects across both university and placement settings. The chapter begins with discussion of how student teachers perceive their knowledge and learning in relation to teaching the primary foundation subjects. The chapter then moves on to examining how teacher knowledge may be theorised, including discussion about the relationship between theoretical and practical knowledge and the well-established, longstanding metaphor of the "theory–practice gap." Following this, perspectives on student teacher learning are discussed, where reflection is identified as an integral element that underpins student teacher learning across diverse paradigms. This leads to a discussion of models of reflection and how student teacher reflection may be supported.

2.1 Student teacher perspectives on knowledge and learning to teach the primary foundation subjects

This section discusses student teachers' perspectives on knowledge and learning needed for teaching the primary foundation subjects. There is a paucity of empirical research that addresses this area, hence the significance of the present study. Indeed, such is the case regarding research literature that addresses student teacher beliefs on learning per se (Fives and Gill, 2014). Therefore, inferences are drawn from studies that present student teachers' broader perspectives on teaching (Tabachnick, Popkewitz and Zeichner, 1979), interpretations of subject knowledge (Pope, 2017), and beliefs about

learning, teaching and teaching knowledge (Fives and Buehl, 2010; Ferguson and Bråten, 2018).

Nearly 50 years ago, empirical research from Tabachnick, Popkewitz and Zeichner (1979) considered three conceptualisations in relation to student teacher perspectives on 'the problem of teaching' (p.22). Perhaps surprisingly, there was little evidence that student teachers viewed teaching as *a problem of knowing*; student teachers were 'impatient' or 'indifferent' about questions concerned with the meaning or purpose of what pupils were asked to learn (Tabachnick, Popkewitz & Zeichner, 1979, p. 23). Student teachers were more concerned with questions around class control and behaviour management, indicating their perspective on teaching as *a problem of acting* (Tabachnick, Popkewitz and Zeichner, 1979, p. 25). The student teachers described teaching practice as procedural, routine, technical and control of teaching practice, where pupils were corrected, kept quiet and forced to be attentive, ignoring questions of what was to be taught or why (Tabachnick, Popkewitz and Zeichner, 1979). That said, there was evidence that the student teachers wanted to develop a personal teaching style and professional approach, but this was stifled by their need to survive in high-stakes and low-trust environments; in this sense, the student teachers perceived teaching as *a problem of being* but were unable to fully *become* their professional identities (Tabachnick, Popkewitz and Zeichner, 1979).

More recently, Pope (2017) demonstrates how primary student teachers, university teacher educators and school mentors understood the term *subject knowledge* to represent general teacher knowledge with its interpretation strongly shaped by culture, context and personal experience, rather than describing *subject knowledge* as a critically

distinct concept. Specifically in relation to student teachers, there was a consistent view that holding strong subject knowledge enhanced the student teacher's ability to teach and their confidence in their own practice (and that the opposite was true of weak subject knowledge). However, many student teachers held relatively shallow, pragmatic perspectives, focused on propositional knowledge and its routine, technical role in teaching, concerned with "giving" or "passing on" the correct knowledge, particularly in relation to curriculum delivery (Pope, 2017). Others held more complex conceptions of subject knowledge, which Pope relates to Shulman's (1986, 1987) *pedagogical concept knowledge* (PCK), involving the ability to deconstruct concepts, teach the same concept in multiple ways, understand different perspectives, and anticipate potential misconceptions. Pope (2017) also describes how some student teacher perspectives on subject knowledge included aspects of child development and understanding of what a group of learners could or could not do; she aligns these perspectives with Shulman's (1987) category of *knowledge of learners and their characteristics*. Similarly, Pope (2017) notes how student teachers, more so than school mentors and university teacher educators, made frequent reference to the different curriculum practices encountered across different schools and classroom cultures. In this sense, Pope (2017) argues, student teachers relate subject knowledge to the social and cultural context in which it is situated, aligning with Shulman's (1987) category of *knowledge of educational contexts*. Notably, Pope (2017) found that within the student teachers' conceptions of subject knowledge, a small number included references to Shulman's (1987) *knowledge of educational ends, purposes and values and their philosophical and historical grounds*. This was often expressed in terms of personal accountability to know the required subject knowledge set out by the statutory curriculum. Elsewhere, student teachers

referred to subject knowledge and professional values, such as a moral drive to develop children's social skills or spiritual awareness. While references were made to educational values and to educational ends in terms of accountability, no references were made to educational *purposes*. This aligns with the earlier work of Tabachnick, Popkewitz and Zeichner (1979), which highlighted the tendency of student teachers to ignore the question of *why* in favour of *how*.

Ferguson and Bråten (2018) describe how an individual's beliefs act as a 'scaffold, framework, or filter that guides their actions, interpretation of new information, and the goals they set for themselves' (p.349). Through semi-structured focus group interviews, Ferguson and Bråten (2018) explore Norwegian student teachers' beliefs about learning, teaching, and teacher knowledge. Concurrent with Pope (2017), the Norwegian student teachers believed that it was imperative they held strong content knowledge to stay "a step ahead" of their pupils, describing the knowledge needed by the teacher as far outweighing the contents of the pupils' textbook (Ferguson and Bråten, 2018, p. 358). Like earlier research (Patrick and Pintrich, 2001), Ferguson and Bråten (2018) found the student teachers tended to conceptualise learning as a *product* of teaching rather than a *process*, implying transmissive views of teaching and learning. These beliefs echo Pope's (2017) findings, where some student teachers conceptualised subject knowledge in terms of propositional knowledge to be "given" to pupils. The student teachers also believed classroom management skills – such as organisation, time management, managing pupils' behaviour, and taking a leading role – to be important traits that effective teachers must develop in order to "deliver" successful lessons (Ferguson and Bråten, 2018). This chimes with Tabachnick, Popkewitz and Zeichner's (1979) finding that

student teachers tend to conceptualise teaching as a problem of *acting* rather than a problem of *knowledge* or a problem of *being*.

Ferguson and Bråten (2018) found the student teachers held a prominent belief that motivation was important in learning, and teaching should therefore include activation and variation, again supporting previous research findings (e.g., Turner, Christensen and Meyer, 2009). This suggests that the student teachers were concerned with *how* they might achieve the product of learning, implying some pedagogical concern - perhaps *general pedagogical knowledge* (Shulman, 1987) - which links with Pope's (2017) findings where some student teachers' conceptions of subject knowledge encompassed notions of how the content might be taught. It is also a further example of how student teachers perceive teaching as action, rather than knowledge or being (Tabachnick, Popkewitz and Zeichner, 1979).

Notably, Ferguson and Bråten (2018) found the strongest belief among student teachers was related to diversity, both in terms of pupil learning and the professional responsibility to adapt teaching approaches accordingly. However, this seemed to be understood as personal "learning styles" – specific and stable ways in which individuals learn best, such as through visual, auditory or kinaesthetic methods. This meant that, despite the lack of research base, the student teachers framed teaching as the responsibility to deliver information in varied ways to cater to as many different learning styles as possible. Therefore, although concerned with diversity of learners' needs, the student teachers' beliefs here again chime with the shallow pragmatic perspectives in Pope (2017), and the technical, procedural concerns from Tabachnick, Popkewitz and Zeichner (1979).

Alongside this, Ferguson and Bråten (2018) also found that the student teachers held a belief that knowledge about the social aspects of the classroom was important. This included knowledge of specific children, general knowledge about diagnoses or background factors, and characteristics such as care, patience and enthusiasm. This aligns with Pope's (2017) research, where student teacher conceptions of subject knowledge included references to Shulman's (1987) categories of *knowledge of learners and their characteristics* and *knowledge of educational contexts*. It also chimes with *teaching as a problem of being* (Tabachnick, Popkewitz and Zeichner, 1979), in that student teachers were concerned with personal characteristics of being caring, patient and enthusiastic.

Fives and Buehl (2010) develop a framework of teacher beliefs, through a study with a sample of both qualified and student teachers. The framework illustrates (student) teachers' beliefs around teaching knowledge, qualities and skills, and teacher learning (Fives and Buehl, 2010). *Domain knowledge* explores (student) teachers' beliefs about the knowledge needed for effective teaching. As with Pope (2017) and Ferguson and Bråten (2018), content knowledge, pedagogical knowledge, and knowledge of children were all cited as important aspects of domain knowledge (Fives and Buehl, 2010). Classroom management was another recurring theme; however, in contrast to Ferguson and Bråten (2018), this was not driven by the responses from student teachers, but by participants who were qualified and practising. Furthermore, Fives and Buehl (2010) found that (student) teachers considered *knowledge of the self and other fields* to be an important aspect of knowledge needed for teaching. This included self-awareness, knowledge of one's own strengths and weaknesses, but also knowledge of the world and

culture beyond the classroom. This chimes with Pope's (2017) findings that a small number of student teachers described a sense of professional accountability and educational values informed by their personal philosophies of education within their conceptions of subject knowledge. It also relates to notions of teaching as a problem of being (Tabachnick, Popkewitz and Zeichner, 1979), as the (student) teachers believe they must understand both themselves and the wider world to be an effective teacher, and how this might "show up" within their classroom practice, implying a belief that teaching is something deeper than knowledge or action.

Teaching as a problem of being was foregrounded in the frame *domain qualities and skills* for effective teaching (Fives and Buehl, 2010). Here, (student) teachers believed that personal dispositions were important, including *nurturance and care*, *enthusiasm*, and *integrity and commitment*. Alongside this, there were aspects of teaching as a problem of acting, as student teachers believed it was important for teachers to be skilled in *communication* – including giving clear explanations and building relationships – and *adaptability* – including flexibility and organisation. Therefore, within this frame, (student) teachers seemed to believe teaching to be both a problem of *being* and of *acting*, reinforcing the idea that these perspectives are experientially interwoven (Tabachnick, Popkewitz & Zeichner, 1979).

The frame *sources of knowledge* identified six themes relating to (student) teacher beliefs about sources of teaching knowledge (Fives and Buehl, 2010). *Formal preparation* and *formalised bodies of information* – such as teacher education classes and professional development experiences – were cited, but *never* as the sole sources of teaching knowledge (Fives and Buehl, 2010, p. 486). Three of the sources of teaching knowledge

related to experiences of the classroom: *observational and vicarious experiences; interactive and collaborative experiences; enactive experiences*. Furthermore, (student) teachers often attributed greater weighting or value to the meaning constructed from personal experiences than from other sources (Fives and Buehl, 2010, p. 488). Interestingly, some student teachers believed *self-reflection* to be a source of teaching knowledge (Fives and Buehl, 2010, p. 487), implying they drew a distinction between *experience* and *their reflection upon it*. This aligns with Dewey's (1938) theory of experiential learning (discussed below), and suggests a more nuanced perspective than those participants who understood meaning to be attached to the experience itself, rather than their interpretation of it.

Together, these empirical studies suggest that student teachers' perspectives on knowledge and learning tend to foreground technical competence, content mastery, and classroom management, often conceptualising learning as the product of effective delivery. Although there was some emerging evidence of more complex and nuanced understandings of pedagogical content knowledge, learner characteristics, and contextual influences, only limited attention was given to questions of purpose and the epistemic nature of what is to be learned. Indeed, concerns relating to purpose were often tied to external measures of professional accountability, such as knowing the content of the statutory curriculum. Notably, these studies do not focus specifically on the primary foundation subjects, meaning that student teacher conceptualisations of their own knowledge and learning within these domains remains underexplored. This gap underscores the significance of the present study. Having considered relevant empirical

research, the literature review now discusses theoretical perspectives on student teacher knowledge and learning.

2.2 Theoretical perspectives on student teacher knowledge

Defining what constitutes teacher knowledge is complicated by the fact that it takes different forms depending on whether its purpose is for *action* or for *understanding* (Korthagen, 2010). As Connelly and Clandinin (1985) note, the aims of the practitioner are experiential, different from the theoretical aims of the researcher, meaning that the characteristics of their knowledge are also fundamentally different. Adding further complexity, Russ et al (2016) argue that knowledge is conceptualised in distinct ways by different research traditions. They delineate three research paradigms of teacher learning: *process-product*, where teaching is a set of actions; *cognitive*, where teaching is a way of thinking; and *situated sociocultural*, where teaching is interaction. Within the cognitive paradigm, *knowledge* is defined as an individual's mental structures, consisting of 'mental representations and processes that act on those mental representations' (Russ et al., 2016, p. 397). Here, knowledge includes a person's beliefs, attitudes and orientations. Beliefs may be understood as 'psychologically held understandings, premises or propositions about the world that are felt to be true' (Richardson, 1996, p. 103). Attitudes and orientations likewise reflect dispositions towards teaching and learning, encompassing preferences, commitments, and tendencies that shape how teachers interpret situations (Fives & Buehl, 2012). By including these concepts within the cognitive definition of knowledge, Russ et al (2016) emphasise the personal nature of an individual's knowledge.

Given the precise meaning of knowledge in the cognitive paradigm, when referring to other paradigms, Russ et al (2016) use the term *entities* to describe what is changed through learning. In the process-product paradigm, the entities of change are the actions or behaviours of the teacher. In the situated sociocultural paradigm, the entities relate to teacher identity, the use of tools and practices, and community norms and participation. For this study, a more expansive understanding of knowledge is adopted, consistent with Polanyi's (1962) *tacit knowledge* and Schön's (1983) *reflection-in-action*, where the entities of change can be seen as expressions of knowledge in practice. This broader perspective views teacher knowledge as encompassing cognitive, embodied, relational, and situated dimensions, while recognising that it may incorporate beliefs, attitudes and orientations. The following section explores perspectives of teacher knowledge and integrates them with Russ et al's (2016) research paradigms.

2.1.1. Theory and practice knowledge

As introduced in Chapter 1, teacher knowledge is frequently framed as encompassing both theoretical and practical elements. Dewey (1904) considered theoretical knowledge to be 'the intellectual method and material of good workmanship', comparing this with practical knowledge that could make 'on the spot… an efficient workman' (pp. 9-10). Inherent here is the assumption that the terms *theory* and *practice* encompass two different types of knowledges. This section considers how theory and practice may be understood as different types of knowledge.

For teaching to be recognised as a profession, it must be underpinned by a publicly accessible body of knowledge (Hoyle & John, 1995). This knowledge is typically theoretical, research-based and characterised by generalisability and scientific rigour

(Korthagen, 2001; Van Vuuren, 2020). Developed by educational researchers, it includes formal, hierarchical insights such as theoretical frameworks, research evidence, professional standards, and policy documents (Boyd, 2014; Fenstermacher, 1994). In teacher education, this knowledge base is commonly viewed as something to transmitted to student teachers through formal university-based instruction, with the intent of shaping professional practice (Korthagen, 2001; Murray, 2015; Van Vuuren, 2020).

Theory knowledge is often contrasted with practice knowledge, which is shaped through classroom experience in specific contexts (Fenstermacher, 1994). This situated knowledge is embedded in particular times, places and actions (Mattson et al., 2019). It aligns with practical wisdom: an informal, socially situated form of knowing that is developed through collaborative and institutional contexts such as school teams and wider professional networks (Boyd, 2014). For student teachers, this kind of knowledge is viewed as being primarily developed through the school-based placement (Allen & Wright, 2014), consistently positioned as an essential component of student teachers' development (Gutierrez & Nailer, 2021; Lederman & Lederman, 2015; Murray, 2015; Vick, 2006). In contrast to the perceived "formal" teaching approaches of university-based ITE, practice knowledge is often perceived to be learned in the school-based placement through everyday interactions (Van Vuuren, 2020).

Building on Dewey's work, Schön (1983) develops the term *technical rationality*, a model that assumes practical problems are solved through the application of theory. Schön (1987) critiques technical rationality, suggesting it sets up a hierarchy where theory knowledge is ascribed high-status and practice knowledge low-status. This positions

academics as the experts who determine what constitutes valid knowledge, how this knowledge is disseminated, and to whom (Rolfe et al., 2001). In turn, this diminishes practice-based knowledge to instrumental issues of technique, method and procedure, focusing on the *how* and ignoring the *why* (Kincheloe & Mclaren, 2002). Biesta (2007a) argues that, in such contexts, the purpose of research becomes framed as generating technical knowledge that may inform practice. This chimes with the framing of the teacher as an expert technician (Winch et al., 2015). In ITE, a model of technical rationality positions university teacher educators as the "experts", teaching theoretical knowledge to student teachers who will attempt to transfer it to practice (Korthagen, 2001).

Schön (1987) critiques the positivistic grounding of technical rationality, arguing that, in the real world, problems rarely adhere to the principles of academic inquiry. Rather, problem solving involves non-rigorous inquiry in the 'indeterminate, swampy zones of practice', where the practitioner must frame the problem for themselves and decide the aspects that warrant their attention (Schön, 1987, pp. 3–4). Furthermore, real-world problems may present themselves as unique cases, value conflicts, or in several ways at once (Schön, 1987). Such problems cannot be solved through instrumental application of existing theory, meaning that, in practice, professionals must draw on more than theoretical knowledge. Indeed, in ITE, student teachers are expected to draw on many sources of knowledge, such as theories, research, subject knowledge, teaching strategies, practical skills, and knowledge about specific pupils (Hermansen & Mausethagen, 2023). The concept of multiple sources of knowledge highlights the

insufficiency of the technical rationality model as a way of describing the process of learning to teach.

Instead, Schön (1983, 1987) argues that practitioners construct their own theory-of-practice - professional knowledge created in action - drawing on *explicit* and *implicit* knowledge. Explicit knowledge includes concepts that can be clearly expressed and communicated, such as formal theories of learning. In contrast, implicit knowledge is *tacit* knowledge (Polanyi, 1962). Implicit knowledge is more intuitive, difficult to articulate and embedded in practice (Hammerness et al., 2005; Rolfe et al., 2001). It is shaped by the practitioner's perspective (Kinsella, 2007), implicit in their actions and their 'feel for the stuff with which [they] are dealing' (Schön, 1983, p. 49). For example, tacit knowledge might be evident in how a teacher sensitively responds to a pupil's question or adapts their approach to enhance learner engagement.

Implicit knowledge cannot be directly transferred to others; it must be learned through apprenticeship and participation in cultures of practice (Polanyi, 1962; Rolfe et al., 2001). In ITE, this has often been framed as a division between explicit theoretical knowledge of the university, and tacit practice knowledge of the school placement (Murray, 2015). However, this is an unhelpful conceptualisation, as ultimately *all* explicit knowledge is rooted in tacit understandings, dependent on communication and the shared meanings ascribed to words (Fischer et al., 2004; Polanyi, 1969). Eraut (2000) develops this argument by critiquing a binary distinction between tacit and explicit knowledge. Drawing on Tulving's (1972) model of episodic and semantic memory, Eraut (2000) shows how that tacit knowledge develops through implicit connections between past memories and current experience, which become abstracted into more generalised forms of explicit

knowledge. From this perspective, implicit and explicit knowledge are dynamically interrelated.

However, in expert practice, a teacher's actions are often shaped by implicit knowledge, expressed in the forms of routines and automatic responses. Ellis (2005) describes implicit knowledge as *procedural*, emphasising that it is automatically accessible during fluent performance, contrasting with explicit knowledge that requires conscious retrieval. Similarly, Korthagen (2017) argues that teachers' behaviour is 'only partly influenced by thinking, let alone by the theories they have learnt' (p.389). In this sense, it is helpful to consider *teacher competence*, which is underpinned by teacher knowledge (Gitomer & Zisk, 2015). Teacher competence is 'an integrative concept including knowledge, skills, decision-making and disposition to act in multiple professional situations' (Toom, 2019, p. 807). Toom offers a distinction between teacher's declarative knowledge (know that) and their procedural knowledge (know how), arguing that competence arises through the interplay of these knowledges and the work of teaching (see Figure 1). Here, teacher knowledge is a blend of explicit, tacit, and personal forms of knowing, developed through both formal study and informal learning experiences (Connelly & Clandinin, 1985; Polanyi, 1962; Schön, 1983; Toom, 2019). Therefore, Toom (2019) extends Schön's distinction between explicit and implicit knowledge by reframing them as interrelated elements of teacher competence, highlighting how both declarative and procedural knowledge can support teaching in complementary ways.

		The work of teaching	
		Theoretical challenges	Practical challenges
Teacher knowledge	Declarative knowledge (know that)	General knowledge, theories, principles of education, instructional process, subject matter	Knowledge of pedagogical methods, schemes, practices, strategies relevant for practice of teacher's work
	Procedural knowledge (know how)	Ability to utilise theories and principles as tools as to perceive and structure instructional phenomena	Ability to apply pedagogical methods, schemes and strategies in practice, solve problems, act in teacher's work

Figure 1: Dimensions of teacher competence in terms of teacher knowledge and the work of teaching. Adapted from Toom, 2019, p.815

The works of Eraut (2000) and Toom (2019) resonate with broader literature that aims to move the discussion beyond the explicit-implicit dichotomy, some of which argues that Schön (1983) oversimplifies the relationship between theory and practice knowledge (e.g., Hébert, 2015). However, Kinsella (2007) emphasises that Schön conceptualises this relationship not as causal or linear, but as entities that counterbalance one another. That said, much of ITE literature continues to frame the purpose of teacher education as "bridging the gap" between theory and practice (e.g., Allen & Wright, 2014; Korthagen, 2007; McIntyre, 2005; Nel, 2021; Resch et al., 2024; Tang et al., 2019; Van Vuuren, 2020). In contrast, a more recent body of work rejects the gap metaphor (Anderson, 2023; Biesta, 2007; Heikkilä & Hermansen, 2024; Korthagen, 2016; Loughran, 2014). For example, Hermansen and Mausethagen (2023) argue that student teachers should come to understand the epistemic relations between a diverse range of theory and practice-based knowledge sources, rather than treating them as competing or hierarchical. From

this perspective, teacher knowledge is conceptualised as 'a generative and dynamic relationship with characteristics that are highly-context dependent' (Heikkilä & Hermansen, 2024, p. 42). This resonates with Freire's (1970) assertion that 'only through communication can human life hold meaning' (p.77), where people learn with and within the world. The following sections explore perspectives that move beyond dichotomies of theory and practice, or explicit and implicit, outlining more nuanced and integrated conceptualisations of teacher knowledge.

2.1.2. Episteme, techne and phronesis

Aristotle's intellectual virtues are frequently used to theorise the knowledges of teaching (e.g., Biesta, 2010; Korthagen, 2001). *Episteme* refers to formal, abstract and generalisable knowledge, often associated with expert or scientific knowledge (Hennissen et al., 2017; Kessels & Korthagen, 2001). It encompasses a form of understanding that is systematic, explicit, and concerned with universal principles that can be consistently applied across different contexts (Wiliam, 2008). Episteme might be understood as theory – the publicly recognised body of professional knowledge that holds universal validity (Hoyle & John, 1995; Van Vuuren, 2020). It foregrounds formal, structured, and generalised forms of knowing, including theory, research evidence, professional guidance and policy (Boyd, 2014). In Schön's (1983) terms, episteme may be likened to explicit knowledge.

In contrast to the abstract, generalisable nature of episteme, the teaching placement is highly situated, shaped by its specific context (Sorensen, 2014; Starkey & Rawlins, 2012). As Schön (1983) argues in his critique of technical rationality, in placement, student teachers must draw on forms of knowledge beyond 'universal timeless truths' (Wiliam,

2008, p. 434). This calls attention to Aristotle's other intellectual virtues, particularly *techne*, which refers to technical skills or craft knowledge (Stenberg & Maaranen, 2022; Stucki & Sager, 2018). In this way, novices may often first encounter techne as explicit knowledge, for example, guidelines for how to plan a lesson. However, for experienced teachers, techne is implicit knowledge, embodied in their practice and enabling the *mindless expertise* of acting without conscious thought (Rolfe et al., 2001).

Although beneficial for efficient expert practice, techne is limited as it focuses solely on production; it does not engage the ethical, moral or evaluative dimensions of teaching practice (Wiliam, 2008). Biesta (2010) cautions that an overemphasis on techne risks framing education as a purely technical enterprise, detached from its moral and societal purposes. Teaching becomes reduced to the execution of techniques designed to achieve predefined learning outcomes (Kemmis & Smith, 2008a). Biesta (2010) critiques the narrow, instrumental aims of research as the result of "learnification", where the broader aims and values of education are overshadowed by limited, outcome-driven measures. Learnification often reinforces dominant narratives about the importance of academic achievement in the core subjects, marginalising broader educational purposes and other curricular areas, such as the foundation subjects (Biesta, 2010). This resonates with earlier discussions of student teacher learning as adherence (Lofthouse et al., 2021).

Aligning with enquiry perspectives of student teacher learning, Biesta (2010) argues that teachers should cultivate Aristotle's virtue of *phronesis* or 'practical wisdom' (p.36). Unlike techne, which focuses on producing outcomes, phronesis is oriented towards moral action where value lies in conducting the process *well* (Wiliam, 2008). It is a form

of perceptual knowledge that enables teachers to discern what is salient in practical situations (Dunne, 1993; Kessels & Korthagen, 2001). Rather than drawing on abstract theory, phronesis involves situated, case-based judgement developed through practice (Kessels & Korthagen, 2001). Phronesis is therefore implicit or tacit knowledge (Polanyi, 1962; Schön, 1983), as it is dynamic, socially mediated and often contested, generated through professional experience and reflection (Boyd, 2014; Hennissen et al., 2017).

Central to phronesis is the ability to act appropriately in complex and unpredictable circumstances, exercising professional judgement in ways that serve both the immediate needs of learners and the broader good of society (Heilbronn, 2010; Kemmis & Smith, 2008a). When enacted, this moral orientation becomes *praxis*: action informed by wisdom, guided by ethical commitment, and shaped by the traditions and values of the field (Kemmis & Smith, 2008b). While Aristotle's praxis emphasises ethical and context-sensitive judgement, Freire's (1970) conception of praxis highlights the critical and transformative potential of phronesis. Freire's praxis (1970) involves an ongoing cycle of reflection and action directed towards social transformation. In this sense, teaching is not only about 'the capacity to do the right thing at the right time' (Heilbronn, 2010, p. 81), but about questioning and transforming wider educational and social conditions. This resonates with the assertion that phronesis is about 'doing what will later be seen to have been good in light of its historical consequences' (Kemmis & Smith, 2008a, p. 16).

Aristotle's intellectual virtues offer a useful framework to move beyond binary conceptualisations of theory and practice knowledge. The next section considers more contemporary understandings of teacher knowledge that resonate with episteme, techne and phronesis. The discussion centres on Shulman's (1986, 1987) widely-cited and

applied *teacher knowledge base*, which offers a detailed categorisation of the knowledge teachers need to be effective practitioners. It then moves on to consider *personal practical knowledge* (Connelly & Clandinin, 1985), foregrounding the subjective, embodied and storied nature of teacher knowledge.

2.1.3. Shulman's teacher knowledge base

Shulman's influential work (1986, 1987) conceptualises a teacher knowledge base, grounded in the idea that an established and codified body of knowledge informs professional practice. Four sources are identified: *scholarship in content disciplines*, *formal educational scholarship*, *the wisdom of practice,* and *educational materials and structures* (Shulman, 1987, p. 9). From these, seven categories of teacher knowledge are distinguished: content knowledge (CK), general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge (PCK), knowledge of learners, knowledge of educational contexts, and knowledge of educational ends and values (Shulman, 1987, p. 8). Although this work might initially imply a technical-rational view of teaching (Schön, 1983), it also recognises situated and relational dimensions of knowledge, emphasising practice, context and culture. Indeed, in later work, Shulman and Shulman (2004) emphasise the situated nature of teacher learning (see 2.2.5. Integrating perspectives on student teacher learning with research paradigms).

Subsequent research emphasises that teacher learning is also shaped by teachers' beliefs about knowledge. Fives and Buehl (2010) propose five frames of such beliefs, three of which are relevant here. First, *domain knowledge* closely aligns with Shulman's (1987) categories, encompassing knowledge of content, pedagogy, learners and self. Second, *sources of knowledge* reflect teachers' beliefs about where teaching knowledge

originates. This encompasses *formal preparation* (e.g., university-based ITE) *and formalised bodies of knowledge* (e.g., theory and research) alongside relational and situated forms of learning, *observation, collaboration, enactment,* and *reflection*. Third, *domain qualities and skills* foreground professional dispositions, including *communication*, *adaptability*, *care*, *enthusiasm*, and *integrity*. This framework underscores that teacher beliefs mediate what types of knowledge and learning are valued, which may explain why CK and PCK are the most widely researched of Shulman's categories (1987).

CK refers to a deep understanding of the organising principles and structures that define a disciplinary field (Shulman, 1986). Teachers need to know not only that something is correct, but also understand why, under what conditions, and how it connects to broader conceptual frameworks (Ball et al., 2008; Jacob et al., 2020). Strong CK enables teachers to answer pupils' questions, extend their learning, and address misconceptions (Coe et al., 2014). Related is Shulman's (1987) *curriculum knowledge*, which concerns selecting and sequencing content and judging the appropriateness of resources for particular leaners and contexts. While CK resonates with episteme, given its focus on validity claims, curriculum knowledge is more closely aligned with phronesis, as it requires context-sensitive judgement (Kemmis & Smith, 2008a; Wiliam, 2008).

PCK, in contrast to CK, is uniquely pedagogical, defined as 'that special amalgam of content and pedagogy' (Shulman, 1986, p. 8). PCK enables teachers to transform disciplinary CK into forms accessible to learners, involving evaluation of a topic's structure, likely misconceptions, and adapting teaching to pupils' needs (Gess-Newsome, 2013). Teachers with strong PCK are more effective at stimulating interest and

improving learning outcomes (Jacob et al., 2020; Olfos et al., 2014). PCK thus draws on explicit and implicit knowledges, aligning with techne and phronesis (Kemmis & Smith, 2008a; Schön, 1983; Wiliam, 2008). CK and PCK are closely intertwined: transformation of CK must be situated within curriculum and pupil experience (Deng, 2018). Indeed, Tran and O'Connor (2024) suggest that PCK is shaped by student teachers' knowledge of theory, practice, local contexts, and professional orientations, requiring them to make informed and situation-sensitive decisions for what is best for their pupils.

Research that explores the other categories is less frequently attributed to Shulman (1987). Knowledge of learners, contexts, and educational purposes encompass understanding how children think and learn, recognising the complexity of classroom and cultural contexts, and situating teaching within broader educational values. These categories underscore that teacher knowledge extends beyond technical competence, and includes ethical, social and philosophical dimensions. This emphasises how, despite distinguishing separate categories, Shulman's (1987) framework represents a nuanced and integrated conceptualisation of teacher knowledge.

2.1.4. Personal practical knowledge

Connelly and Clandinin (1985) develop the concept of *personal practical knowledge* to describe teacher knowledge. Like Schön (1983), their point of departure is recognising the differences in the perspectives of the theoretician and the practitioner. They suggest that theory-based knowledge is concerned with the *modes of knowing* (Eisner, 1979): the different ways that knowledge can be understood and experienced, which include aesthetic, scientific, formal, interpersonal, intuitive, and spiritual. The aim of the theoretician is to celebrate these modes of knowing, through intentional, 'conceptual

accounts of disciplined inquiry' (Connelly & Clandinin, 1985, p. 178). However, in contrast, the modes of knowing are suggested to be inappropriate to satisfactorily characterise the practitioner's knowledge:

The teacher plans, explains, demonstrates, remonstrates, praises, evaluates and reflects with voice and body. She does not know her teaching "formally" … What does feel right in the circumstance is the overall rhythm of teaching and learning and the more detailed shifting kaleidoscope of knowing that is occurring.

Connelly & Clandinin, 1985, p. 176

In teaching practice, the modes of knowing are not separate or discretely applied but integrated into a unified personal practical knowledge. The teacher's concern is the child and their learning, involving consideration of the affective, social and moral dimensions of experience. This chimes with implicit knowledge as the practitioner's 'feel for the stuff with which [they] are dealing' (Schön, 1983, p. 49) and Biesta's (2010) assertion that education is a moral practice. It also resonates with Aristotle's phronesis as it implies the teacher is primarily concerned with knowing how to act in the child's best interests (Kemmis & Smith, 2008a).

Connelly and Clandinin (1985) highlight that the theoretician's work is conceptual, whereas the practitioner's is experiential (Connelly & Clandinin, 1985). This strongly aligns with Schön's (1983) critique of technical rationality and the emphasis he places on implicit knowledge derived through practice. For Conelly and Clandinin (1985), in practice, knowing *is* experience, where the teacher engages in 'minded, knowing actions' (p. 178). *Knowingness* is derived from the teacher's stories – their remembered events, past relationships, and the meanings constructed from them. This gives rise to

knowledge that is both concerned with the practical and grounded in the personal – hence, *personal practical knowledge*.

Because it is experiential, embodied, and formed through the narratives of a person's life, personal practical knowledge cannot be neatly reduced to a single, fixed concept. In practice, teachers respond a best they can to a situation, drawing on a blend of experiential images, habits and fragments of experience, some of which may have explicit conceptual origins (Connelly & Clandinin, 1985). Personal practical knowledge is not accessed through a deliberate selection of named components, but through tacit recall, leading to the formation of some coherent action for teaching. This leads Connelly and Clandinin (1985) to describe teaching as 'narrative-in-action', asserting that 'theory and practice are unified in the actor' where 'knowing and doing are reflections of one another' (p.184).

2.1.5. Integrating perspectives on student teacher knowledge with research paradigms

This section discusses how these perspectives on teacher knowledge might be integrated with the research paradigms of teacher learning (Russ et al., 2016) that were outlined earlier in this chapter. The process-product paradigm, where knowledge is evident in behaviours and actions, aligns closely with Aristotle's *techne* (Wiliam, 2008). There is some resonance with Shulman's (1987) *pedagogical content knowledge*, which is concerned with how *content knowledge* may be transformed so that pupils may learn it.

Aristotle's *episteme* (Wiliam, 2008) and Shulman's (1987) *content knowledge* both emphasise systematic, abstract understanding that can be transferred across contexts. In this sense, they align with the cognitive paradigm, which views knowledge as a framework of mental structures that can be drawn upon to interpret and act in a range of teaching situations. Given that the mental structures of knowledge may include beliefs, attitudes and orientations, the cognitive paradigm may also *personal practical knowledge* (Connelly & Clandinin, 1985).

In the situated sociocultural paradigm, student teacher knowledge is related to identity, the tools of practice, and community participation. Shulman's (1987) *knowledge of learners* and *knowledge of educational contexts* align with this paradigm, as they emphasise the relational dimensions of teacher knowledge. Connections can also be made with *personal practical knowledge* (Connelly & Clandinin, 1985), which emphasises knowledge as embodied and storied. Tool appropriation and community participation could be related to *techne* (Wiliam, 2008), particularly if a novice is seeking to imitate those around them. With increasing experience within a situated community of practice, the student teacher may develop the capacity for making context-sensitive judgements, meaning their knowledge might become closer to *phronesis* (Wiliam, 2008). Similarly, this could also relate to the development of pedagogical content knowledge (Shulman, 1987), as the student teacher comes to better understand how to implement tools that enable content to be learned.

Notably, Russ et al (2016) do not offer a research paradigm that fully captures perspectives on teacher knowledge that foreground its moral and political dimensions. As established above, teacher knowledge encompasses an understanding of

educational purposes and values, alongside the capacity to engage in transformative action to address situational, contextual and structural injustices (Biesta, 2010; Freire, 1970; Shulman, 1987). Therefore, this study introduces a *critical-transformative paradigm*, where teaching is conceptualised as moral and political transformative action (Freire, 1970). Knowledge is viewed as moral and political orientations, situated both locally and within broader professional landscapes, and concerned with the purposes of education (Biesta, 2010). Aristotle's *phronesis* (Wiliam, 2008) resonates with this paradigm, as it emphasises the need for teacher judgement to be guided by both the learners' immediate interests, and the broader interests of society (Heilbronn, 2010; Kemmis & Smith, 2008a). Similarly, Shulman's (1987) *knowledge of educational aims* and purposes aligns foregrounds the moral and political dimensions of teaching. *Episteme* is also relevant, as perspectives may be informed by theoretical and conceptual knowledge. Likewise, the personal political and moral perspectives of a student teacher are likely to be subsumed as part of their *personal practical knowledge*, and their practice may begin to embody their values.

This suggests that student teacher learning involves the integration of multiple forms of knowledge into practice, shaped by both personal and contextual factors that are complex and dynamic. This is a particularly relevant challenge for student teachers learning to teach the primary foundation subjects, where practice is often influenced by local school cultures and agendas, mentor expertise, and opportunities for collaboration (Becher & Orland-Barak, 2018; Caldwell et al., 2021; Sparkes et al., 1990). This underscores the importance of exploring student teacher knowledge in relation to

teaching the foundation subjects, and how such knowledge is developed through ITE. The next section therefore discusses perspectives on student teacher learning.

2.2. Theoretical perspectives on student teacher learning

Having discussed the heterogeneity of teacher knowledge, it is necessary to consider how such knowledge is learned. Following the work of Russ et al (2016), this study adopts a *learning theory* approach to describe student teacher learning "from the inside" (see Figure 2). This aligns with the study's constructivist epistemology (see 3.1. Research philosophy), where knowledge is the collection of meanings ascribed to experience and ideas by the individual (Savin-Baden & Howell Major, 2013). This inside view generates understanding of how and why external factors interact with the learning process, leading to the development of rich models and frameworks to describe student teacher learning (Russ et al., 2016).

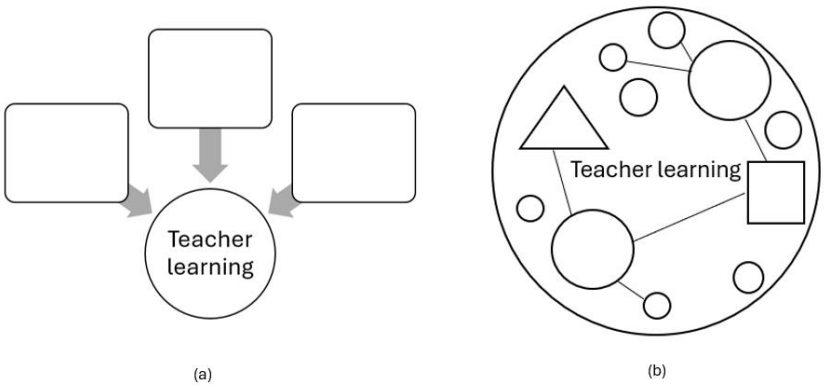


Figure 2: Two approaches to studying "how" student teachers learn. (a) A focus examining "outside" factors that impact teacher learning and (b) focus on the "inside" to describe what constitutes student teacher learning (Russ et al, 2016, p.392)

Learning theory offers different ways of conceptualising student teacher learning, ranging from passive receipt of transmitted knowledge, to co-construction in socially mediated environments, to personal meaning making and transformation. That said, ITE programmes are often structured around acquisition approaches, where knowledge is delivered through university-based instruction and expected to be carried into practice (McDonald et al., 2013), which is subject to the previously established criticisms of technical rationality (Schön, 1983, 1987). Furthermore, how student teachers learn, particularly within university-based experiences, remains an under researched area (Hermansen & Mausethagen, 2023; Korthagen, 2016). Therefore, it is pertinent to explore the "inside process" of student teacher learning.

In accordance with the paradigms outlined above, student teacher learning is framed as a process whereby entities – or knowledges - are changed (Russ et al., 2016). In the process-product paradigm, learning is the acquisition of new skills, their fine-tuning, and their implementation with increasing frequency. In the cognitive paradigm, learning is the assimilation and accommodation of new knowledge into existing mental structures (Piaget, 1971). In the situated sociocultural paradigm, learning is conceptualised in several ways (Russ et al., 2016). A teacher's identity might be changed through processes of *enculturation* into a community, and their roles might change through processes of *positioning* within the community. In terms of classroom practices, learning might be understood as *appropriation* of tools and using them in ways that are particular to the situation and context. Finally, if knowledge is understood as community participation, learning involves *negotiation* (the tacit agreement of the group's norms of interaction) and *individual attunement* (the changing participation of an individual within the group).

Extending Russ et al's (2016) paradigms, this study suggests that the critical-transformative perspective conceptualises learning as critical reflection upon the moral and political purposes of education (Biesta, 2010), alongside the development capacity to enact transformative action to better align practice with these ideals (Freire, 1970). In this paradigm, teacher learning involves cultivating the ethical and political attitudes that support the development of Aristotle's phronesis, enabling teachers to become professionals who can act for the good of their pupils and for society as a whole (Heilbronn, 2010; Kemmis & Smith, 2008a). The discussion next explores learning theories in relation to teacher development, before integrating these learning theories with the research paradigms (Russ et al., 2016).

2.2.1. Transmissive apprenticeship learning

The banking model of education positions learners as passive recipients of knowledge deposits made by the teacher (Freire, 1970). This aligns with transmissive perceptions of teaching as a craft, where learning to teach involves mastering routines and formulas (Harrison-Palmer, 2022). Apprenticeship models, involving modelling, coaching, and gradually faded support, are often associated with this techne-oriented view (Collins et al., 1989). Such approaches can support *efficiency*, enabling student teachers to retrieve and apply knowledge to solve routine problems (Bransford et al., 2005). Repeated practice allows this knowledge to become increasingly tacit, enabling the student teacher to direct their conscious attention to other aspects of practice (Hammerness et al., 2005). Learning to teach with efficiency is often the primary concern for student teachers, who want to be taught what to *do* in classroom situations (Bransford et al., 2005; Korthagen, 2017).

In ITE, a significant limitation of the apprenticeship approach is the *apprenticeship of observation* (Lortie, 1975), that is, the strong preconceptions of teaching student teachers bring from their own schooling. These preconceptions are both 'unanalytical' and 'remarkably resistant to change' (Westrick & Morris, 2016, p. 156), possibly because they are emotionally embedded and reinforced by selective evidence (Crowe & McGarr, 2022). Allowing these beliefs to go unexamined means that student teachers may be unaware of the drivers of their professional choices and behaviours. Framing teacher learning as an apprenticeship compounds the apprenticeship of observations, as it focuses only on the development of observable, external traits without necessarily revealing the cognitive problem-solving processes of experts (Collins et al., 1989).

Freire (1970) critiques transmissive education for presenting knowledge as fixed and unproblematic, and framing learning as reproduction of that fixed knowledge. This resonates with technical rationality (Schön, 1983) and teaching as technical expertise (Winch et al., 2015), where theory is presented as a set of procedures to be applied in practice, leaving little scope for questioning or adapting knowledge to context. Philosophically, Freire (1970) argues that this this is an oppression of learners' humanity. At a practical level, viewing teachers as "automatons" ignores the complexity of diverse, nuanced and contextual practice-based problems (Bransford et al., 2005; Schön, 1987). It limits the flexibility, risk-taking and innovation needed to address non-routine problems (Borg, 2004; Botha, 2020; Bransford et al., 2005; Schwartz, 2025). Therefore, student teacher learning must be conceptualised as 'something more' than apprenticeship or transmission (Bransford et al., 2005, p. 50). The next section of this chapter considers

alternative views of student teacher learning that foreground reflection, integration of diverse knowledges, and the development of professional agency.

2.2.2. Cognitive constructivism and situated cognition

This section discusses two constructivist models of learning*: cognitive constructivism* and *situated cognition* (Rodriguez, 1998). *Cognitive constructivism*, grounded in the work of Piaget (1971), emphasises the learner's active role in building and reorganising knowledge structures (Bransford et al., 2005; Rodriguez, 1998). In ITE, this highlights the role of the apprenticeship of observation (Lortie, 1975), as empirical research demonstrates that deeply entrenched prior conceptions play a critical role in how new ideas are interpreted (Rodriguez, 1998).

Situated cognition, drawing on Vygotsky (1978), positions learning as social interaction within cultural and historical contexts (Bransford et al., 2005). Central to Vygotsky's (1978) theory is the Zone of Proximal Development (ZPD), the distance between what a learner can achieve independently and what they can achieve in collaboration with a more knowledgeable other (MKO). Within the ZPD, the learner is supported to perform tasks they could not yet accomplish alone, enabling the gradual internalisation of new skills, concepts, and ways of thinking (Vygotsky, 1978).

The difference between these theories is that cognitive constructivism views learning as an internal change, whereas situated cognition views it as social participation (Rodriguez, 1998). However, both emphasise the central role of the learner's prior knowledge and experiences in shaping how new ideas are understood and integrated. For student teachers, it is likely that prior conceptions have been formed through their apprenticeship of observation (Lortie, 1975). Without making these assumptions explicit,

it is likely that new knowledge would be assimilated uncritically, reinforcing existing, unexamined beliefs (Crowe & McGarr, 2022).

Rodriguez (1998) critiques both theories, arguing that ignoring the complexity of social and contextual issues of learning primarily serves those in positions of power and overlooks those who experience marginalisation. Rodriguez (1994) demonstrates how student teachers strategically "play the game", choosing to strategically implement "acceptable" teaching practices in order to successfully complete the placement. Therefore, while cognitive constructivist and situated cognition approaches acknowledge the active role of the learner, they do not address the problems that arise through the banking model of education and are therefore subject to the same criticisms as the transmissive apprenticeship perspectives of student teacher learning. These critiques highlight the need for perspectives that foreground ways in which student teachers construct and reflect on knowledge within social and experiential contexts.

2.2.3. Social constructivism and experiential learning

Both *social constructivism* (e.g., Beck, 2006; Rodriguez, 1998) and *experiential learning* (Dewey, 1938) foreground the personal and social dimensions of learning. *Social constructivism* emphasises that learning is socially mediated through interaction and participation (Taber, 2015). Rather than internalising predetermined expert thinking, leaning is co-created through dialogue and reflection, closely connected to the learner's thoughts, actions, emotions and history (Beck, 2006). Authentic activities – 'hands-on, minds-on' activities – support learners to reflect on how the topic's personal relevance (Rodriguez, 1998, p. 600).

Dewey's (1938) *experiential learning* is embedded in social constructivist principles (Beard, 2018). Dewey (1938) describes education and experience as 'intimate and necessary' (p. 20), characterised by principles of *interaction* and *continuity*. Interaction refers to socially constructive transactions between learners (Mayer, 2015), where meaning is co-constructed through dialogue and participation *in* and *with* social and cultural environments (Harfitt & Chan, 2017). However, distinctively, Dewey (1916) frames interaction as a democratic endeavour, where education cultivates participation, mutual respect, and shared community values.

Importantly, for Dewey, experience alone does not constitute learning; it is the learner's *reflection* on interactive experience that enables interpretation and reframing (Korthagen et al., 2006; Ord & Leather, 2011). *Continuity* describes how prior experience shapes the meaning of new ones, leading to growth in cultural sensitivity and expertise (Beard, 2018; Mayer, 2015). Learners thus generate new conceptions through cycles of experience and (re)interpretation (Miettinen, 2000). For teacher educators, this underscores the need to work with student teachers' prior experiences to transform them into meaningful learning opportunities (Harfitt & Chan, 2017).

Building on sociocultural and experiential principles, Korthagen and Lagerwerf (2001) propose the *realistic teacher education* approach, conceptualising teacher knowledge at three levels: *gestalt* (intuitive, subconscious patterns shaped by prior experience), *schema* (organised concepts guiding practice), and *theory* (abstract frameworks for understanding). Through reflection, gestalts become consciously organised into schema, and schema into theory. At the gestalt and schema level, the purpose of knowledge is framed as *for action*, whereas at the theory level, it is *for understanding*

(Korthagen, 2010). However, teacher's rarely reach theory level, as their work is usually situated in knowing-for-action (Hoekstra et al., 2007; Korthagen & Lagerwerf, 2001). This aligns with Connelly and Clandinin's (1985) distinction between theoreticians' 'conceptual accounts of disciplined inquiry' and practitioners' embodied 'knowing actions' (p.178).

Korthagen (2004a, 2016) further proposes student teacher learning through the onion model (see Figure 3). Structured as concentric layers, the model moves from environment (contextual factors such as policy or school culture) through behaviour and competencies, and inward to beliefs, identity, and mission. While all layers interact, deeper layers exert greater influence over practice, with reflection on identity and mission offering the most potential for transformative development (Korthagen, 2004). Observable and internal levels of learning resonate with Schön's (1983) distinction between explicit and implicit knowledge. The apprenticeship of observation (Lortie, 1975) also operates at internal levels, shaping beliefs and identity, rather than just behaviour or competencies. ITE might therefore be support student teachers to surface and examine these tacit, inner layers.

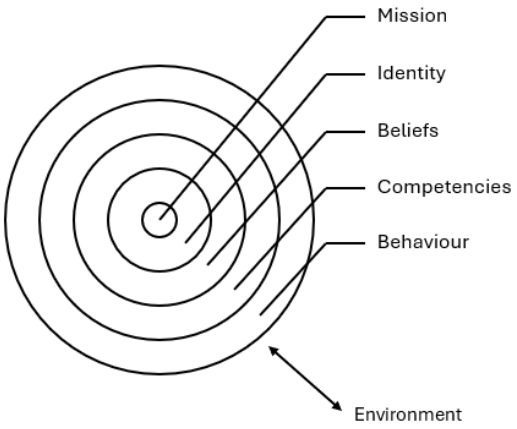


Figure 3: The Onion Model (Korthagen, 2004)

Complementing these structural accounts of teacher learning (Korthagen, 2004; Korthagen & Lagerwerf, 2001), narrative inquiry (Clandinin & Connelly, 1990) views teacher learning as fluid and storied, where knowledge is continuously revised through stories teachers tell about themselves and their experiences. *Narrative unities* are the 'threads' that account for the way teachers construct stories across their personal and professional lives (Connelly et al., 1997, p. 671). Learning is thus the re-interpretation and reconstruction of personal stories in response to new encounters, aligning with Dewey's (1938) principle of continuity.

As the onion model (Korthagen, 2004) emphasises the layer of environment, narrative inquiry introduces concept of *professional landscapes*: the personal and institutional environments in which teachers work (Clandinin & Connelly, 1996). These landscapes are dynamic and value-laden, shaped by contested ideas of practice. The narrative teachers encounter within these landscapes can strongly influence their developing

knowledge. For example, as school stories change with reforms, so too may an individual's teacher stories, as they adapt to align with shifting expectations (Clandinin & Connelly, 1996), suggesting close alignment with interaction and continuity (Dewey, 1938).

Clandinin and Connelly (1996) differentiate between three types of teacher stories. *Sacred* stories are taken-for-granted, often idealised narratives embedded in policy, research, or institutional culture. *Secret* stories represent private, authentic narratives only shared in trusted spaces. *Cover* stories are public facing accounts that align with sacred stories and mask secret stories. In the foundation subjects, student teachers may hold sacred stories relating to subject marginalisation but also hold secret stories expressing their personal enthusiasm. Narrative inquiry thus emphasises that learning is situated within multiple, often conflicting stories that shape identity and practice.

Across these social constructivist and experiential learning theories, learning is understood as reflective, situated, and socially mediated rather than transmissive. These approaches stress how prior experience, identity, and context shape knowledge construction. However, these perspectives primarily focus on how knowledge is built and storied, rather than how it might be fundamentally re-evaluated. The following section therefore discusses transformative learning theory and problem-posing education, where learning involves profound shifts in worldview and identity.

2.2.4. Transformative learning and problem-posing education

Mezirow's (1990, 2000) *transformative learning* and Freire's (1970) *problem-posing education* frame learning as an *internal* process of questioning and restructuring assumptions, as well as an *external*, political act of reshaping the contexts in which

learning takes place. Mezirow (2000) foregrounds the individual's critical reflection and reframing of perspectives, whereas Freire (1970) positions critical reflection as a component of praxis, the purpose of which is to challenge oppressive social structures.

Like social constructivism and experiential learning, transformative learning posits that meaning making is based on interpretation of experience, shaped by prior interpretations (Mezirow, 1990, p. 5). However, distinguishing transformative learning from other theories, Mezirow (1981) emphasises development of metacognition, where the learner becomes aware and in control of the internalised, tacit habits and perceptions that guide their learning. These tacit habits and perceptions are the *frames of reference* that shape the learner's personal interpretation and evaluation of the meaning of experience (Mezirow, 1991).

Frames of reference encompass both *habits of mind* and *points of view*. Habits of mind are 'a set of assumptions – broad, generalized, orienting predispositions that act as a filter for interpreting the meaning of experience' (Mezirow, 2000, p. 17). They are expressed through points of view, which comprise 'clusters of meaning schemes – sets of immediate specific expectations, beliefs, feelings, attitudes, and judgements – that tacitly direct and shape a specific interpretation' (Mezirow, 2000, p. 18). These meaning schemes, like implicit knowledge, gestalts, and narrative unities, are largely unconscious mental structures and operate automatically (Connelly & Clandinin, 1985; Korthagen & Lagerwerf, 2001; Schön, 1983). Student teachers' tacit frames of reference are likely to be shaped by their apprenticeships of observation (Calderhead & Robson, 1991; Lortie, 1975).

For Mezirow (2000), learning occurs as frames of reference become more dependable, meaning that interpretations or opinions are more likely to be true or justified, enabling better understanding of experience. Mezirow (1985) suggests that, through learning, the student teacher becomes more critically aware of how and why they perceive the world, leading to frames of reference that are more inclusive and discriminating in the integration of experience and the actions they guide. Mezirow (1991) directly likens this to Freire's (1970) *critical consciousness,* where learners become conscious of their own perception of their reality and the contradictions within it (Bradshaw, 2017).

Transformative learning is suggested to follow a series of phases, through which the learner critically reassesses and alters their meaning perspectives (Mezirow, 2000). It often begins with a *disorienting dilemma*, such as challenge or experience that does not align with existing frames of reference. This prompts critical self-reflection, where the learner examines the origins, validity and consequences of their frames of reference. Through dialogue with others, the learner explores alternative viewpoints, leading to a reframing of their perspective. This new, reframed perspective is then tested and enacted in practice and subsequently integrated into the existing frames of reference.

Mezirow drew heavily on the work of Habermas (1971, in Fleming, 2018), to distinguish different kinds of learning. *Instrumental* learning is concerned with how things happen, rather than why. It involves testing predictions with empirical evidence, deductively inferring meaning from observations of the environment (Fleming, 2018). *Communicative* learning is concerned with the meanings that underly the communication, enabling understanding of the self and others through evaluating the authenticity of the speaker and the truthfulness of their speech (Fleming, 2018). Both instrumental and

communicative learning may become *emancipatory* if the learner becomes aware of underlying assumptions that are outdated, problematic, or no longer relevant, and thus hinder understanding (Fleming, 2018). Through this awareness, the learner is liberated from forces which limit the learner's control in their life, but have been 'taken-for-granted as beyond human control' (Mezirow, 1991, p. 87).

Mezirow (2000) argues that transformative learning leads to the self-empowerment and liberation of the learner. At the same time, he recognises that the learner's meaning perspectives are formed through 'webs of affiliation within a shared life world' (Mezirow, 2000, p. 27), meaning that self-empowerment only exists within the constraints of social, historical and cultural conditions. Transformative learning is therefore concerned with noticing and challenging reified cultural paradigms that are no longer dependable (Mezirow, 2000). The concept of the *lifeworld* is borrowed from Habermas (1971, in Fleming, 2018), and refers to the background of shared meanings, values and cultural narratives that shape how the learner interprets experiences. This resonates with the onion model, which emphasises that a teacher's learning is entwined with their feelings and motivations that are embedded in the social context (Korthagen, 2016). Similarly, narrative inquiry conceptualises student teacher learning as situated within dynamic and value-laden professional landscapes (Clandinin & Connelly, 1996).

This echoes *problem-posing education*, which aims to develop *critical consciousness* of the learner: 'the power to perceive *the way they exist* in the world *with which* and *in which* they find themselves' (Freire, 1970, p. 83, original italics). Meaning is made through the dialogic relations and authentic inquiry of both the teacher and learner, grounded in their lived experiences (Freire, 1970). Both transformative learning and problem-posing

education hold *critical reflection* as a core component in the learning process. However, Freire's (1970) definition of praxis emphasises how reflection is inseparable from action. Similar to Mezirow's (1991) stages for transformative learning, Freire (1970) identifies the stages that enable praxis: articulation of the problem, critical reflection, and, crucially, the taking of meaningful action to transform or disrupt injustice (Bradshaw, 2017).

Problem-posing education has some overlaps with social constructivism and experiential learning, particularly the emphasis on dialogue, learner experience, and posing problems that relate to learner's lives. Like Dewey (1938), Freire (1970) emphasises the role of interaction, where teachers and learners are critical co-investigators, engaging with each other and with the world. However, while problem-posing education is aimed at fostering critical consciousness, social constructivism is concerned primarily with enhancing conceptual understanding or skill acquisition (Beck, 2006). Similarly, experiential learning seeks to enact democratic participation (Dewey, 1916, 1938), but problem-posing education extends these political aims to challenge oppression and enact emancipatory ideals (Freire, 1970).

2.2.5. Integrating perspectives on student teacher learning with the research paradigms

The perspectives presented suggest multiple conceptualisations of student teacher learning. In this section, these perspectives are integrated with the research paradigms of teacher learning established above: process-product, cognitive, situated sociocultural and critical-transformative (Russ et al., 2016). From the transmissive apprenticeship perspective, student teacher learning is a process of learning to imitate pre-determined skills and behaviours that enable common practice-problems to be solved efficiently

(Bransford et al., 2005; Collins et al., 1989; Freire, 1970). This aligns closely with the process-product paradigm, which suggest that student teacher learning is the acquisition, implementation, and fine-tuning of new skills.

Cognitive constructivism and situated cognition perspectives of student teacher learning emphasise the change in an individual's mental structures, either through internal cognitive reorganisation or mediated through social interaction (Piaget, 1971; Rodriguez, 1998; Vygotsky, 1978). This perspective aligns with the cognitive paradigm. However, this perspective often overlooks nuanced factors, such as power relations or prior experience (Rodriguez, 1994). In this sense, the cognitive constructivism and situated cognition align with the process-product paradigm.

Social constructivist and experiential perspectives emphasise that learning is personal meaning-making, shaped by interpretations of prior experience, collaborative dialogue, and the cultural environment (Beck, 2006; Dewey, 1938; Harfitt & Chan, 2017; Taber, 2015). This aligns with the situated sociocultural paradigm. That said, there are elements that relate to the critical-transformative paradigm, for example, Dewey (1916) emphasises the democratic aims of experiential learning. Realistic teacher education suggests that, through reflection, the mental structures that underpin student teacher knowledge become more consciously known and better organised, aligning with the cognitive paradigm (Korthagen & Lagerwerf, 2001). However, Korthagen (2004a, 2016) also emphasises the role of the person, their feelings and motivations, and the social context. In this sense, it aligns more with the situated sociocultural paradigm. Similarly, narrative inquiry (Clandinin & Connelly, 1990) suggests that student teacher learning is a process of constructing storied knowledge in response to prior and new experiences, in

relation to the cultural and moral dimensions of the professional landscape. Narrative inquiry therefore closely aligns with the situated sociocultural paradigm.

Finally, transformative learning (Mezirow, 1990, 2000) and problem-posing education (Freire, 1970) perspectives frame student teacher learning as internal processes of questioning and restructuring assumptions, where education is a means of self-empowerment and emancipation. This implies close alignment with the critical-transformative perspective. That said, transformative learning involves a teacher becoming aware of their own frames of reference (Mezirow, 2000), which encompass meaning schemes shaped by social and cultural interactions. Similarly, Freire's (1970) critical consciousness involves the teacher perceiving the way they exist in the world, which implies social interaction and interpretation. In this sense, there are elements of this perspective on student teacher learning that align with the situated sociocultural paradigm.

Notably, Shulman and Shulman (2004) present a model that cuts across the different research paradigms of teacher learning. Building on Shulman's (1987) teacher knowledge framework, they emphasise the importance of the professional learning community and propose that that accomplished teaching develops around five clusters of attributes: cognition, disposition, motivation, performance, and reflection. These attributes highlight that as well as being behavioural and cognitive, learning to teach is a moral and communal experience, shaped by individual commitment and collective practice. Reflection, throughout all attributes, enables student teachers to interrogate their assumptions and the contexts in which they work. The next section of this chapter

explores *reflection* as an element that unites different perspectives on student teacher knowledge and learning.

2.3. Reflection in teacher learning

Reflection is suggested to help student teachers make sense of the ill-defined problems of practice (Kember et al., 2008; Moon, 2006). Resonating with transformative learning (Mezirow, 2000), Schön (1983) argues that reflective practice enables practitioners to become aware of their tacit frames, meaning their implicit knowledge may be made explicit (Kinsella, 2009). Through reflection, the tacit beliefs of the apprenticeship of observation may be surfaced and examined (Lortie, 1975). Social constructivist and experiential approaches emphasise reflection as part of knowledge construction (Beck, 2006; Connelly et al., 1997; Dewey, 1938; Korthagen, 2004; Korthagen & Lagerwerf, 2001). Critical reflection is a core component of transformative learning (Mezirow, 2000) and the development of critical consciousness (Freire, 1970). Therefore, across all research paradigms, bar process-product, reflection is identified as integral to student teacher learning.

Dewey (1933) informs most conceptualisations of reflection (Ketonen et al., 2023; Korthagen, 2017). Reflection is defined as 'active, persistent and careful consideration of any belief or supposed knowledge' (Dewey, 1933, p. 9). Reflection therefore involves deliberation upon and transformation of knowledge. Rogers (2001) identifies four common elements: a trigger, active engagement, examination of one's current beliefs, and integration of new understanding. This is echoed by Ryan (2012), who suggests that reflection involves making sense of experience, and reimagining future experiences for personal and social benefit. Peltier et al (2005) assert that there must be a sense of

changed understanding. Essentially, reflection involves looking back, then looking forward with a new perspective. Since Schön's (1983, 1987) seminal work that established reflective practice as a means to elucidate implicit knowledge, two broad types of reflective models have been developed: breadth and depth (Gläser-Zikuda et al., 2024). These are explored further in the following section.

2.3.1. Breath models of reflection

Breadth models (e.g., Gibbs, 1988; Kolb, 1984; Rolfe et al., 2001) structure reflection as iterative cycles of description, analysis and action (Barthakur et al., 2022; Peltier et al., 2005). They can be broadly conceptualised as 'awareness – critical analysis – and change' (Peltier et al., 2005, p. 252). For example, Rolfe et al's (2001) framework for reflexive practice prompts teachers to ask *What?, So what?* and *Now what?*. These prompts represent stages of description, interrogation, and the development of new, action-oriented understanding (Rolfe et al., 2001).

Although widely used, breadth models have been critiqued for being sequences of staged activities, rather than models of reflection (Black & Plowright, 2010). Rolfe et al (2001) deliberately use the term *framework,* as they aim to cue, prompt and structure reflective thought. In contrast, a *model*, they argue, should explain, describe or predict the nature of reflection (Rolfe et al., 2001). This definition is more closely aligned to the purposes of depth models, which discern characteristics of different categories of reflection.

2.3.2. Depth models of reflection

Depth models focus on the quality of reflection, describing a hierarchy from descriptive to critical engagement (Barthakur et al., 2022; Peltier et al., 2005; Suphasn & Chinokul,

2021). This hierarchy is evident in the frameworks developed by both Larrivee (2008) and Kember et al (2008), beginning with *non-reflection* and culminating in *critical reflection*.

At the first level, both identity habitual or automatic action, which involves descriptions or actions without any questioning or consideration of alternatives (Kember et al., 2008; Larrivee, 2008). At the second level, *surface reflection* (Larrivee, 2008), reflection may be limited to technical adjustments to meet predetermined goals. Kember et al (2008) term the second level *understanding*, suggesting that new ideas may be considered but not meaningfully integrated into existing knowledge. Both models propose that at the third level, *pedagogical reflection*, teachers connect conceptual theory with practice, seek alignment between espoused theories and theories-in-use, and generate insights that go beyond theory. At the fourth level, *critical reflection,* Kember et al (2008) highlight shifts in personal meaning, resonating with transformative learning (Mezirow, 2000). Larrivee (2008) places greater weight on the ethical and political dimensions of practice, aligning critical reflection with Aristotelian *phronesis* and Freirean *praxis* (Freire, 1970; Wiliam, 2008).

In teacher education research, Liakopoulou develops a framework to analyse student teacher reflections, where the content of reflection is cross-referenced against its form. *Content* of reflection relates to 'the minimum duties and tasks that are necessary for every teacher' - subject matter, curriculum, teaching objectives, teaching methods, teaching and pupil evaluation, and class management (Liakopoulou, 2012, p. 43). *Form* of reflection relates to its depth level, which Liakopoulou describes as *technocratic*, *interpretative,* and *critical*. These levels mirror Larrivee's (2008) descriptions of *surface*, *pedagogical* and *critical* reflection.

Ultimately, models of reflection might be thought of as existing on a continuum representing to what extent they encourage breadth and depth of reflection. In practice, they may operate simultaneously. For example, a student teacher may follow the sequence 'What? So What? Now What?' (Rolfe et al., 2001) at the depth level of *surface reflection* or of *critical reflection* (Larrivee, 2008). The sequence of questions would be the same for both, but surface reflection is likely to be concerned with technical procedures, whereas critical reflection might consider the purposes of education. The depth models of Larrivee (2008) and Kember et al (2008) are integrated in Appendix H and contribute to the conceptual framework for this study, seeking to describe the nature of student teachers' reflection and learning in the primary foundation subjects across university and school.

2.3.3. Supporting student teachers to reflect

While reflection is positioned as a core element of student teacher learning and knowledge generation, it is a complex process and not one that comes naturally to student teachers (Rens et al., 2020). Reflection often requires student teachers to exist in a state of flux and constant self-appraisal as they attempt to resolve ill-structured problems with no definite "answer" (Goldman & Grimbeek, 2015). This entails both cognitive, emotional and contextual challenges for student teachers, which are discussed below.

In becoming aware of a critical incident, student teachers may recognise anomalies in their knowledge but are unable to specify what is needed for this to be resolved. This requires student teachers to engage in the complex act of trying to describe knowledge that is not yet known to them (Van Ingen & Ariew, 2015). Indeed, prior knowledge may

influence the depth at which student teachers reflect, likely accessing earlier levels before moving to more critical levels. For example, a student teacher may first need to make sense of the technical aspects of teaching (surface reflection) before evaluating alternative, theory-based approaches (pedagogical reflection) (Hatton & Smith, 1995). With prior knowledge compounded by the apprenticeship of observation (Lortie, 1975), Kember et al (2008) suggest that student teachers reflection is likely to lead to the rejection new conceptual ideas, instead favouring the construction of 'individual meanings' within 'existing naïve frameworks' (p.374). Alongside this, student teachers often begin with low levels of knowledge of the concept of reflection (Goldman & Grimbeek, 2015). Therefore, they may encounter challenges related to content knowledge (the topic of their reflection) and metacognitive knowledge (what and how one reflects).

Epstein (2008) discusses the emotional challenges of reflection, noting that it requires a willingness on the student teachers' part to be vulnerable to inconvenient truths about themselves and the world. He suggests that it is a natural human response to be initially defensive about insights that challenge perceptions of competence, effectiveness or self-worth. This inclination could encourage what he calls *pseudo-reflection*, where student teachers engage in self-congratulation and self-deception to protect their self-image. Furthermore, he suggests that reflection is more likely to be concerned with visible behaviours, where student teachers are more likely to receive explicit positive feedback, than grapple with more complex, hidden aspects of professional practice and identity. This has implications for conceptualisations of student teacher learning as 'multi-levelled' (Attema-Noordewier et al., 2012; Korthagen, 2016), as it suggests that

less consideration may be afforded to internal aspects of learning, such as beliefs or motives. As such, student teacher reflection may tend towards the earlier levels of surface or pedagogical reflection, rather than critical reflection.

Alongside the internal cognitive and affective dimensions of reflection, student teachers may experience barriers to articulating their reflective awareness if they perceive environmental threats to their personal or professional self-concept. Against England's national policy landscape of performativity and high-stakes accountability (Burn & Mutton, 2015), student teachers may choose to "play the game" (Rodriguez, 1994), carefully selecting when and how to articulate their awareness of gaps in their knowledge, should it jeopardise their path to qualification.

These barriers underline that reflection is not a neutral process, it brings a cognitive and emotional burden that student teachers must learn to bear. Despite the cognitive barriers, the novice status of student teachers should not be conceptualised as a barrier to deeper reflection. As Knapp (2012) argues, the prior educational and personal experiences of student teachers can provide rich, authentic contexts for exploring pedagogies and purposes of education. Student teachers might be supported to bear the emotions of reflection by naming them and considering what prompted them. In this, they may come to understand reflection as 'an appreciative "gaze"', concerned with understanding the 'root sources of success' and building 'a better future from a positive present' (Neethling & Nel, 2021, p. 6).

Peltier et al (2005) identify two key conditions for fostering reflective thinking: instructor-student interactions and student-student interactions. Rens et al agree (2020), suggesting that interpersonal interactions through dialogue are essential to guiding

reflection. Teacher educators might encourage a discursive, non-threatening learning environment, where questions are encouraged, connections between concepts are highlighted, and students feel supported and trusting. This could enable student teachers to share thoughts and feelings with each other, a 'fundamental requisite' to reflection (Peltier et al., 2005, p. 256).

As well as dialogic reflections, reflective writing can be used to support student teachers to engage in self-questioning and self-dialogue. Indeed, Rolfe et al's (2001) framework for reflexive practice (see 2.3.1. Breath models of reflection) is specifically designed to be applied across different forms of reflection. Written reflective journals are widely used in teacher education as tools for constructing and expanding personal understandings of teaching (Suphasn & Chinokul, 2021). Writing affords time and accountability for reflection (Moon, 2006), which can be particularly useful in overcoming emotional barriers. It enables student teachers to make sense of ill-structured problems, making abstract ideas visible and open to re-examination (Moon, 2006). Reflective journals can therefore act as both a product that captures a situated snapshot of the student teacher's knowledge, and as a process, where the act of writing prompts further reflection (Moon, 2006; Suphasn & Chinokul, 2021). Reflective writing can enhance student teachers' ownership of their learning through encouraging a personal search for meaning and connection to prior knowledge, rather than passive borrowing of taught concepts (Abednia et al., 2013; Moon, 2006). This implies that reflective journal writing may support student teachers to engage in the deeper levels of pedagogical and critical reflection (Kember et al., 2008; Larrivee, 2008).

Even within dialogic and supportive environments, student teachers still often require guidance to move beyond the early depth levels of reflection (Rens et al., 2020). Breadth models are suggested to reduce the cognitive complexity of reflection (Gläser-Zikuda et al., 2024), with studies consistently finding that reflection can be deepened through application of Gibbs' Reflective Cycle (e.g., Ardian et al., 2019; Husebø et al., 2015; Markkanen et al., 2020). Ryan (2012) argues that the processes of reflection should be taught explicitly, demonstrating that using the 5Rs breadth model (Bain et al., 2002) can effectively scaffold student teachers' critically reflective writing**.** Likewise, Brookfield's (1998) four lenses for critically reflective practice can provide an effective scaffold for student teachers' reflections (e.g., Liston et al., 2022). Brookfield (1998) puts forth four lenses to prompt teachers to reflect from different viewpoints: as themselves as a learner, through the eyes of their pupils, through the lens of colleagues' experience, and through the lens of theoretical literature. The lenses can encourage critical interrogation of practice and support student teachers to surface personal and contextual assumptions (Kennedy, 2019).

2.4. Conclusion to literature review

The literature review has explored a range of perspectives on teacher knowledge, learning and reflection. Extending the work of Russ et al (2016), it has established four paradigms that provide frameworks for understanding student teacher knowledge, learning and reflection. Key theories and concepts have been synthesised within these paradigms, demonstrating that student teacher knowledge and learning are diverse and contested concepts. Across the paradigms, knowledge is conceptualised as a set of pre-determined behaviours and actions, ways of thinking based on cognitive structures,

community participation and interaction, and moral and political orientations for transformative action. Likewise, learning is viewed as the acquisition of behaviours, a change in cognitive structures, changes in tool appropriation and positioning within a community, and transformation of worldview and identity. This suggests that student teacher learning is not linear or uniform and is characterised by multiple (and sometimes competing) understandings that unfold across different contexts. Reflection is identified as a central aspect of student teacher learning across multiple paradigms, rooted in the notion that it enables tacit knowledges to be surfaced and potentially challenged (Mezirow, 2000; Polanyi, 1962; Schön, 1983).

There is little existing literature that addresses the nature of student teacher knowledge and learning, particularly within the context of the primary foundation subjects, and across the different settings of university and school-based placement. This study responds to this gap, seeking to generate new insights into how student teachers make sense of their learning and knowledge in the foundation subjects and to compare this across the settings of university and school. The following methodology chapter outlines how the study was designed to meet these research aims.

3. Methodology

This chapter outlines the methodology for the study, justifying why the methods were chosen and describing how they were implemented. The research was guided by the following aims:

- To understand what and how student teachers learn to teach in the primary foundation subjects during their university-based and school-based experiences
- To compare how the student teachers' knowledge and learning change between university-based and school-based experiences

The study was designed to address the following research questions:

1. How do student teachers' reflections on university-based experiences illustrate the ways they make sense of learning to teach the primary foundation subjects?
2. How do student teachers' reflections on school-based placement experiences illustrate the ways they make sense of learning to teach the primary foundation subjects?
3. In what ways do student teachers' knowledge, learning and reflection change as they move between university and placement settings?

An inductive, tightly bounded case study, situated within a constructivist research philosophy, was chosen as it was congruent with these research aims and questions. This chapter demonstrates how the research ontology, epistemology and methodology align to create a plausible study (Guba & Lincoln, 1994; Major & Savin-Baden, 2009). Naturally occurring documentary data was collected and analysed using Reflexive

Thematic Analysis (Braun & Clarke, 2019). The chapter describes the researcher's positionality and recognises the researcher's subjectivity as a resource that may generate deeper and more nuanced interpretations of the data (Braun & Clarke, 2023). Alongside this, the methodology outlines *honesties* (Major & Savin-Baden, 2009), the points at which limitations of the research design seemed to "threaten" the quality of the research. For example, the ethical considerations of conducting insider research (Trowler, 2016) required ongoing reflection regarding the power relationships between me, a teacher educator, and the student teachers who participated in the study. At times, pragmatic compromises had to be made to maintain ethical integrity within this relationship. Recognising that honesties are a criterion by which the plausibility of research is evaluated (Major & Savin-Baden, 2009), I resisted the temptation to present a linear and "tidy" account. Instead, they are included here to reflect the relational and interpretive complexity of constructivist research.

The methodology is grounded in existing academic literature and aligns with the conceptual language of the field. While the research philosophy for this study is constructivist, emphasising constructions of concepts and knowledge as 'means of access' to the world of experience (Flick, 2008, p. 90), it is situated within the broader interpretivist paradigm, which underpins much of qualitative research. Whilst the terms *interpretivist* and *qualitative* are sometimes used interchangeably, this study distinguishes between the epistemological paradigm (interpretivism) and the methodological tools (qualitative methods) used to explore interpretations of participants' meanings. The 'research onion' (Saunders et al., 2019, p. 130) and the set of lenses for qualitative research (Savin-Baden & Howell Major, 2013) provided helpful

frameworks to support the demonstration of methodological congruence between the study's approach, design, and methods. The methodology chapter is therefore structured in line with these frameworks, to demonstrate the 'flow' between these different elements (Braun & Clarke, 2025, p. 415).

3.1. Research philosophy

Within any research study, there is a need for 'congruence between the theoretical level of research and the pragmatic level' (Lester et al., 2017, p. 88). The philosophical stance of the researcher is their 'philosophically informed view about reality, knowledge and ways to gain knowledge that serves as a guide for a particular study' (Savin-Baden & Howell Major, 2013, p. 54). As such, it informs the approaches and methods of the study, and clarifies a set of assumptions that underpin the rationale for a particular research design (Savin-Baden & Howell Major, 2013). The philosophical stance, akin to the research paradigm or worldview, must consider the assumptions it makes in relation to:

- ontology, the nature of reality,
- epistemology, the nature of knowledge,
- methodology, the nature by which knowledge can become known.

(Guba & Lincoln, 1994)

The study is underpinned by constructivism, which adopts a relativist ontological approach in that 'realities are apprehendable in the form a multiple, intangible mental constructions, socially and experientially based, local and specific in nature… and dependent for their form and content on the individual persons or groups holding the constructions' (Guba & Lincoln, 1994, p. 110). Epistemologically, knowledge is 'a

compilation of human-made constructions' (Raskin, 2002, p. 4), 'where individuals assign meaning to experiences and ideas' (Savin-Baden & Howell Major, 2013, p. 63). Construction of concepts and knowledge acts as 'means of access' to the world of experience - events and activities in the natural and social environment; these constructions are used to interpret experiences, to understand and attribute meanings (Flick, 2008, p. 90). Therefore, absolute truths are not achievable; rather, constructions might be evaluated by their level of applicability or sophistication (Guba & Lincoln, 1994). In this sense, an individual cannot know for certain if their constructions align with a reality that is "out there", but, as Raskin (2002) suggests, 'they can know if their constructions work for well for them' (p.4). Knowledge is 'contextualised, situated and mediated by a knower's perspective' (Ide & Beddoe, 2024, p. 727)

Constructivism is sometimes used as an alternative term to interpretivism, or is included within the interpretivist paradigm (Punch, 2009, p.16). For example, in educational research, the *'constructivist/interpretative* approach' is described as 'the study of social interactions that occur in educational settings' (Ponce & Pagan, 2016, p. 48). The boundary between interpretivism and constructivism is often blurred, possibly because qualitative research methods are associated with both approaches (Punch, 2009). Gorkski (2013) distinguishes the two, suggesting that interpretivism draws a sharp line between natural and social entities, whereas for constructivism, natural sciences are 'just another realm of social life' (p.660).

Similarly, distinction is drawn between *constructivism* and *(social) constructionism* (Braun & Clarke, 2013; Savin-Baden & Howell Major, 2013), although other authors often use interchangeably (e.g., Creswell & Poth, 2024; Hammersley, 2013). While both adopt

relativist ontological positions, social constructionism emphasises the *shared* nature of reality, suggesting that knowledge is constructed through 'creating a culture of shared artefacts with shared meanings' and 'emerges through dialogue and negotiation' (Savin-Baden & Howell Major, 2013, pp. 62–63). Instead, *constructivism* emphasises that reality is an individual's mental construction, where truth is a result of perspective, and knowledge is constructed by the researcher, not discovered in the world (Savin-Baden & Howell Major, 2013, pp. 63–64).

In terms of methodological assumptions, knowledge production is often grounded in empirical data (Braun & Clarke, 2013), and seeks to make sense or interpret meanings others have of the world (Creswell & Poth, 2024). For this reason, questions tend to be broad and general, enabling the participant to construct the meaning of an experience (Creswell & Poth, 2024). Representativeness of the data emerges through the research process, determined by the 'richness of the information gathered' (Ponce & Pagan, 2016, p. 59). This is one of the reasons why constructivist research lends itself to small sample size, as the researcher seeks an in-depth understanding of the participants' constructions and interpretations of their experiences. It is suggested that *representing* the participants' interpretations through the data is akin to 'mimesis', the process by which an individual 'assimilates' themselves to the world (Gebauer & Wulf, 1995, pp.2-3, in Flick, 2008, p. 92). Within constructivist methodologies, mimesis occurs in three ways: in how the participant translates experiences into forms of data that can be collected; in the researcher's constructions and interpretations of texts based upon this data; and, in the reader's interpretations of the researcher's texts (Flick, 2008).

The mimetic components of constructivist research foreground the positionality of the researcher, and so reflexivity becomes a significant consideration. Acknowledging positionality means that the researcher recognises how their interpretation 'flows from their own personal, cultural, and historical experiences' (Creswell & Poth, 2024, p. 28). Reflexivity involves a researcher's critical reflection on both the knowledge produced and their role in the production of knowledge (Braun & Clarke, 2013). It is suggested that *functional reflexivity* refers to the research tools and process, whereas *personal reflexivity* refers to the researcher's own subjectivity (Wilkinson, 1988, in Braun & Clarke, 2013). Plausible qualitative research makes reflexivity explicit design (Major & Savin-Baden, 2009), so it was necessary to consider the influences of the functional and personal aspects of the study. For these reasons, I critically discuss the research design (see 3.3.3. Addressing limitations of insider research) as well as my own subjectivity as the researcher (see 3.3.1. Being an insider; 3.3.2. Being an outsider).

3.2. Research approach and design

3.2.1. Inductive approach

Congruence between the research philosophy, approach and design strengthens the research study (Savin-Baden & Howell Major, 2013). Therefore, it is necessary to consider how the research philosophy informs the research approach and design. Constructivists do not usually seek to test a specific theory (Savin-Baden & Howell Major, 2013); rather, they are trying to 'get a feel' for what is going on to better understand the nature of the phenomenon (Saunders et al., 2019, pp. 154–155). For these reasons, this research adopted an inductive approach, as is often the case for constructivist studies within the

overarching interpretivist paradigm (Creswell & Poth, 2024; Saunders et al., 2019; Savin-Baden & Howell Major, 2013). An inductive approach means that theory follows data, with the aim of 'understanding the way in which humans interpret their social world' (Saunders et al., 2019, p. 154). Through in-depth exploration of the experience and interpretations of individuals, researchers generate or develop theory or patterns of meaning, often in the form of a conceptual framework (Creswell & Poth, 2024; Hammersley, 2013; Saunders et al., 2019). The inductive research approach is characterised by small sample sizes, as it is likely to be focused on particular contexts relevant to the experiences it aims to understand (Saunders et al., 2019). Often, a variety of data collection methods are employed (Saunders et al., 2019), congruent with constructivist methodologies (Savin-Baden & Howell Major, 2013).

3.2.2. Case study design

This study adopted as case study as its research design. Case studies are concerned with gaining 'an in-depth understanding of particular phenomena in real-world settings' (Blichfeldt & Andersen, 2006, p. 3). They offer flexibility (Atkins et al., 2012), enabling researchers to recognise the case's content and complexity (Punch, 2009), through asking evaluative *how* and *why* questions (Yin, 2014). They are suitable where the researcher aims to notice change as it happens, and seeks its antecedents and consequences (Thomas, 2023, p. 157). Aligned with the inductive approach, they tend are well-suited to small scale investigations (Atkins et al., 2012). Three possible purposes of case study research are suggested:

i. To explore a phenomena about which not much is known
ii. To describe something in detail

iii. To explore what is happening

Day Ashley, 2012, p. 106

These purposes align with the aims of this research study (see 1.4. Purposes and aims of the study). Such aims define the clear research focus, an important aspect of the case study approach (Punch, 2009). Furthermore, they are congruent with instrumental, diachronic case study design. Instrumental case studies 'seek to give insight into the specified phenomenon, possibly through refining theory' (Stake, 1994, in Punch, 2009, p. 120). The study aimed to give insight into the experiences, constructions, and interpretations of student teachers throughout university and placement experiences. Diachronic case studies 'show how changes may have happened over time and why those changes may have happened' (Thomas, 2023, p. 158). The study aimed to describe the changes in student teachers' knowledge about teaching the primary foundation subjects through their learning experiences in university and the subsequent placement.

An instrumental case study selects cases that best enable particular phenomena to be understood (Creswell & Poth, 2024). To achieve this, parameters must be identified to ensure the case is bounded and relevant to the study's intent (Creswell & Poth, 2024). In this study, the case was bounded by a specific event (Thomas, 2021): engaging with the FARE module and a concurrent school-based placement within an undergraduate ITE programme. The university-taught FARE module and the school-based placement provided the context in which the student teachers constructed their knowledge of teaching the primary foundation subjects. The focus of the study was on the meaning-making processes that occurred within this bounded situation, using reflective assignments and recorded conversations as naturally occurring, documentary data.

This demonstrates both the *subject* and the *object* of the case study (Wieviorka, 1992). The subject was the specific pedagogical situation, bounded by time, institution, and experience; the object was the process through which these student teachers constructed knowledge and interpreted meanings as a 'means of access' to the world of experience (Flick, 2008, p. 90). Furthermore, the research design is congruent with distinguishing characteristics of qualitative research more broadly, in that it was conducted in a natural setting and situated within a specific context (Creswell & Poth, 2024). The researcher's understanding of the specific context is emphasised as being essential in understanding how constructed meanings are shaped by the unique circumstances of context (Creswell & Poth, 2024). This design of the study meant that an approach of 'insider research' (Trowler, 2011) could be implemented, meaning that the researcher already possessed understanding of the specific context (see 3.3. Positionality).

3.3. Positionality

A significant consideration in research design was my relationship to the subject of the case to be studied. I was one of five teacher educators who taught the student teachers on the FARE module between November 2019 and July 2020. BERA explicitly addresses the tensions that may arise where teachers research their own students (BERA, 2024, p. 13), indicating its precedence in educational research. Thomas (2023) calls these 'local-knowledge case studies' and highlights the benefits of the researcher already possessing a great deal of knowledge about the selected case (p.156). Researching cases situated where the researcher is employed or studying is termed *insider research* (Trowler, 2011). BERA (2024) cautions that, ethically, 'particular care' may be needed where the

researcher is also an insider to the researched community (p.13). Here, I use the terms *insider* and *outsider* to consider my positionality. I then discuss the benefits and limitations of insider research, along with their influences on the research design.

3.3.1. Being an insider

Within interpretivist studies, the insider researcher may be able to utilise their 'privileged access to particular kinds of knowledge' (Mercer, 2007, p.3). A shared understanding of context means that the insider researcher is likely to better understand the participants' nuanced use of language and communication and is therefore likely to offer a richness in interpretation of data (Munn-Giddings, 2021; L. E. Ross, 2017). Like the participants, I had lived experience of the transition from student teacher to qualified teacher, likely navigating similar challenges moving between the worlds of the university and the placement. Our work together and our shared familiarity with primary education contexts meant we had a shared language, assisting the ease of our communication.

The interpersonal relationships that already exist between the researcher and the participants could lead to the quicker establishment of rapport and trust during data collection, improving the quality of the research (Atkins et al., 2012). At the point of data generation, I had worked with the student teachers for over a year. I had taught across several of their modules in the first year of their undergraduate degree, supported them in their first placement, and shared enrichment opportunities with them, such as professional development workshops at the Houses of Parliament. These experiences had provided opportunities for both formal and informal interactions, establishing strong interpersonal relationships between me and the cohort of student teachers.

3.3.2. Being an outsider

Although I was, in many ways, an insider in this research, my positionality and power meant I was, in other ways, an outsider. I was the teacher educator to the participants, not a peer. My lived experiences occurred in a different university and different schools to them, twelve years earlier. I had taught across different primary schools for ten years – I "knew the chalkface" in ways they did not. However, I had only limited experience in teaching the current National Curriculum Programmes of Study (Department for Education, 2013). It was implemented in schools in September 2014, but I moved to teach in an international school in Thailand in August 2015, meaning I only taught using the current National Curriculum for one academic year. Furthermore, I had not experience of teaching in a primary school under the then new Ofsted inspection framework (Ofsted, 2019b), which emphasised the importance of the curriculum's depth and breadth, and implicitly valorised knowledge-based mastery approaches (Ofsted, 2019b). In short, the context had changed, meaning the student teachers in the study would likely have different experiences to me in their placement.

Furthermore, teaching abroad in an international school gave me new professional development opportunities, in a context with different accountability measures to those in England. As assistant principal, I was responsible for adapting the National Curriculum (Department for Education, 2013) to meet the needs of our international pupils across Year 1 to Year 6. Through this, I came to know the content of the National Curriculum programmes of study, as well as evaluating its relevance to the school's pupils. This experience increased my sense of professional autonomy as we, as a teaching staff, were able to move beyond externally prescribed directives. However, this freedom also

brought with it a sense of risk and exposure. When introducing the adapted curriculum to teaching staff, I had to justify my beliefs and actions to my staff, engaging in dialogue while holding the tensions of different views. While ultimately this encouraged us all to reflect and consider their own pedagogical values, there were times when I missed the easy and swift justification of 'it's what Ofsted are looking for'. In this sense, I came to realise that compliance to external measures can sometimes provide a sense of "professional safety" and reduce the cognitively taxing work of discerning the best course of action. Without these experiences, I would perhaps continue to valorise teacher autonomy, without recognising the nuances of teacher compliance.

Becoming a teacher educator in England in October 2016 further deepened my understanding of the primary curriculum and teaching practice. The current iteration of the National Curriculum has been critiqued for lacking focus on developing wellbeing, prioritising prescribed attainment goals over learning-engagement, and placing a high emphasis on mathematics and English, to the detriment of science and the foundation subjects (Hargreaves et al., 2023). Despite my limited direct experience of teaching under this curriculum, these critiques chime with my own experiences of primary teaching in England. Since the start of my primary teaching career in 2007, I found the role had increasingly become focused on measuring the amount of progress the children had made in the English and mathematics, which I now recognise as an example of 'neoliberal high-stakes standards-based accountability reforms' that have characterised recent shifts in global education systems (Brown et al., 2021, p. 447). However, at the time, I was only aware of something feeling not quite "right", but I could not put it into words; I did not have the language, much less the peer-reviewed research. It was only

when I became a teacher-educator that I learned the term 'performativity' (e.g. Ball, 2003) and realised that this concept had slowly infused, yet increasingly dominated my time as a primary teacher in England.

Becoming a teacher educator enabled me to develop deeper insight into my lived experiences of primary teaching in England and Thailand. In this sense, I developed 'sociological imagination' (Mills, 1959, in Matthews et al., 2018, p. xvi), noticing my personal frustrations and linking them to the broader social and political context. Therefore, my position within this research design was not neutral. My insider/outsider perspective shaped the research design. My practice-based and conceptual knowledge helped me to pose more nuanced questions about student teacher development and notice patterns that may not have been noticed by the student teachers themselves. That said, the positionality of the researcher within insider research can also create limitations, which must be considered as part of a plausible research design.

3.3.3. Addressing limitations of insider research

3.3.3.1. Insider researcher reflexivity

Common critiques of insider research are the degree to which it may be considered "objective" and that researchers might "over-identify" with participants and adopt their perspectives (Sikes & Potts, 2008). However, within constructivist research philosophy, the creation of truth and knowledge is dependent on the knower's perspective, and so objectivity cannot be separated from subjectivity (Savin-Baden & Howell Major, 2013). This means that the researcher's positionality is integral to research quality, rather than a threat. In this sense, the insider approach may strengthen constructivist research design, as the researcher is likely to better understand and interpret the group culture

(Savvides et al., 2014). That said, the insider researcher must maintain the capacity to critically engage with information, meaning that researcher reflexivity is essential (Drake & Heath, 2008). This enables the researcher to consciously consider their position and influence within the study, while understanding that they can never be truly "outside" of the research subject or process (Major & Savin-Baden, 2009). Adding to this, Drake and Heath (2008) emphasise the importance of maintaining boundaries in the relationships between the insider researcher and participants in educational institutions. Therefore, there are important reasons relating to both quality and ethics that mean an insider-researcher might seek to put distance between themselves and the data generation.

3.3.3.2. Power imbalances

A further consideration of insider research highly relevant to this study is the power relationship between participant and researcher. Power is not intrinsic to a person or institution; rather, power is gained through discursive struggles to define truth and meaning (Day, 2012, p. 67). In this study, the power relationships between the researcher/teacher educator and the participants/student teachers had to be considered, as did the power relationships between the participants/student teachers themselves. This section considers potential factors that may influence power relationships where a researcher/teacher educator researches their own student teachers.

Traditionally, the researcher is positioned as more powerful than participants as the person who defines the "truth" (Ide & Beddoe, 2024). Likewise, in England's current policy landscape, statutory frameworks such as the ITTECF (Department for Education, 2024b) may be perceived defining the "truth" by multiple stakeholders. Given the obligation to

ensure that ITE programmes adhere to policy frameworks (Ofsted, 2024a), it is probable that teacher educators may be perceived as the definers of "truth" by student teachers. This emphasises how a researcher/teacher educator is already likely to hold a position of power when researching their own student teachers. The researcher/teacher educator's position of power may be raised further by the student teachers' perceptions of their future relationship with the teacher educator. The student teachers might anticipate that the teacher educator will be involved in their future professional development, ultimately judging whether they gain QTS. It may influence how truthful participants feel they can be; 'pragmatism may outweigh candour' (Mercer, 2007, p. 8). This exemplifies how the nuanced and fluid boundaries between insider and outsider are further compounded where a researcher holds multiple roles in relation to the participants (Ross, 2017). Furthermore, within a cohort of student teachers, some may hold more power than others, influenced by their interpersonal relationships to the researcher or with others in the group (Atkins et al., 2012; BERA, 2024; Trowler, 2016). Therefore, the research design had to account for how such relationships might be navigated.

The power imbalance reflects the inherent conflict of roles experienced by the researcher who also holds a professional role at the same institution (Trowler, 2016). According to BERA (2024), where dual roles occur, it is essential that the researcher's roles is made explicit, both to participants and to the reader of the research report. As Day (2012) explains, making explicit the nuance of the power imbalances between researcher and researched can enable the reader to better understand the researcher's positionality and the context of the study. This requirement is particularly relevant to constructivist research, where *mimesis* (the representation and interpretation of experience) occurs at

the three levels of participant, researcher and reader (Flick, 2008). This underscores the importance of transparency around the researcher's roles as part of the research design.

Having considered potential limitations of insider research relating to research quality and ethics, the next section seeks to demonstrate reflexivity in making clear to the reader how these limitations were addressed. First, it explains how the use of naturally occurring documentary data enabled distance to be built between the researcher and the point of data generation. It then describes the context of the data generation, demonstrating how the dual roles of researcher and teacher educator were made explicit to participants.

3.3.3.3. Naturally occurring documentary data

All data sets in this study were naturally occurring; all data generation 'would have occurred regardless of the role of the researcher' (Lester et al., 2017, p. 89). Naturally occurring data distances the researcher from the data generation (Lester et al., 2017), reducing the power imbalance between researcher and participant. Naturally occurring documents were generated *during* the teaching of the FARE module and *after* the school-based placement (See Table 2).

A document is a textual artefact that contains 'an intentional message, fulfilling a particular purpose of its creator' (Wildemuth, 2017, p. 166). Documents as data may be considered naturally occurring, in that they were not produced *for* the study, but they are useful to it (Wildemuth, 2017, p. 166). When designing research that uses naturally occurring documentary data, two key aspects must be considered: the phenomenon of interest must be clearly conceptualised, and the link between the phenomenon and the documentary data must be defined (Neuman, 2006, in Wildemuth, 2017). In this research, the phenomenon to be studied was clearly defined as the object of the case

study: the process through which these student teachers constructed knowledge and interpreted meanings as 'means of access' to the world of experience (Flick, 2008, p. 90). The documents that formed the data sets represented the student teachers' emerging constructions and interpretations as they reflected on learning and teaching experiences at different points during the FARE module and after the school-based placement. This provided a 'clear rationale' for the link between the object of the study and the documentary data (Wildemuth, 2017, p. 166).

The documents collected encompassed recorded conversations (Data Set 1) and reflective writing (Data Sets 2 and 3). Data Set 1 comprised recorded conversations between student teachers, discussing their reflections on their university experiences in the FARE module. This was akin to participant-led peer interviews, which have been suggested to minimise power imbalances between participants and the researcher (Lushey & Munro, 2015). Data Set 2 comprised weekly reflective journals, where the student teachers listened back to their recorded conversations and wrote a reflection prompted by Rolfe et al's (2001) framework for reflexive practice (What? So What? Now What?). Data Set 3 comprised post-practice essays: reflective written accounts of practice, where the student teachers considered how their university experiences in the FARE module shaped their teaching practice. Written methods of data collection are likely to increase the sense of distance between the researcher and the participants (Handy & Ross, 2005). The student teachers submitted two or three reflective journals (Data Set 2) that connected with their reflective account (Data Set 3) as their module assignment. The recorded conversations (Data Set 1) were an integral aspect of the FARE

module, providing a scaffold for student teacher reflection. However, the conversations themselves were not assessed as part of the module assignment.

Each data set was generated by the participants with relatively little input from the researcher, even in the role as teacher educator, as the module was taught by a team of teacher educators. The instruction teacher educators gave to the student teachers related to how to structure conversations or writing – e.g., using the writing frame to support their reflection - rather than *what* to include (see Appendix A). This is congruent with the case study approach, in that it was a situation where the researcher had little control (Day Ashley, 2012). The methods of this study aligned with other research in teacher education and higher education research that collect student assignments as naturally occurring data (e.g., Gawley, 2018). 'Teacher work samples' (TWS), primarily used for the purposes of assessment of student teacher competencies, might be collected as data artefacts (D. Bell et al., 2009; Henning et al., 2010). Often, these are documents that provoke the student teachers' reflections on practice (e.g., Bataller-Català, 2025; Kohler et al., 2008; Zhang et al., 2023). This closely aligns with the documents generated in this study, particularly Data Set 2 and Data Set 3.

That said, there are limitations to naturally occurring data. The methods of recording shape the data, potentially limiting the content of data by missing out important information, such as contextual cues (Lester et al., 2017). Additionally, in this study, the power ascribed to me by my dual roles meant that there was the possibility that the participants would produce written material they felt would 'please' the researcher (Salisbury, 1994, in Moon, 2006). Therefore, it is necessary to consider the quality of naturally occurring data sets, which this study does in providing 'dense description' of

context and methods (Savin-Baden & Howell Major, 2013, p. 479) (see 3.3.3. Addressing limitations of insider research; 3.4. Methods).

3.3.3.4. Context of data generation

The power imbalance was initially addressed by clearly distinguishing of the dual roles of researcher and teacher educator. When the FARE module assignment was introduced to the cohort of student-teachers, it was followed by an explanation of the aims of the research project (see 3.7. Ethics; Appendix A). It was explained that "wait-time" would be implemented between the grading of the assignments and the data analysis. This provided greater clarity around my dual roles as a teacher educator and the researcher. During the teaching and assessment of the FARE module, my role was that of teacher educator; following ratification of the assessment grades, my role became that of the researcher. Refraining from analysing the data as it was generated reduced the possibility that I might act in my role as researcher – for example, by asking a particular participant for clarification around their meaning in one of their reflective journals written during the teaching of the FARE module. The decision was also made *not* to use incidental data (Mercer, 2007, p. 13), e.g., informal conversations between me and the student teachers. While the student teachers were aware that, in the future, I would use other data sources they had generated, in the moments of teaching the FARE module, they could speak to me as they would have done in any other teaching instance. As much as I could, I foregrounded my role as teacher educator during the data generation phase.

Additionally, five teacher educators were involved in teaching and assessing the module, and the assessors were not allocated to student teachers until after the assignments had been submitted for marking. This reduced the likelihood of the student teachers writing

to please a specific teacher educator (including the researcher). Furthermore, the inductive approach of the study meant that there were no predefined research categories or criteria for the research. The choices the student teachers made about the content of their reflective journals and post-practice essays were indicative of what they considered to be significant in their understanding of teaching the foundation subjects. During the analysis, this meant codes and themes were generated from the student teachers' *own* interpretations and meanings ascribed to experience. This exemplifies one of the strengths of naturally occurring data sets, in that they remove the researcher's concerns that may otherwise become embedded in interview questions, providing space for the generation of novel or unexpected findings (Lester et al., 2017).

The research design also addressed the power imbalance by seeking to empower the participants. The student teachers could control if and what they chose to share through their recorded conversations and written reflections. In this sense, the student teachers held power as they could define their own "truths" within their conversations and writing. Furthermore, participation required active opting-in and ongoing consent was sought throughout the data generation period (see 3.7. Ethics).

Whilst it is acknowledged that researcher distancing can limit data quality (e.g., Payne-Gifford et al., 2021), in this study, it served to minimise the power imbalance in a way that could not have been achieved through other "closer" methods, for example, face-to-face interviews. That said, although I deliberately maintained a degree of distance during the data generation, to minimise the influence of my position and reduce the risk of coercion, my relationship to the participants could not be entirely bracketed. My existing familiarity with the context, and my knowledge of teaching the primary foundation subjects, my

previous experiences (see 3.3.2. Being an outsider) inevitably informed my interpretation of the participants' data.

All qualitative data constructed within social contexts is influenced, whether consciously or unconsciously, by a wide range of factors such as social norms, self-perception and presentation, and participants' relationship to the researcher (Handy & Ross, 2005). Therefore, to provide a credible and transparent account of how data were constructed (Major & Savin-Baden, 2009), it is necessary to consider the possible contextual influences. In this study, in the generation of Data Set 1 (the recorded conversations), the participants may have been influenced by their perceptions of their relationships with each other and with the five teacher educators who taught the module, their personal histories relating to the foundation subjects, the way in which the subjects were taught in university, and the knowledge that their recorded conversation would support them in crafting an academic assignment. In the generation of Data Set 2 and Data Set 3 (the reflective journals and written accounts of practice), it is likely that participants were influenced by the assessment rubric (see Appendix B), their perceptions of academic writing, their competency in written communication, and their understanding of the FARE assignment. Furthermore, their reflective accounts of practice would be strongly influenced by their interpretations of their school-based experiences, which themselves would have been informed by personal histories and situated within complex school contexts. Acknowledging this *honesty* (Major & Savin-Baden, 2009) is a necessary aspect of plausible research and illustrates relational complexity of researcher interpretations in constructivist studies.

3.4. Methods

3.4.1. Sample

In good qualitative research, the sampling method selected should be consistent and in line with the philosophy, approach and design of the research project (Dowling & Brown, 2010; Ponce & Pagan, 2016; Punch, 2009). Representativeness in qualitative research concerns the relevance of the participants' experience of and concern with the researched phenomenon (Flick, 2018), enabling the generation of 'the kind of rich data necessary to answer the research question' and production of 'believable' explanations and descriptions (Savin-Baden & Howell Major, 2013, p. 318). In this study, the case was tightly bounded by a specific pedagogical event; all participants were student teachers enrolled in the FARE module, followed by their second teaching placement, in a northern university ITE programme in the academic year 2019-2020. In this sense, criterion sampling (Patton, 2023) was methodologically congruent and fit for purpose, the criterion being enrolment in the FARE module in the academic year 2019-2020.

Researcher reflexivity is foregrounded in constructivist and insider research. Conscious of the *power imbalance* (Day, 2012; Ide & Beddoe, 2024) between me and the potential participants, participation was made voluntary and self-selecting. This approach was implemented to mitigate coercion and ensure that the research design was ethical. Twenty-four student teachers met the criterion for sampling; having been briefed on the study (see Appendix A) and provided with an information sheet about the study, all signed consent forms to state they would participate (see Appendix C). However, acknowledging that some of the student-teachers may have felt pressured to sign the consent form to

create a positive impression in the eyes of their teacher educators (Atkins et al., 2012, p. 56), the first round of data collection required the student teachers to actively share their documentary data with the researcher. Whilst it was recognised that this might reduce representation of 'hard to engage' groups (Braun & Clarke, 2013), something that BERA (2024) highlight as an ethical concern, it was determined to be a necessary pragmatic compromise to maintain ethical integrity of the study. Of the twenty-four who initially signed consent forms, fourteen student teachers "opted-in" and shared their documents during the first round of data collection.

Pseudonym	**Gender**	**Ethnicity**	**Status at entry to programme**
Milly	Female	White British	School leaver
Cara	Female	White British	School leaver
Adam	Male	White British	School leaver
Phoebe	Female	White British	School leaver
Sarah	Female	White British	School leaver
Eve	Female	White British	School leaver
Heather	Female	White British	School leaver
Leonie	Female	White British	School leaver
Marcia	Female	Asian British	School leaver
Jackie	Female	White British	Mature student
Abigail	Female	White British	Mature student
Rebecca	Female	White British	Mature student
Kit	Male	White British	Mature student
Terri	Female	White British	School leaver

Table 1: Demographic of sample

Table 1 provides details of the participants. It includes the student status at entry to the programme to give some indication of the participants' prior experiences of educational practice. Each of the mature student teachers in the sample had been employed in educational settings prior to beginning the ITE programme. The school leavers' experiences were typically voluntary and less extensive. The data collected was concerned with how the student teachers constructed meaning around their university and placement experiences; it was therefore relevant to consider their levels of prior experience in educational settings, as this was likely to inform their personal interpretations. This information is included to provide a more detailed account of the research context and support the plausibility of the study (Savin-Baden & Howell Major, 2013).

The sample is not representative of the cohort of student teachers that constituted the case. Males and mature students are overrepresented; Asian British are underrepresented, and Black British are not represented at all. The study did not aim for representative sampling as it did not seek to generalise findings. Rather, aligned with the constructivist research philosophy, the study sought to generate *resonant* interpretations of the student teachers' constructions of meaning and experience (Angen, 2000). Furthermore, as explained above, representativeness was not achievable due to the study's ethical commitments to its participants (see 3.3.3. Addressing limitations of insider research). That said, the fact that *all* mature student teachers from the cohort chose to participate could indicate that they felt more comfortable in their own reflections, or a had a greater interest in the aims of the research (perhaps influenced by their prior work experiences). Their reflections often implied a more nuanced

understanding of educational practice and the school-based contexts in which they worked. These contributions inevitably shaped the findings, both in terms of the depth of their reflections, and in who felt ready, able or willing to participate in the study. This consideration is another *honesty* that was necessary to acknowledge to support the *plausibility* of the study (Major & Savin-Baden, 2009).

As data collection and analysis were not concurrent (see 3.3.3. Addressing limitations of insider research; Table 2), it was not possible to know when the study had reached the point data saturation, that is, the point when 'the researcher is no longer hearing or seeing new information' (Savin-Baden & Howell Major, 2013, p. 317). That said, the notion of data saturation is said to be misplaced in constructivist studies (Savin-Baden & Howell Major, 2013), due to the recursive relationship between experience, construction and interpretation (Flick, 2008). The study therefore sought *plausibility* as its core criteria for quality (Major & Savin-Baden, 2009), rather than saturation of codes and themes (see 3.6. Quality). It is acknowledged that the sample was not purposively sampled, but the data generated were sufficiently rich and nuanced to support resonant interpretations of meaning whilst retaining ethical integrity.

3.4.2. Data collection

Despite its constructivist philosophy, this study uses the term *data collection* rather than *data generation*. *Generation* is often the preferred term within qualitative research, as it 'captures the active role of the researcher and acknowledges that data don't pre-exist research as data' (Braun & Clarke, 2025). However, in this study, efforts were taken to distance the researcher from taking an active role in the generation of data, and the data were naturally occurring. Therefore, *data collection* feels a more appropriate term to

describe how the researcher obtained access to the data sets. The term *generate* is used to describe the student teachers constructing the data, which occurred naturally as part of their engagement in the FARE module.

Three types of documentary data were collected that each fulfilled different purposes for the participants at separate points throughout the study. Although all three data sets were technically naturally occurring documents, each had characteristics of other qualitative data artefacts. Data Set 1 resembled participant-led peer interviews. Data Set 2 were akin to researcher-directed interval-contingent diaries. Data Set 3 could be viewed as written accounts. For this reason, the research approach is considered multi-method, as different types of qualitative data were collected (Saunders et al., 2019). A multi-methods design is characteristic of case studies (Yin, 2018), as they seek to preserve and understand the wholeness and unity of the case (Punch, 2009). Given the significance of functional reflexivity in qualitative research (Wilkinson, 1988, in Braun & Clarke, 2013), and the need for 'dense description of methods' to support the plausibility of the study (Major & Savin-Baden, 2009, p. 479), the three methods of data generation are described below.

3.4.2.1. Data Set 1 – participant-led peer interviews

The first data set consisted of weekly recorded conversations, where the participants reflected on what they had noticed about their learning in the FARE module, over a period of four weeks. The student teachers worked in pairs or triads to record a reflective conversation that would act as a scaffold for writing a reflective journal entry for the week. The conversations lasted for around 15 minutes. They were recorded on either the student teachers' personal devices or a tablet provided by the university. These were then

shared with the researcher electronically and stored securely on the researcher's university OneDrive account. Over the four-week period, twelve recorded conversations were shared with the researcher.

Although the recorded conversations were naturally occurring documents, their form was akin to participant-led peer interviews. It is suggested that quality of interview data might be improved through reducing the difference in status between researcher and participant (Punch, 2009). This was an important reason for collecting data that student teachers had generated together, away from the presence of the researcher. It is also suggested that establishing rapport between interviewer and participant strengthens data quality (Punch, 2009). Likewise, peer-to-peer interviews are suggested to develop rapport and comfort between participants through common ground and shared lived experience (Croft et al., 2016; Payne-Gifford et al., 2021). For this reason, student teachers could choose who they worked with. This increased the likelihood they worked with someone in whom they had a degree of trust, therefore increasing the likelihood responses were authentic and more fully represented the "truths" of the student teachers.

3.4.2.2. Data Set 2 – interval contingent diaries

The second data set consisted of weekly reflective journals, where student teachers chose one aspect of their learning from the week and interrogated it at a deeper level, considering its implications for their future practice. The student teachers listened back to their reflective conversations and used this to scaffold their written reflections. Each student teacher wrote and submitted one journal per week over a period of four weeks; from those who had "opted in" by actively sharing their reflective conversations, this

generated 55 reflective journal entries. These were downloaded from the university's assignment submission portal after the full assignment had been marked, returned to the student teachers, and grades ratified by the university awarding processes. The reflective journals that formed Data Set 2 were stored securely on the researcher's university OneDrive.

Although the weekly reflective journals were part of the teaching and assessment of the FARE module, not researcher directed, their form was similar to interval contingent diaries (Thomas, 2023). Diaries allow researchers to collect information about participants' thoughts, feelings, experiences, conversations, responses, actions or practices of a specified period of time (Braun & Clarke, 2013; Thomas, 2021). The weekly reflective journals were akin to interval-contingent diaries, where participants record their interpretations of experiences over regular intervals (Thomas, 2023). Data Set 2 sought information that could deepen understanding of the participants' personal constructions and interpretations of their learning in the FARE module. This meant a method akin to diary entries was congruent with the research aims, as diaries stimulate reflection and require evaluation of thought (Olorunfemi, 2024).

Jannssens et al (2018) emphasise the importance of specifying the research question in relation to designing the structure of the diary, which can range from very structured to very unstructured (Braun & Clarke, 2013). The research design must consider what type of information is being sought and how it may be best ascertained. The secondary nature of Data Set 2 meant that the research design had little control over the structure of the weekly reflective journals. Student teachers were asked by their teacher educators to write their journals using the reflective framework, answering the questions 'What?', 'So

What?' and 'What Next?' (Rolfe et al., 2001) – starting with the question '*What* did you learn this week in the FARE module?'. The weekly reflective journals therefore had a relatively loose structure, in line with the aims of the study.

Jannssens et al (2018) also emphasise the temporal aspects of collecting data through diaries. The student teachers wrote weekly reflective journals about their FARE experiences over a period of four weeks (the duration of the module's teaching). They recorded their reflective conversations on the Friday of each week, then had until the following Wednesday to submit their journal entry through the university assessment portal. While this was a requirement for assessment of the FARE module, it serendipitously supported the quality of the data, as it reduced the time between participants' experiences and recording their interpretations of those experiences. The trustworthiness of written data as a method is discussed below (see 3.4.2.3. Data Set 3 – written accounts).

3.4.2.3. Data Set 3 – written accounts

Reflective post-practice essays formed the third data set. These data were generated after the FARE module teaching was complete, and after the student teachers' school-based placement. During the placement, student teachers had the opportunity to teach the foundation subjects. Following this, they wrote a reflective account of their practice, considering the connections between their university learning and their practice experiences, for which they received a further assignment briefing (see Appendix D). Fourteen post-practice essays formed Data Set 3. They were downloaded from the university's assignment submission portal at the same time as Data Set 2, after all

assignments had been marked and grades ratified. Again, they were stored securely on the researcher's university OneDrive.

Again, although the data were naturally occurring documents as part of the FARE assessment procedure, their form was that of written account (Thomas, 2023). These written accounts differed from the weekly reflective journals as the student teachers wrote about their placement experience *after* the placement had ended, as part of their assessment for the FARE module. Both Data Sets 2 and 3 might be considered 'retrospective assessment', in that they involved looking back on a previous time, not recording the 'here-and-now' (Janssens et al., 2018, p. 2). However, Data Set 2 involved participants looking back on the previous week, whereas Data Set 3 involved participants looking back on experiences from the previous eight weeks.

The strength of collecting written diaries and accounts is that they can offer a deep, insightful and accurate understanding of specific aspects of a person's experiences of events and change over time (Milligan & Bartlett, 2015, p. 90). They capture the participant's voice in their own words, emphasising what the participant deems important (Olorunfemi, 2024). They allow participants to consider their responses and refer back to what they have previously written (Handy & Ross, 2005), meaning they can revise and rewrite 'until they feel that the response they have given is an accurate reflection of what they actually wanted to say' (Milligan & Bartlett, 2015, p. 92). Furthermore, written diaries and accounts are likely to be lower in contextual bias than other methods, such as interviews, because the participant can construct them in their natural setting (Handy & Ross, 2005; Olorunfemi, 2024). These aspects of the method strengthened its functional reflexivity.

3.4.2.4. Timeline of data collection

Data Sets 1 and 2 were generated during the teaching of the FARE module and Data Set 3 was generated after the school-based placement. This was an important aspect of the research design, as Creswell and Poth (2024) emphasise the importance of studying 'current, real-life cases that are in progress' (p.117) to strengthen the trustworthiness of the data collected. However, as discussed above, wait-time between data generation/collection and data analysis was built into the research design to address ethical concerns relating to the power imbalance and the dual roles of the researcher. The timeline of data collection is shown in Table 2.

Date	**Student teacher learning experience**	**Data generation and collection**
December 2019	FA/RE Module teaching commences Record 1st reflective conversation / Write 1st reflective journal Record 2nd reflective conversation / Write 2nd reflective journal Record 3rd reflective conversation / Write 3rd reflective journal	**Data Set 1 generated** Weekly reflective conversations (akin to recorded peer interviews) **Data Set 1 collected** Participants actively share digital recordings with the researcher each week **Data Set 2 generated** Weekly reflective journals (akin to research directed diaries)
January 2020	FA/RE Module teaching concludes Record 4th reflective conversation /Write 4th reflective journal	
February 2020	Placement commences	
March 2020	Placement continues	
April 2020	Placement concludes	

May 2020	Post-Practice Essay completed and submitted	**Data Set 3 generated** Post-Practice Essays (akin to vignettes of practice)
June 2020	Marking & moderation of Post-Practice Essays Feedback returned to students	
July 2020	University confirms grades of Post-Practice Essays	**Data Sets 2 and 3 collected** Researcher downloads participants' reflective journals and assignments from the university assessment portal **Wait-time** prior to data analysis
August 2020		**Wait-time** prior to data analysis
September 2020		**Data analysis commences**

Table 2: Timeline of data collection

3.5. Data analysis

Qualitative research typically generates a large amount of data, fertile for multiple interpretations (Cohen et al., 2018). Analysis of such data presents a considerable challenge for researchers new to qualitative approaches (Sakata et al., 2019, p. 325). Thomas suggests that for interpretive researchers, constant comparison is 'the basic analytic method' (Thomas, 2023, p. 246). The early stages of constant comparison involve transcription, reading, and gaining familiarity of the entire data set, before beginning coding. During the reading and gaining familiarity stages of this approach, the "messiness" of the data became apparent, an inevitability of naturally occurring data, which made organisation and sense-making of the data feel challenging (Lester et al., 2017).

One of the draws of reflexive thematic analysis was the idea that the researcher *constructs* the themes, rather than themes passively emerging from the data (Braun & Clarke, 2019, p. 594). I was keenly aware of the presence of myself as the researcher in the data analysis. I felt overwhelmed by the task of representing *everything* in the data as accurately as possible to make a meaningful difference to practice. Despite my research being rooted in the constructivist paradigm, I held unvoiced positivist assumptions about how the data should be interpreted, which I battled with during the data analysis. An approach that not only acknowledged but foregrounded the presence of the researcher in the data analysis was a welcome reprieve.

3.5.1. Reflexive Thematic Analysis

Thematic analysis allows qualitative researchers to 'identify or develop patterns of meaning and/or central ideas that unify them'; these patterns are called 'themes' (Dusi & Stevens, 2023, p. 293). Thematic analysis is suggested to be a highly appropriate method for analysis in case studies (Peel, 2020). The themes can be used to 'organize, describe or interpret (perceptions of) reality' (Dusi & Stevens, 2023, p. 293), enabling researchers 'to access more implicit, tacit themes' within the data (Merton, 1975, in Dusi & Stevens, 2023, p. 294). This aligned with the research design, as case studies are linear but iterative. The 'story' of a case is linear, but iterative aspects surface and resurface, building on each other and deepening researchers' understanding of the case as a whole (Yin, 2018). Thematic analysis does *not* aim to provide 'thorough explanations' or 'make theoretical predictions' (Newman, 2006, in Dusi & Stevens, 2023, p. 295). Again, this is congruent with the case study design, as it involves exploring what is happening, describing phenomena in detail, and deepening understanding around under-researched

phenomena (Day Ashley, 2012, p. 106). Thematic analysis is particularly useful if the research aims 'to contribute to existing theory by describing certain aspects or (re)presentations of reality' (Dusi & Stevens, 2023, p. 295). This has strong coherence with instrumental case studies that 'seek to give insight into the specified phenomenon, possibly through refining theory' (Stake, 1994, in Punch, 2009, p. 120).

Braun and Clarke's (2006) highly influential paper detailing an interpretive method for thematic analysis in psychology research led to a multitude of interpretations and adaptations of said method across many social science fields (Dusi & Stevens, 2023). In response to this, the authors revised their approach as 'Reflexive Thematic Analysis' (Reflexive TA) (Braun & Clarke, 2019), an interpretative, reflexive process that fully embraces 'the subjective skills of the researcher' (Braun & Clarke, 2020, p. 333). Themes do not emerge from the data, nor are they discovered in the data – they are not 'diamonds scattered in the sand' (Braun & Clarke, 2016, p. 740). Instead, researchers are encouraged to use the language of *theme generation* as 'a creative and active process, one they are central to' (Braun & Clarke, 2020, p. 343). Themes are generated through a rigorous, recursive coding process that involves the researcher "tussling with' the data to develop an analysis that best fits their research question' (Braun & Clarke, 2016, p. 741). Ultimately, the analysis is 'a reflection of the researcher's interpretive analysis of the data' (Byrne, 2022), constructed at 'the intersection of the researcher's theoretical assumptions, their analytic resources and skill, and the data themselves' (Braun & Clarke, 2019, p. 594). The researcher's knowledge of theories provides 'an interpretative lens through which to code and make meaning of the data' (Braun & Clarke, 2022, p. 57).

Meanings and knowledge are conceptualised as 'partial, situated and contextual', which is suggested to be a *value* of qualitative research (Braun & Clarke, 2021).

As such, positivist conceptions of reliability, such as seeking replicability or consensus across multiple coders, are discouraged (Braun & Clarke, 2024; Byrne, 2022). It is fully acknowledged that Reflexive TA is unlikely to give rise to findings that can be reproduced, given that the researcher's subjectivity is foregrounded (Byrne, 2022). This aligns with the research design of a single case study, where it is argued that 'expectations about reliability drop away', as there can be no assumption of replicability given the case study's situated and relational nature (Thomas, 2021, p. 69). In Reflexive TA, researcher subjectivity, reflexivity and creativity are viewed as a central asset to knowledge generation, rather than a threat (Braun & Clarke, 2019; Byrne, 2022); this is suggested to be another *value* of qualitative research (Braun & Clarke, 2021). In this sense, Reflexive TA might be considered 'fully qualitative', in that both its techniques and values are qualitative, as opposed to other types of TA, such as coding reliability approaches, that are qualitative techniques underpinned by positivist values (Braun & Clarke, 2021, p. 39).

Rather than reliability, Reflexive TA encourages 'knowingness' – that is, the writing should demonstrate transparent, thoughtful and deliberative processes that underpin the rationale for the study's philosophy, approach, design, and method (Braun & Clarke, 2019, p. 591). Researchers should identify their epistemological and ontological assumptions that inform their use of Reflexive TA to demonstrate both methodological congruence and research transparency (Braun & Clarke, 2020, 2024). Constructivism is commonly identified as a congruent research paradigm for Reflexive TA (Braun & Clarke, 2019; Byrne, 2022). This study's constructivist philosophy understood data as 'giving

access to meaning-*making*, not interior realities' (Braun & Clarke, 2024, p. 6). In line with the study's aims and inductive approach, Reflexive TA enabled construction of patterns across the participants' interpretations of their personal experiences, and consideration of how such personal experiences were situated within wider socio-cultural contexts (Braun & Clarke, 2021), namely, the university and the school-based placement. Furthermore, as an insider researcher, I was able to bring rich, unique knowledge (Munn-Giddings, 2021) to the intersection of factors at which the analysis is constructed, strengthening the *plausibility* (Major & Savin-Baden, 2009) of the interpretation. Finally, the methods and collection of naturally occurring documentary data closely aligned with Reflexive TA, as the data collected was directly concerned with the participants' constructions and interpretations of meaning, based on their university and placement experiences, albeit constructed through the lens of an academic assignment.

3.5.2. Data analysis process

I implemented Braun and Clarke's (2022) steps for reflexive TA in order to analyse each of the data sets. Early on, during the first phase, I *familiarised* myself with the data and began to note potential codes. To an extent, I had first read some of Data Set 2 and 3 in my teacher educator role, when marking the assignments. However, as a researcher, it was necessary to become immersed in the data in their entirety. This involved listening to and transcribing all the recorded conversations from Data Set 1, as well as reading through Data Set 2 and Data Set 3 and noting initial codes (see Appendix E). This early familiarisation and immersion stage shaped the interpretive lens through which I approached the next stages of coding and theme generation.

Moving to the second phase, I *coded* the data, prioritising Data Sets 1 and 2, as these related to the first research aim concerning the student teachers' university learning experiences. The early insights I constructed at this stage inevitably informed how I attended to the data during coding, influencing how I attended to the data and made interpretive decisions. The majority of the codes were inductive in that they were constructed through interpretation of the text (Dusi & Stevens, 2023). In line with Braun and Clarke's (2022) categorisation, codes were generated relating to surface/explicit meanings as well as codes relating to conceptual/latent meanings. Some of the codes could be considered deductive, in that they were informed by my knowledge of existing literature relating to student teacher development.

Next, I began the third phase, *generating initial themes* within Data Sets 1 and 2 by looking for connections between the codes, clustering codes based on their meaning (see Appendix F). This was followed by *development and review of the themes* (fourth phase), and *refining, defining and naming of the themes* (fifth phase). Although described as three separate phases, I found this stage of the data analysis to be a recursive and iterative process. I continually went back and forth between the data, the codes, and the writing. Indeed, qualitative data analysis is rarely linear (Sakata et al., 2019), involving 'complex processes of moving between concrete descriptions and the abstract interpretations that are informed by the literature' (Merriam, 2009, in Peel, 2020, p. 7). Braun and Clarke (2006) recognise that the process is flexible and recursive, emphasising the importance of writing as a key analytical approach (Dusi & Stevens, 2023, p. 307).

Alongside this process, I began coding and theme generation for Data Set 3, which was concerned with how the student teachers' university learning experiences shaped their

teaching practice. Structuring the data analysis in this way supported recursive relationship between the research aims and the construction of the findings. Just as the familiarisation stage had influenced the first coding stage, the initial themes generated from Data Sets 1 and 2 became a lens through which I coded and interpreted Data Set 3, guiding but not constraining the analysis. Although this meant that analysis of Data Set 3 was more deductive in nature than the analysis of Data Sets 1 and 2, it enabled me to address the second research aim, which sought to compare student teachers' knowledge and learning across university and school-based experiences.

As an insider-researcher, I had to recognise that my familiarity with participants may have led me to make assumptions about language and meaning, leading to a less explicit interrogation of participants' constructions and interpretations (Ross, 2017). Given that both insider research and Reflexive TA requires 'knowingness' at each stage of the study (Braun & Clarke, 2019, p. 591), and following reflexive research guidance (Ide & Beddoe, 2024; Thomas, 2023), I wrote reflexive memos alongside my coding and theme construction (see Appendix G). These memos were particularly helpful as I transitioned from my teacher educator role to the role of researcher, moving from assessing assignments to interpreting the meanings of the data. Here, I was guided by the work of McNiff (2009), who emphasises the need to critique of one's own thinking and work contexts (p.3). It is suggested that reflexivity may be enabled through a researcher's confidence in their identity, a willingness to 'trouble' their thinking, and the capacity to hold knowledge 'lightly', recognising multiple possibilities (McNiff, 2009, pp. 3–4). In this way, I attempted to orient my practice '*toward* reflexive openness' (Braun & Clarke, 2024, p. 415, original italics). I regularly paused during analysis to reflect on how my

interpretations were shaped by my teacher educator role, my own pedagogical values, and my aims for coherence within the study, captured in my reflective memos.

Through this recursive approach, the sixth phase – *producing a report* – was initiated. Through connecting the developing themes with existing academic literature, I deepened my understanding of my interpretations. This led to the generation of the findings and discussion chapters of the study. More recently, I have taken note of Braun and Clarke's (2025) Big Q Qualitative Reporting Guidelines, which helped make me increasingly aware of the need to mitigate my use of positivistic language and contextualising data extracts appropriately.

3.6. Quality

Qualitative studies should consider the *quality* of the research; it is suggested that qualitative researchers avoid using terms such as *validity* due to its positivist connotations (Braun & Clarke, 2023; Savin-Baden & Howell Major, 2013). Angen (2000) suggests that within the interpretive paradigm, quality should be considered in terms of ethical and substantive aspects of the research. In terms of ethical quality, the moral issue of interpretative research is to more fully understand 'the meanings involved in our everyday existence' (Angen, 2000, p. 388). This requires careful reflection on the part of the researcher in selecting topics for research and generating questions to be answered. The research should seek to move us beyond present understanding. Substantive quality involves evaluating the *substance* of the research (Angen, 2000). The researcher must both do justice to the subject, and *show* the reader how they have done this (Angen, 2000). This involves the researcher being reflexive, and accounting for their reflexivity within the written record of the study (Angen, 2000; BERA, 2024; Day, 2012). Guided by

the three critical questions posed by Savin-Baden and Howell Major (2013) for ensuring and documenting quality, this section considers: how quality was viewed; how quality was demonstrated, and how quality was operationalised in the study.

3.6.1. How quality was viewed

Several core concepts that have been developed to describe quality in qualitative research, most notably, *trustworthiness* (Lincoln & Guba, 1985). However, the criteria that Lincoln and Guba (1985) set out as indicators of trustworthiness - credibility, transferability, dependability, and confirmability – are critiqued as inherently positivist (Major & Savin-Baden, 2009), at odds with constructivist philosophy and Reflexive TA (Braun & Clarke, 2023). Therefore, this study views *plausibility* (Major & Savin-Baden, 2009) as its core concept of quality. This involves locating the truths and realities within the study, indicating that there has been effort of the part of the researcher to show that their interpretation of data represents a version of reality (Major & Savin-Baden, 2009). It is suggested that *verisimilitude* (the quality of seeming to be true) and *criticality* (the act of striving for critical analysis and awareness) are key concepts in supporting researchers to locate realities and truths within the study (Major & Savin-Baden, 2009).

Plausibility also involves recognising the stance of the researcher: how they position themselves in relation to the research design, the data generation, and the analysis and interpretation (Major & Savin-Baden, 2009). Three criteria are suggested as meaningful concepts to locating the researcher stance: reflexivity, honesties, and integrity (Major & Savin-Baden, 2009). Researcher reflexivity recognises that 'the position or perspective of the researcher shapes everything' (Savin-Baden & Howell Major, 2013, p. 474). This has strong alignment with insider research and Reflexive TA, which position researcher

subjectivity as a resource (Braun & Clarke, 2023; Trowler, 2016). Honesties of the researcher acknowledge that the "truth" of research is constructed through recursive phases or reflection, analysis and re-engagement (Savin-Baden & Howell Major, 2013). Honesties are socially and contextually defined; acknowledging honesties can support a researcher to resist privileging similarity in data interpretation over difference (Savin-Baden & Howell Major, 2013). Finally, integrity identifies the researcher as 'a person who will necessarily enable a unique interpretation of the data set' (Savin-Baden & Howell Major, 2013, p. 474); the researcher must strive to maintain integrity by grounding their interpretations in the data.

3.6.2. How quality was demonstrated and operationalised

In relation to verisimilitude, during the data analysis and writing of the report phases, I sought to create a believable interpretation of the data that might resonate with the beliefs of other teacher educators and researchers. This chimes with Angen's (2000) suggestion that quality in research depends on the reader's sense of a worthwhile interpretation, evoking 'a meaningful feeling of authenticity, a smile of recognition, or an aha experience' (p. 391). A 'dense description of context' (Savin-Baden & Howell Major, 2013, p. 480) provided information about the realities in which the research was situated (see 3.3.3. Addressing limitations of insider research; 3.4. Methods). Similarly, findings were presented through 'dense description' (Savin-Baden & Howell Major, 2013, p. 480), grounding them in the data and evidencing them with quotes and additional contextual information. In terms of criticality, I considered the wider, political contexts of ITE and primary education in England (see 1.1. Learning to teach in England), and the interplay between these contexts and my interpretations of the data. Supported by my writing of

reflexive memos, I sought to notice and challenge the assumptions I made through my interpretations of the data, which led to the construction of the final draft of the report.

In relation to reflexivity, throughout the research, I was keenly aware of the power imbalance between me and the participants. Some of the mitigations for this are reflected in the research design: making my dual roles explicit; collecting naturally occurring data; building in wait-time between data generation and data analysis phases. Furthermore, I was keenly aware of my positionality, particularly during the analysis phase. For this reason, I included a positionality statement in this chapter (see 3.3 Positionality), to "own" my perspectives (Braun & Clarke, 2023) and allow the reader to evaluate the relationship between my subjectivity and my interpretations of the data (Savin-Baden & Howell Major, 2013). I kept reflexive memos throughout the data analysis to support me in noticing the assumptions that influenced my interpretations. In terms of honesties, my interpretations recognised multiple realities and tensions within the data. Although the construction of themes required organising codes around shared meanings (Braun & Clarke, 2023), I did not privilege similarities in the data. The process of organising and reorganising codes into potential themes enabled me to refine the nuance of the meaning of the themes. Furthermore, within this chapter, I described the tensions created by my insider status, the power imbalance between me and participants, and the "messy", recursive nature of the data analysis (see 3.3.Positionality; 3.5 Data Analysis). Finally, I demonstrated integrity within the research design, which was carefully constructed to demonstrate a high degree of methodological congruence. I provided dense description of methods (Savin-Baden & Howell Major, 2013) in order to demonstrate integrity within the research report (see 3.3.3 Addressing limitations of

insider research; 3.4. Methods). Furthermore, I adhered to the principles of Reflexive TA (see 3.5 Data analysis), recognising that I was generating, rather than discovering, the potential themes, and seeking to unite themes by shared meaning, rather than by their domain (Braun & Clarke, 2023).

3.7. Ethics

The study was informed by the ethical guidelines from the British Educational Research Association (BERA) (2024). The ethical considerations for this study related to issues of insider research, voluntary informed consent, non-participation or passive participation, accessing the data, and participant anonymity. Ethical consent for the study was granted by the School of Education and Professional Development from the University of Huddersfield. Gatekeeper consent was also requested from the institution's Head of Department for ITE, given that participants were student teachers on one of the university's ITE programmes.

As noted above (see 3.3. Positionality), insider research requires particularly careful ethical consideration. BERA (2024) identifies 'voluntary informed and ongoing consent' as the condition by which participants agree to their involvement. At the beginning the FARE module, the student teachers were briefed on both the assignment and the research project (see Appendix A; Appendix D). In line with BERA (2024), they were told what they would need to do to participate in the study, i.e., engage in the teaching and learning of the FARE module, complete their school-based placement, complete the module assignment, and give permission for their assignments to be part of the data sets. They were told that their participation was desired to further knowledge and understanding of how student teachers learn to teach the primary foundation subjects.

They were told that their data would be stored securely on the researcher's OneDrive for the purposes of this study. All 24 potential participants gave written consent to their participation in the study (see Appendix C).

That said, BERA (2024) highlights that where potential participants are the students of the researcher, given the power imbalance between the roles, participants are not in a position to enable voluntary informed consent. Therefore, to reduce possible coercion, a second, active "opt-in" measure was built into the research design, where student teachers had to share their recorded conversations with the researcher. BERA (2024) emphasises the need for reassuring potential participants that they are able to choose *not* to participate. In the first briefing, where the purpose of the study was first explained, it was made clear to the student teachers that there was no requirement for them to participate, and that it would not affect their participation or grading of the FARE assignment. The dual role of the researcher was explicitly addressed (see 3.3.3. Addressing limitations of insider research), explaining that there would be "wait-time" between the ratification of grades and the data analysis, meaning that the researcher role would not 'begin' until after the FARE module teaching and assessment had been fully completed. This also reduced the possibility that non-participants may perceive the participant student teachers to be incurring any advantage (BERA, 2024) during the teaching of the FARE module, e.g., preferential treatment from the teacher educator/researcher.

Despite requiring the participants actively opting-in, it was recognised that the student teachers who did not choose to share their reflective conversations could still be considered 'passively involved' (BERA, 2024, p. 11) as they were involved in the teaching

experiences that the participants were reflecting upon in Data Set 1 and Data Set 2. Similarly, the school pupils and teaching staff involved in the student teachers' school-based placement might also be considered passive participants. As part of the assignment guidelines for the FARE module, student teachers were required to anonymise schools, pupils and colleagues. Furthermore, the data was naturally occurring; the student teachers would have reflected on their university learning and the placement with or without the occurrence of this study.

The documentary data collected belonged to the student teachers, who consented to it being used for the purposes of research. That said, Data Sets 2 and 3 were collected via the university's online assessment portal. None of the teacher educators' feedback or grades were collected, only the documents submitted by the participating student teachers. Researchers should consider the time and effort required from participants and its potential negative impact (BERA, 2024); collecting Data Sets 2 and 3 via the assignment portal minimised additional workload for the participating student teachers. Permission to collect the assignments as data was also granted by the ITE head of department as part of the gatekeeper consent.

At the point of data analysis, the participants were each ascribed pseudonyms, as part of the individuals' rights to privacy (BERA, 2024). That said, the tight bounding of the case meant it was not possible to completely anonymise the study; the student teachers from the selected cohort could potentially recognise themselves or others in the write up of the report. It was therefore necessary to consider the potential harm that might arise from indirect identification (BERA, 2024). The risk of harm was judged to be minimal; it was extremely unlikely that indirect identification would put a participant in danger or result

in their social exclusion. Furthermore, the participants had a high degree of control over how they crafted what would become the data sets. For Data Set 1, they could choose to re-record their conversations or not share them with the researcher. For Data Sets 2 and 3, the participants wrote their own professional academic assignments; this meant that they had a high degree of control over what they chose to reveal and discuss.

3.8. Conclusion to methodology

This chapter has outlined the epistemological, ontological and methodological choices of the study, including the research approach and design, the methods of data collection and analysis, and the ethics of the study. Grounded in constructivist philosophy, each aspect was selected to support methodological congruence: an inductive case study aligns closely with the use of qualitative data to explore participants' constructions meaning and experience. Similarly, Reflexive Thematic Analysis positions the subjectivity of the researcher as an analytic resource. As Braun and Clarke (2019) note, findings through this approach are constructed at 'the intersection of the researcher's theoretical assumptions, their analytic resources and skill, and the data themselves' (p.549), closely aligning with the constructivist paradigm.

The methodology was shaped by my role as an insider/outsider researcher. It was therefore necessary to make my positionality explicit, along with its influence on the research design, its limitations, and the ethical considerations it entailed. To address the power imbalances between me and the participants, I made my dual role transparent and used naturally occurring data to distance myself from the data generation. These decisions, whilst ethically important, also introduced complexities and compromises

that were acknowledged throughout the chapter as something that influenced the way the study developed and was interpreted.

Plausibility was adopted as the core criteria for quality, in-keeping with the constructivist paradigm. As Savin-Baden and Howell Major (2013) suggest, the research report itself becomes the site of evaluation, and must present a 'plausible case' of the research context and participants' stories (Savin-Baden & Howell Major, 2013, p. 479). Throughout this chapter, I have engaged with the five criteria for plausibility - verisimilitude, criticality, reflexivity, honesties and integrity (Major & Savin-Baden, 2009) – to offer a transparent and contextual account of the study.

The next chapter presents the findings and discussion, offering an interpretation of the student teachers' reflections on their university experiences and school-based placement in relation to teaching and learning in the primary foundation subjects.

4. Findings for Research Question 1

This chapter presents the findings relating to the first research question: *how do student teachers' reflections on university-based experiences illustrate the ways they make sense of learning to teach the primary foundation subjects?*

Reflexive thematic analysis of Data Sets 1 and 2 led to the development of three 'lenses', through which the student teachers reflected on their university-based experiences: *teacher, learner* and *person*. Through the *teacher* lens, the student teachers reflected on how their university-based experiences might inform their future practice. Through the *learner* lens, they reflected on the process of their own learning. Through the *person* lens, they reflected on how their perspectives had changed through their engagement in university-based learning experiences.

I originally developed the three level model of *person-learner-teacher* through my practice and research in university teacher education (Sors et al., 2025). These initially acted as a framework to describe teacher educator pedagogy and student teachers' learning experiences in an undergraduate module in a primary ITE programme, *Outdoor Learning*. Given that this study adopted reflexive thematic analysis, I did not approach the data analysis seeking to impose a framework on the data. However, I found that each lens could be iteratively constructed from the data, encompassing the "story" of the data as a whole (Braun & Clarke, 2006) and generating new insights. This is congruent with reflexive thematic analysis, which holds that meaning is made at the 'intersection' of the data, the researcher's theoretical assumptions, and their analytical skills (Braun & Clarke, 2019, p. 594).

The chapter also begins to address the third research question: *In what ways do student teachers' knowledge, learning and reflection change as they move between university and placement settings?* Through the lenses of *person-learner-teacher*, patterns in the depth of reflection and alignment with research paradigms of student teacher learning were discerned. Therefore, this chapter integrates the *person-learner-teacher* framework (Sors et al., 2025) with depth models of reflection (Kember, 2001; Larrivee, 2008) and the research paradigms of student teacher learning (Russ et al., 2016) to provide new understanding of what and how student teachers learn to teach in the foundation subjects. (For a summary of the reflective depth models and the research paradigms, see Appendix H and Appendix I respectively.)

The chapter unfolds as follows. The teacher lens encompasses three themes: subject knowledge as a practical asset; inclusive practice as the right techniques; preparing children for future health, wellbeing and citizenship. After each theme is presented, the depths of reflection and paradigms of teacher learning are discussed. The learner lens encompasses three themes: learning as more than curriculum delivery; emotional engagement to enable learning; inclusion as belonging. Again, depth of reflection and paradigms of teacher learning are discussed after each theme. Finally, the person lens encompasses one theme – shifting worldviews on diversity – where again, the reflective depth and paradigms of teacher learning are discussed.

4.1. Teacher lens

Through the teacher lens, student teachers reflected on their professional responsibilities in relation to knowledge, curriculum delivery and purpose, and inclusion in the foundation subjects. Across the reflections, there was a common thread of

compliance. Subject knowledge was assumed to be an unquestioned requirement for confident, competent teaching. Curriculum frameworks were viewed as authoritative guides of what and how to teach. Inclusion was conceptualised as the application of correct techniques. The purposes of the foundation subjects were perceived in linear, cause-and-effect terms, where teaching a subject was assumed to produce outcomes such as healthier lifestyles, improved academic performance, or socially just values.

4.1.1. Subject knowledge as a practical asset

4.1.1.1. Subject knowledge for confidence and competence

Student teachers connected strong subject knowledge with confidence in their teaching, and weak subject knowledge with low confidence. For example, Jackie's reflection illustrates how she connected strong subject knowledge with increased teaching confidence:

It is important to continue to build my knowledge so I can deliver RE lessons with confidence, and this has felt more achievable through the enrichment I have experienced so far.... Faith groups within communities are a valuable resource which offers... factually correct, solid subject knowledge.

Jackie, Reflective Journal, Week 1

Jackie's emphasis on '*factually correct'* knowledge implies the high value she placed on her professional responsibility to teach children accurate information. This might be heightened in a subject like RE, where she might feel the responsibility to be aware of cultural nuances and sensitivities. In this sense, her subject knowledge is a practical asset that enables her to teach ethically.

Sarah's reflection illustrates how weak subject knowledge was linked to low teaching confidence:

Even though I got a GCSE in French, I wouldn't now feel confident to teach French to children… I decided to revise my French GCSE coursework and found I had forgotten most of what I had learned… As Watts, Forder and Phillips (2012) write, if languages are not used, they are forgotten…Because of this, I am now regularly reviewing my French work, and aim to have developed my French knowledge to a high standard by the end of the year.

Sarah, Reflective Journal, Week 4

Recognising that her subject knowledge had become weaker where it had once been strong, Sarah focused on the recovery of her prior subject knowledge, rather than seeking to build something new. Motivated by her professional aims, the drive to be a teacher who would not produce '*unconfident speakers*', Sarah revisited her prior learning in French and committed to ongoing review. This indicated that Sarah viewed an individual's subject knowledge as something that can fluctuate, and that it can be strengthened and reinforced. However, she still conceptualised it as a fixed body of knowledge that could be acquired to varying degrees, rather than something constructed between learners.

4.1.1.2. Subject knowledge as instrumental to teaching

Student teachers emphasised how they expected to improve their subject knowledge alongside their pedagogical knowledge. For example, Heather connected subject knowledge with observing teaching of the subject:

I need to read up on the computing programme of study within the curriculum and see what the children study... I also need to observe a range of computing sessions... it will be good to see the different ways in which it is taught... I need to grow my confidence in [computing] so I can pass this onto the children....

Heather, Reflective Journal, Week 4

Heather emphasised her professional responsibility as becoming familiar with the content of the National Curriculum POS (Department for Education, 2013) and observing how it is taught. She recognised that increasing her subject knowledge and experiences of teaching computing could improve her confidence in her teaching, which in turn could be passed on to her pupils. However, she placed greater emphasis on developing her knowledge of *how* to teach the pre-determined subject knowledge, rather than form a deep conceptual understanding of computing knowledge.

Similarly, Kit wrote:

While on teaching placement I will continue to observe teaching... to ensure that when teaching I have the knowledge and strategies to maximise the effectiveness of my teaching... for my own learning I feel that the more practical aspect of teaching is more effective in expanding my subject knowledge...

Kit, Reflective Journal, Week 1

Kit's emphasis on learning through '*practical*' experiences suggests a conception of subject knowledge as closely tied to pedagogy, where knowing *what* to teach is constructed alongside learning *how* to teach it. For Kit, the purpose of gaining subject

knowledge and its associated teaching strategies was to maximise the '*effectiveness'* of practice, likely measured by pupil attainment of intended outcomes.

Kit and Heather's reflections align with the apprenticeship model of student teacher learning (Collins et al., 1989). On one hand, this aligns with Deng's (2018) argument, who suggests that student teachers benefit from observing content knowledge being interpreted and enacted within the context of a particular school and curriculum. On the other hand, the apprenticeship model is suggested to limit student teacher learning by only providing a partial view of the teacher's work (Borg, 2004; Botha, 2020; Collins et al., 1989). In this context, the student teachers would likely only have access to the subject knowledge that the teacher conveyed to the pupils through the lesson. They would not necessarily be able to observe the breadth of the experienced teacher's subject knowledge, unless the teacher had had to address specific misconceptions or challenge pupils in ways that extended beyond the learning object. The student teachers' belief that they could best learn subject knowledge through an apprenticeship approach is perhaps based on the conceptualisation that the knowledge they need to know is outlined by curriculum frameworks and does not extend beyond this (discussed below).

4.1.1.3. Curriculum frameworks as "what you need to know"

Student teachers conceptualised the subject knowledge they "needed to know" as content of National Curriculum Programmes of Study (POS) (Department for Education, 2013). Leonie reflected on an experience from a prior school-based placement, where her lack of subject knowledge prevented her from interpreting the school's curriculum framework for RE:

I was provided with the RE framework used by the school… however the only information given for each lesson was a focus question, for example, 'Why is the Earth special?'. It was for me to decide which faith I would link that to and how I would do it – this was very daunting for me…

Leonie, Reflective Journal, Week 1

Leonie implied that curriculum framework should provide the teacher with the knowledge they need to teach a particular topic within a subject. She did not view this as an opportunity to deepen her own knowledge of different religions, to compare different worldviews, or to broaden children's understanding of different religions. Instead, she is '*daunted*' by the prospect of not knowing what to teach, critical of the curriculum framework for being '*vague and unclear'*. Although she did not explicitly state it, her lack of subject knowledge in RE was a barrier to her being able to interpret the curriculum framework.

Leonie's reflection continued, considering her own teaching practice using the school's curriculum framework:

…the questions did not link to each other, meaning the lessons seemed to be stand-alone lessons… I chose Christianity one week, then next week, because of the question, I may have to choose Islam; this felt like I was not making progress as I could not build on the knowledge from the week before as it was a new and different faith…

Leonie, Reflective Journal, Week 1

This indicates that Leonie felt a sense of powerlessness during her prior teaching experience. She described the questions as not linking to one another, which affected

her ability to make links in knowledge between each lesson. However, she did not appear to recognise that stronger subject knowledge may have enabled her to make explicit knowledge connections across the sequence of lessons.

Leonie's reflection exemplifies the benefit of teachers having strong subject knowledge in enabling them to teach. In this sense, there is an argument to say that student teachers should be encouraged to view subject knowledge as a tool; lacking this tool led meant that Leonie experienced negative emotions and her teaching lacked depth and connection. However, it could also be argued that it is the expectation, the belief, of student teachers that they need to know "just enough" to deliver the curriculum, piecemeal style, that reinforces the sense of powerlessness that Leonie felt. Had she had deeper subject knowledge in RE, beyond that which is required to be taught, this could have been an opportunity for her to experience autonomy and creativity in her teaching practice, enabling her to design and teach a more coherent sequence of learning. In this way, the student teachers' view of subject knowledge as a practical asset may, in fact, be limiting their teaching.

Here, it is helpful to consider the student teachers' reflections in relation to Shulman's (1987) teacher knowledges. The student teachers' conceptualisations of *subject knowledge* could be likened to *content knowledge*, as both are concerned with the "stuff" of what to teach. However, content knowledge extends beyond "what the children need to be taught"; it is knowledge of the organising principles and structures of the disciplinary field (Shulman, 1986). The student teachers were concerned predominantly with ensuring they understand the content outlined in the curriculum frameworks but rarely considered that they may need subject knowledge that extended beyond this.

Parallels could also be drawn between the student teachers' conceptualisations of subject knowledge and Shulman's (1987) *curriculum knowledge*. However, again, the student teachers hold only a partial view, as curriculum knowledge is far more that the selected content knowledge to be taught to pupils; it encompasses the knowledge needed to evaluate the appropriateness of a range of curriculum materials in relation to the teaching context (Shulman, 1987). This suggests that the student teachers held a relatively narrow view of content and curriculum knowledge.

Jackie was one of the few student teachers who appeared to conceptualise subject knowledge as extending beyond the curriculum framework:

The research task we did as a group about Judaism was interesting… I have seen there is so much more to be learned about each religion. There are many different celebrations that can teach us about religion, but the key is not to give a 'token' learning experience where the link to the religion is tenuous.

Jackie, Reflective Journal, Week 1

In this reflection, Jackie considered how her newly developed subject knowledge about Judaism might help her meet a professional aim, shaping her teaching practice in a way that would be meaningful for learners. She had started to notice opportunities for learning that she might plan and implement ('*There are many different celebrations that can teach us about religion*'). At the same time, she was cautious that, without a secure foundational knowledge about each religion, pupils could experience learning that was disconnected and uncontextualized (*'the key is not to give a 'token' learning experience'*). As the teacher, she would have to avoid teaching lessons with only '*tenuous'* links to religion. This would involve a level of reflection on her part, considering the extent to

which her planning built upon what pupils already know. In this sense, she conceptualised strong subject knowledge, along with reflective practice, as a practical asset that could improve the coherence of pupils' learning experiences.

Returning to Leonie's reflection of teaching RE using a non-prescriptive curriculum framework, she raised similar concerns to Jackie in relation to the pupils' learning experience:

I felt that this way of teaching was hard for the children to follow and engage with. Jumping from faith to faith, and back again was confusing and difficult to understand as some of the questions and the links to religion were massively stretched.

Leonie, Reflective Journal, Week 1

Here, Leonie's description of the children's learning resonates strongly with Jackie's concerns about '*token*' experiences with tenuous links to religion. It highlights the value that both Leonie and Jackie placed upon coherent and meaningful sequences of learning that iteratively build upon previously learned knowledge, with learning objectives that are closely relevant to the selected topic. This suggests that their understanding of children's learning was underpinned by principles of cognitive constructivism or situated cognition (Rodriguez, 1998), which frame learning as integration of new knowledge into the learner's existing cognitive structures.

Considering narrative unities, this perhaps reveals one of the student teachers' *sacred stories*, that is, a taken-for-granted, idealised narrative (Clandinin & Connelly, 1996) about teaching and learning. Both Jackie and Leonie implied that "*teachers must sequence learning encounters for knowledge connections*", where the teacher's

responsibility is to have strong enough subject knowledge to design and teach sequences of learning that are coherent and relevant for pupils. However, while Leonie emphasised that curriculum materials should guide the teacher in this process, Jackie appeared more open to designing her own sequences of learning.

4.1.1.4. Depth of reflection for subject knowledge as a practical asset

In this topic, the student teachers' reflections broadly align with *surface reflection*. The student teachers reflected primarily on the *technical processes* of teaching, concerned with how developing their own subject knowledge would enable them to teach "effectively". The implication is that teaching effectively involves transfer of fixed, pre-determined knowledge from teacher to pupils and is measured by the extent to which pupils acquire this knowledge. Heather and Kit's reflections emphasised a concern with learning *"what works"* in terms of teaching subject knowledge to pupils. Similarly, Leonie's reflection revealed her concern around *meeting pre-determined goals*, identifying the lack of detail in some curriculum frameworks as a barrier to "effective" teaching and learning.

That said, aspects of the reflections also align with the lower level of *pre-reflection*. Leonie's reflection implied she *did not take ownership of her problems*; rather than consider what she might do to achieve her professional aims (creating a relevant and connected sequence of learning), she externalised the problem and blamed the school's curriculum framework for not being more prescriptive. This indicates a degree of *inflexibility* and *inability to deviate from taught procedures*. Similarly, Sarah, Heather and Kit automatically identified single strategies for improving their subject knowledge, rather than considering a *range of alternatives* or justifying their chosen strategy. This implies

that their response was somewhat *automatic,* possibly *procedure without thought, not considering the applicability* of their solutions to problems.

However, Jackie's reflection on how she might implement her subject knowledge to teach RE moves towards the deeper level of *pedagogical reflection*. If narrative unities are taken as personal theory (Connelly & Clandinin, 1985), Jackie's sacred story of "*teachers must sequence learning encounters for knowledge connections*" could be considered *theory applied to practical situations.* In turn, this indicates that Jackie was *seeking alignment between her espoused theory* and her future *theory-in-use*. However, this narrative unity is an assumption that underpins Jackie's reflection; she does not notice it explicitly or interrogate it, she only considers its implications for practice.

The framing of narrative unity as personal theory also means that Leonie, who shared the same sacred story as Jackie, noticed misalignment between her espoused theory and her theory-in-use when reflecting on her prior experience teaching RE. In this sense, Leonie's reflection might be considered multifaceted, with different aspects aligning with different levels of reflection, ranging from *pre-reflection* to *surface reflection*, through to *pedagogical reflection.*

While taking narrative unities as personal theory may be deemed a legitimate framing in terms of Connelly and Clandinin's original work (1985), it appears to compromise the integrity of the depth models of reflection. Kember et al (2008) conceptualise *theory* as generalised and conceptual knowledge that is decontextualised from practical situations. For Larrivee (2008), theory is presented as the field's conceptual knowledge base that underpins educational goals and approaches, drawing a distinction between *espoused theories* (what the teacher believes) and *theories-in-use* (what they actually do

in the classroom). Therefore, while it is acknowledged that the student teachers' *narrative unities* might be legitimately considered *personal theories*, Larrivee's conception of theory is taken throughout the rest of the findings and discussion, to better delineate the different depth levels of reflection.

4.1.1.5. Paradigms of student teacher learning in subject knowledge as a practical asset

The reflections strongly align with the process-product paradigm. Most strongly, Heather and Kit conceptualised teaching as a set of pedagogical actions to be performed and refined through experience. Both prioritised acquisition of skills through observation of experienced teachers, suggesting they aimed to replicate effective teaching strategies. However, their reflections suggest limited engagement with the underlying pedagogical knowledge or values that inform these practices.

Jackie and Sarah conceptualised subject knowledge as fixed, static and externally defined. Jackie emphasised the need for '*factually correct, solid subject knowledge*', while Sarah aimed for '*a high standard*' in her French proficiency, suggesting that that her knowledge was measurable against curricular benchmarks. Both positioned knowledge as something to be acquired and stored, valued primarily for is instrumental role in enabling confident curriculum delivery. In this sense, they understood student teacher knowledge as something evidenced through their pedagogical actions and behaviours, reinforcing a view of teaching as effective execution of predefined techniques.

That said, Sarah's reflection indicated a dual conception of learning. Her plan to '*revise*' her GCSE coursework and '*regularly review*' her French work implied a process–product orientation, focused on the retrieval and rehearsal of knowledge that could apply in practice. At the same time, this strategy aligns with principles of cognitive constructivism

(Rodriguez, 1998) and resonated with the notion of *retrieval practice*, a strategy for strengthening memory retention (Castro Hernandez & Sebrechts, 2025; Roediger & Karpicke, 2006). Similarly, Jackie appeared to conceptualise knowledge as an objective body of facts to be collected and recalled when needed. However, she identified the enrichment visit to the Gurdwara as key to her learning, hinting at a situated or experiential view of knowledge development. Despite this, she ultimately framed the experience as a means to acquire more accurate content, rather than an instance of transformative or relational learning. This reinforces the conceptualisation of student teacher learning as the acquisition of skills, rather than a way of thinking or interaction, further aligning with the process-product paradigm.

4.1.2. Inclusion as the right techniques

4.1.2.1. Acquisition of better techniques for inclusion

Marcia, Kit and Terri noticed how the PE workshop had taught them teaching strategies that would enable children with physical disabilities could be included in the same learning activities as the rest of the class:

Kit: *Like when we were doing the netball where someone was on the side of like 'they've not had a turn with the ball.' So they're a spotter on the corner-*

Terri: *And that person has to be passed the ball before getting the goal.*

Marcia*: Yeah, I thought that was really interesting because when I was at school, I never, I never had that.... That never happened to me, so I think that's really good and I'll be using that in my lessons. I will!*

***Kit**: Yeah, definitely cause it is a good idea because again, it's not something I'd ever seen either and I think -*

***Terri:** I never would have thought about it.*

***Kit:** Exactly. You would have just saw like that one child-*

***Terri:** Like, [imitating a stern teacher voice] 'Come on! Get in!'*

***Kit:** Well, that's what I mean. You would have encouraged them to join in, but it's like giving them a different technique to join in.*

Kit, Marcia & Terri, Reflective Conversation 4

Here, the student teachers highlighted a specific strategy that the teacher educator modelled and implemented during the PE workshop, to ensure that all learners in a netball game were passed the ball before a goal was scored. Marcia related this to her own experience of PE lessons as a pupil, indicating that this teaching strategy could have helped her be more included, implying a sense of empathy for pupils who experience exclusion from participating in PE. However, she quickly moved to an instrumental framing, sharing her determination to implement this teaching strategy in her future practice.

Through reflection on her engagement in the PE workshop, Marcia surfaced her prior beliefs about PE – that it can be exclusionary for some pupils, like herself. This resonates with the apprenticeship of observation (Lortie, 1975), drawing on memories of her own PE lessons as a pupil. By observing practice in the university workshop that directly addressed how to ensure participation of all learners, she felt determined to incorporate

the same teaching strategy into her own practice. This suggests that university-based learning has the potential to challenge student teachers' apprenticeships of observation.

Similarly, Kit and Terri reflected on the teaching strategies they may have used *prior* to the PE workshop (such as encouraging the more reticent children to '*get in!*'), describing their new knowledge as '*a different technique'* to support future pupils. This implies relatively surface-level learning, where one technique has been replaced with a better one, rather than a deeper shift in how they conceptualised inclusion. This implies an instrumental framing of inclusion, where student teachers were concerned with practical techniques and strategies that would ensure participation for all pupils, rather than considering the systemic or cultural factors that contribute to exclusion. These reflections align closely with the process-product paradigm, inclusion is reduced to the identification and application of discrete pedagogical actions, with little evidence of engagement with broader purposes or values underpinning inclusive practice.

4.1.2.2. *Techniques to instrumentalise inclusive values*

Adam and Phoebe also reflected on how they might ensure inclusive practice in their future PE lessons:

Adam: ***...*** *Maybe you could work in having some motivation [for pupils to meet learning outcomes]. See a good technique is how you could use is building in sort of a competition. So obviously if you had four teams, you'd have two play against each other. Then the winners would play each other for the prize maybe. Maybe, but that would mean have your other two teams not playing again. You'd have them playing again, play another game....*

Phoebe: *… It's a big aspect that you'd have to – if you're planning PE lessons, you'd have to plan a range of activities… And then on the morning work out if there's any children away or anything, you'd then have to last-minute plan which ones you could actually include in your lesson…*

Adam & Phoebe, Reflective Conversation 1

Adam and Phoebe's reflective conversation encompassed their shared professional aim to enable learners to meet learning outcomes, as well as consideration of how they might achieve this. Adam also indicated that learners should have the same experience (*'but that means you would have your two other teams not playing again'*), implying he believed that teaching practice should be experienced as "fair" by all pupils. However, Phoebe considered the need for a '*range of activities*', implying that she would implement different activities based on the needs of the children who were in attendance (*'you'd then have to last-minute plan which one you could actually include in your lesson'*). This indicates that, rather than equal participation for all, Phoebe conceptualised inclusive practice as activities that would suitably challenge all learners based on their individual competencies. This chimes with social constructivist views and the Zone of Proximal Development (Vygotsky, 1978), where learning involves engagement in carefully designed activities that support the learners to work at the upper levels of their competency, supported by more knowledgeable others (Bradshaw, 2017).

Across this sub-theme, the student teachers' reflections relate to Shulman's (1987) knowledge of learners, which encompasses understanding diverse needs and enabling participation for all (UNESCO, 2017). That said, the student teachers remained focused on the procedural aspects of their practice – what needs to be done to enable learner

participation for all, rather than understanding a child's social, emotional and cognitive experiences. This technical framing of inclusion, while practical, overlooks the relational and ethical dimensions of practice. It suggests the student teachers valued *techne* knowledge, concerned with achievement of predefined learning outcomes (Kemmis & Smith, 2008a). However, broader perspectives frame inclusion as a school's response to student diversity, viewing inclusive practice as a moral and context-sensitive endeavour (Ainscow et al., 2006). This framing of inclusion relates more to *phronesis* knowledge, the practical wisdom and ethical commitment that guides a teacher's situated, case-based judgment (Kemmis & Smith, 2008b; Kessels & Korthagen, 2001). The fact that the student teachers' seem to value techne knowledge over phronesis implies a narrower framing of inclusion, concerned with "doing the right thing" (Lofthouse et al., 2021) over a genuine, considered response to learner diversity (Ainscow et al., 2006).

4.1.2.3. Depth of reflection for inclusion as the right techniques

In this sub-theme, the student teachers' reflections strongly aligned with *surface reflection*. They were overwhelmingly concerned with *technical processes* that would enable them to *reach pre-determined goals*, namely, to enact inclusive practice. They were consistently concerned with *"what works" rather than the value of the goals themselves*. The reflections were often *descriptive*, for example, Adam describing how he might set up a competition or Phoebe describing her future planning processes. The student teachers' values, beliefs and assumptions remained *below the surface*, with all uncritically framing inclusion as an uncontested ideal.

The reflections were deeper than *pre-reflection*, as the student teachers did consider alternative responses, for example, Kit and Terri reflected on how they might have

encouraged participation in PE before learning the specific technique. They also considered how they might *adapt their teaching based on students' needs*, for example, Phoebe suggested that she would need to adapt her planning based on children's attendance. There were emerging elements of *pedagogical reflection* as well, in terms that the student teachers were at a very early stage of thinking about how they might apply *the field's knowledge base and current beliefs about quality practices* to *practice situations*. Their reflections went further than relying on the taught content of the workshop, as they considered some of the implications of the salient aspects of their experience. For example, Marcia noticed how the inclusive teaching technique contrasted with her own experience of schooling; Adam recognised that while competition could be motivating for learners, he needed to find ways to ensure parity of experience for all pupils. There was no evidence of *critical reflection*. Despite inclusion being a topic that is inherently *moral and ethical*, these reflections did not explore the deeper *implications or consequences* of inclusion, and they did not consider *larger social and political conditions* in which teaching practices are embedded.

4.1.2.4. Paradigms of student teacher learning in inclusion as the right techniques

Each of these reflections imply the student teachers had the same professional aim: to ensure all pupils can learn and participate equally in PE. Describing in detail the techniques they might use to achieve this professional aim suggests a primary concern with the logistical aspects of teaching. They did not question, for example, where his professional aim had come from, or the notion of fairness as equal opportunities participation. This suggests that the student teachers held the narrative unity "*teaching is knowing and selecting the right techniques to meet the needs of learners*". In turn, this

implies that they conceptualised their own learning as the acquisition of these techniques, framing teacher knowledge as a fixed set of best practices, aligned with the process-product paradigm.

This presents somewhat of a paradox. The *topic* of the student teachers' reflection is itself related to ethical, moral and relational aspects of practice, concerned with the rights of pupils to fair access to meaningful learning and participation. However, the way the student teachers engaged with this commitment implies an instrumentalist, technical orientation. In terms of Schön's (1983) problem-setting, they envisioned the "problem" of inclusion in terms of technical application. This is inherent in phrasing "*teaching is knowing and selecting the right techniques to meet the needs of learners*" which emphasises the actions of the teacher in implementing techniques that enable inclusion. However, in overlooking the moral and political dimensions of inclusion, the student teachers see only *a partial view of reality*, preventing the development of critical consciousness and limiting their ability to act meaningfully within the world (Freire, 1970).

4.1.3. Preparing children for future health, wellbeing and citizenship

4.1.3.1. Leading physically active and healthy lives

Kit framed the purpose of PE as preparing pupils for life beyond school, teaching them to live physically active and healthy lives:

Achieving success in PE is important as research shows that children of primary school age are at a crucial point in their development of physical activity and healthy lifestyle. The knowledge and skills of the PE curriculum should reflect this to support children's

lifelong physical health (Bryant et al, 2017). This is also stated in the National Curriculum Programme of Study for Key Stage 1 and 2 in the aims for teaching to "lead healthy, active lives" (DfE, p.1, 2013)

Kit, Reflective Journal, Week 3

Kit emphasised the importance of children '*experiencing success in PE*', implying that this is necessary if children are to foster positive attitudes towards an active lifestyle, given that they are at '*a crucial point in their development*'. He connected this to the design of the PE curriculum, suggesting it should explicitly support the development of healthy habits and attitudes. He reinforced his reasoning by drawing on the aim of the National Curriculum Programme of Study for PE (Department for Education, 2013), preparing pupils to 'lead health, active lives', implying that he views this as one of his professional responsibilities.

Kit's reflection supported him in developing a personal rationale for teaching PE, concerned with the contribution that PE might make to children's long-term health and wellbeing. That said, he supported his developing rationale by quoting the National Curriculum POS for PE (Department for Education, 2013). On the one hand, he viewed his professional responsibility as one that went beyond transmissive delivery of the curriculum, supporting children to develop positive attitudes to physical activity. On the other hand, there is a sense of Kit passively accepting National Curriculum as pre-determining his professional responsibilities, thus diminishing his own sense of agency.

4.1.3.2. Mental wellbeing for academic success

Terri emphasised the importance of children understanding their own wellbeing and learning how to maintain good mental health, justifying this in terms of improved academic attainment:

[PSHE involves] teaching pupils about mental health… having a good mental health and wellbeing doesn't require only positive emotions but a range of emotions and being able to deal with them adequately… a report by Public Health England (2014) found that pupils with better mental health and wellbeing are likely to achieve better academically. This means that teaching PSHE benefits the individual emotionally but academically also… The report stated that exposing pupil to a good PHSE allowed for students to develop a growth mindset and can-do attitude. This allowed for pupils to set goals, manage stress and organise their schoolwork; all of which impact positively on progress and achieve higher grades.

Terri, Reflective Journal, Week 4

Terri framed PSHE as a means to improve pupils' academic attainment. She reinforced the idea that, by learning to deal with a range of emotions '*adequately*', pupils would be better equipped with skills and attitudes that allow them to '*set goals, manage stress and organise their schoolwork*', enabling academic success. Her implicit message was that PSHE can help children regulate their emotions, which is necessary for both wellbeing and academic achievement. However, she went on to write:

I feel that teaching about mental health and wellbeing should be meaningful and effective for pupils and not a lesson where pupils feel that the expectations from them are not equal to other subjects.

Terri, Reflective Journal, Week 4

This statement implies a tension in Terri's view of PSHE. Initially, she argued that good mental health, the ability to self-regulate, was instrumental to academic success. However, here, she indicated that PSHE lessons should be taught in a way that is less pressured than other subjects, implying that pupils should be able to meaningfully experience positive mental wellbeing. She seemed to conceptualise PSHE lessons as an emotionally calm and safe space, where children would perhaps feel able to discuss topics such as difficult emotions. She positioned PSHE both as a technical means to support academic achievement and, in contrast, a space for authentic and emotional encounters, without the weight of academic expectations.

4.1.3.3. Inclusive and democratic societal values

There was a strong pattern for the student teachers to reflect on the purpose of RE as supporting children to develop tolerance and respect for all society, achieved through acquiring knowledge of different religions. Eve and Heather explored these ideas in detail in their reflective conversation:

Heather: *… I feel like children in this day and age are very sheltered and live very sheltered lives. They don't understand that even though you follow a different religion, you are all the same. And I think it's important.*

Eve: *I think that's where your mutual respect comes from for other people, because if they don't understand the religion, they're like, 'Well, what's the point in it?'*

…

Heather: *I think a lot… I think a lot of racism would be cut out if children at primary school age were educated more about the fact that everybody is equal, even though you follow those different religions… racism to me is children's lack of knowledge.*

Eve: *And then they're just following their parents, it's a lack of understanding, rather than their actual understanding… I think we should bring that man in from the temple [Gurdwara] and he can explain that we're all equal…*

Eve & Heather, Reflective Conversation 2

Through conversation, Heather and Eve conceptualised that racial prejudice might be countered through RE. Heather suggested that children's '*sheltered lives*' leave them unaware of religious and cultural diversity, implying that developing children's knowledge could actively disrupt the racism ('*I think a lot… I think a lot of racism would be cut out*'). Her emphasis on knowledge reflects the belief that intolerance stems from ignorance rather than deliberate hostility, describing a form of implicit, unexamined racism. Furthermore, her framing of children living '*sheltered lives*' may also reflect her on shifting awareness of a personal lack of knowledge after the Gurdwara visit (see 4.3.1.1 Unexamined bias). By encountering a multi-sensory, situated learning experience, her own understanding of religion and diversity had perhaps expanded. The visit to the Gurdwara seemed to have extended her knowledge of Sikhism *and* her conceptual framework for understanding the broader purposes of RE. This suggests that Heather valued the experiential view of learning, understanding learning to be a continual process of interaction and reflection with and within the world (Dewey, 1938).

Similarly, Eve connected knowledge and understanding of a religion with cultural tolerance ('*that's where your mutual respect comes from for other people*'). She implied

that children were unlikely to be actively prejudicial; rather, ignorance about religious beliefs, compounded by family influences, could lead to unexamined bias. She also emphasised the need for educators to be pro-active in creating meaningful learning opportunities, such as she had experienced with the workshop leader from the Gurdwara. This implies that she wanted her future pupils to have more than a partial view of reality (Freire, 1970), chiming with notions of democratic and transformative learning.

Later in the conversation, Eve and Heather considered broader political and social contexts in relation to their perceived purpose of RE:

Eve: *There's been misconceptions of sorts, where it comes to stuff like terrorism that it's linked to the Islamic faith, but it's not. It's because of everyone's misconceptions... If they had actual knowledge and understanding of the Islamic faith, they'd think, well, no, this isn't the reason they're doing it, and there wouldn't be so much hate towards Muslims and stuff because they [society] would have understood.*

Heather: *...I feel like it's important that if they don't [teach RE] then, like you say, the terrorism and stuff, it's only just gonna get worse because children aren't being educated about it.*

Eve & Heather, Reflective Conversation 2

Here, Eve and Heather constructed a deeper articulation of the critical and moral purpose of RE, extending beyond ways in which it might shape children's attitudes and considering its potential influence at a broader societal level. In identifying a link between misconceptions about Islam and societal hostility toward Muslims, Eve implied that the purpose of RE is to challenge dominant cultural narratives. Building on this, Heather

emphasised the vital importance of teaching RE, framing it as a means to prevent social injustices such as Islamophobia and radicalisation. In this, Eve and Heather moved away from technical problems of how to teach RE and began building a socially conscious rationale for why teaching RE matters. In terms of Shulman's (1987) teacher knowledge base, this moves away from content and pedagogical content knowledge, emphasising instead the significance of *knowledge of educational ends, purposes and values*.

They also discussed constraints they perceived that prevented schools from being able to teach RE meaningfully:

Eve: *I do know a lot of schools, though, do have specific teachers for RE that come in, rather than - it's like during your PPA time [planning, preparation and assessment time] ... So that's when you don't get a lot of time on it, a lot of focus on it, as with your other subjects and stuff.*

...

Heather: *...The thing is, another thing in primary school is finding the time to go to all these temples and finding the time to go into, you know, like getting people to come in to speak to the children because they just, they just care about results of core subjects like English maths and science. RE is not seen well, at least in the schools I've been, and it's not seen as an important...an important subject, really, and I think it should be.*

Eve & Heather, Reflective Conversation 2

In noticing that, in her experience as a student teacher, RE was often outsourced to cover teachers, Eve suggested that RE is viewed by many teachers as peripheral to core professional responsibilities. Describing other subjects as getting '*a lot of focus*' in

comparison, she implied a hierarchy of subject status, where RE is viewed as an "add-on", rather than an integral part of the curriculum. Heather extended this critique by reflecting on practical barriers to creating rich, experiential learning in RE, such as organising visits to places of worship or bringing in community speakers. She suggested that a further significant barrier was performativity culture that prioritises assessment results in English and mathematics due to the high-stakes nature of accountability. She implied that this means RE is not viewed as important in schools, despite its potential to address social injustices. Eve and Heather's critique of how structural constraints shape practice chimes with Biesta's (2010) argument for education as an inherently moral practice, challenging 'commonsense views' (p.15) that what matters most is progress in learning in the core subjects.

4.1.3.4. Depth of reflection for preparing children for future health, wellbeing and citizenship

Kit's writing predominantly aligns with Larivee's (2008) first level of *pre-reflection*, and Kember et al's (2008) second level of *understanding*. In terms of *pre-reflection*, the purpose of PE is *taken-for-granted, without questioning*. No consideration is given to the *needs or possible responses of pupils* and *alternative* (or more nuanced) *considerations* are overlooked. In terms of *understanding*, Kit did provide evidence for his understanding of the purpose of PE, drawing on research and the aims of the National Curriculum (Department for Education, 2013). This level in Kember et al's model does not require any links to be made to practice. Furthermore, Kit's writing goes further than Kember et al's first level – *non-reflection* – as there is clearly an attempted to reach an understanding of the topic and the material he references is relevant.

Terri's reflection best aligns with the third level, *pedagogical reflection*, in that she was considering *educational goals* and how they may be achieved. She framed good mental health as being able to deal with a range of emotions, rather than only ever experiencing positive emotions; this suggests she was *applying the field's knowledge base and current beliefs about quality practices* in PSHE. In considering how authentic PSHE lessons might be taught without the weight of academic expectations that may characterise other subjects, she *considered practice situations* and generated *personal insights which go beyond book theory*.

There were some aspects of *critical reflection* also, in that she began to broadly consider the *moral and ethical implications and consequences* of classroom practices. Furthermore, she was aware that meaningful learning in PSHE could be prevented through the *larger social and political realities* that prioritise achievement of pre-determined academic learning outcomes. That said, she also positioned mental wellbeing as valuable in terms of academic achievement, rather than inherently valuable itself. This implies a concern with "*what works*" to foster academic achievement, indicative of the lower level of *surface reflection*.

Eve and Heather's reflection is particularly difficult to categorise. There are some elements of pre-reflection, notably that some of their ideas are *taken-for-granted, without questioning*, such as "in this day and age, children live sheltered lives" and "racism is a lack of knowledge". Similarly, they suggested that parents' racist views may influence children, which resonates with the notion of *attributing problems to others, perceiving themselves as victims of circumstances*.

However, there were also elements of the deeper levels of reflection. Their conversation about contextual barriers that might prevent schools from teaching RE effectively was an example of *successful discussion of practical situations in relation to taught content*. Furthermore, it implies that they were *striving to foster consistency between their espoused theory and their future theory in use*. These are indicators of *pedagogical reflection*. There were also elements of *critical reflection*. Their conversation about racial prejudice and dominant societal perceptions of Islam related to *issues of equity and social justice in and outside the classroom*. However, while they constructed a powerful rationale for teaching RE, there was not *evidence of a change in their perspectives or fundamental beliefs*, nor was there *deep examination of their embodied values and beliefs*.

These reflections demonstrate how student teachers' reflections can be understood at different depth levels, even where the lens and the topic of reflection are the same. Furthermore, Eve and Heather's reflection demonstrates the limitations of the existing models, as it does not neatly align with any of the levels of reflection, or even between two adjacent categories. Aspects of their conversation indicate a lack of reflective engagement, whereas other areas imply deeper levels of criticality.

4.1.3.5. Paradigms of student teacher learning in preparing children for future health, wellbeing and citizenship

As with the other reflections that constructed this lens, aspects of these reflections align with the process-product paradigm, such as Kit's rationale for PE. While he suggested an ethical concern for children's long-term wellbeing, his reasoning was anchored in external justification, such as government policy or research evidence, rather than and

exploration of values. In emphasising "success" in PE as a precursor to physical wellbeing, he implies a linear, cause-and-effect model of learning, in which effective curriculum delivery leads to measurable societal benefits.

Terri's reflection is also best understood as aligned with the process-product paradigm. She conceptualised her own knowledge in terms of acquiring effective pedagogical strategies to support pupils' emotional regulation, suggesting that this was important for their academic attainment. That said, there was a tentative awareness of situated sociocultural dimensions, as she emphasised that '*meaningful and effective*' PSHE might be taught in a way that was different to subjects with greater expectations of academic attainment.

Eve and Heather's reflection explored the topics of social justice, Islamophobia, and the marginalisation of RE in schools, which could imply a move toward the critical-transformative paradigm. However, their understanding of their own learning was largely instrumental, consistent with the process-product paradigm. Like Kit, they leaned into a linear cause and effect conceptualisation of teaching, viewing their teacher knowledge as the ability to deliver content that would lead to societal change. That said, it seemed that the Gurdwara visit had been a meaningful, situated learning experience that had ignited their sensibilities to religion and diversity. In advocating for better RE teaching as a response to social justice, they may have been articulating emergent professional values. While they did not explicitly describe a change in teacher identify, their reflected implies a tentative shift towards the situated sociocultural paradigm, where student teacher learning can involve identity changes through processes of professional positioning within a community.

4.2. Learner lens

Commented [JH1]: Better intro? Through the lens of learner, the student teachers reflected on the conditions and processes of learning. Often, this was prompted by recalling experiences of their own learning in their university-based ITE. It also included reflections where the student teachers imagined how their future pupils might learn.

Through the learner lens, learning was often conceptualised as immersive and embodied but ultimately was interpreted through cognitive framings. When considering inclusion, student teachers attended more to values and learner experiences than to the application of specific techniques, marking a contrast with the teacher lens. Reflections through the learner lens therefore implied a greater orientation towards learning to teach as a process of enquiry, even though there were still traces of the adherence perspective (Lofthouse et al., 2021).

4.2.1. Learning as more than curriculum delivery

4.2.1.1. Learning does not fit into subject categories

Jackie reflected on cross-curricular teaching approaches, initially considering how they may hinder children's learning:

I recognise the importance of enough relevant content in a topic to make cohesive links across the subjects, which is supported by Myatt (2018) who believes that 'poorly conceived plans can result in a muddle.' In practice, I have observed the whole school being given a theme by which to work, similar to the 'wow' day concept (Myatt, 2018) where some links were tenuous, with no obvious connections made across some subjects which felt confusing and misplaced...

Jackie, Reflective Journal, Week 2

Here, Jackie emphasised that, for cross-curricular teaching to be effective, the connections made between different subjects and experiences should support and complement each other. Tenuous links may create confusion in the minds of the learners

or even generate misconceptions as they try to find connections across their different activities. Jackie's choice of language ('*cohesive links*'; '*muddle'*; '*connections*') suggests that cognitive constructivist assumptions underpinned her conceptualisation of learning. This was further reinforced by her assertion that cross-curricular topics should include '*enough relevant content'* to enable pupils to make cohesive links. This implies she viewed learning as the construction of organised and closely interconnected cognitive structures, and believed that this could be enabled through carefully designed cross-curricular learning. This was evident later in her reflection:

... if there is no clear rationale and precision behind the topics, the risk is that the work becomes muddled with no definite, achievable learning (Myatt, 2018). Kukovec (2014) also suggests that the depth of content could be inadequate if the links are not clear and defined... In my future planning, I will be careful to ensure that inter-disciplinary work is thought through so that the outcomes and skills I am looking to build and transfer...

Jackie, Reflective Journal, Week 2

This reinforces Jackie's cognitive constructivist view of learning, in that she emphasised the importance of a clear and precise rationale in the design of a topic to enable '*definite, achievable learning*'. It suggests that Jackie conceptualised her role as the teacher to '*build and transfer*' the knowledge and skills that enable pupils to achieve pre-defined, unequivocal learning outcomes.

She explored how cross-curricular approaches might support learning, prompted by noticing opportunities the museum visit offered to make meaningful links across different subjects:

At the museum, I noted how much science could be taken from it (rocks and fossils, formation of the coal itself, uses for coal in making steam) and how this alone links to the history of transport…

Children think and learn in many ways… Barnes, (2015) believes that… cross-curricular approaches [create] a shared perception and understanding of a topic… Plowden (1967, para 555) suggests that 'children's learning does not fit into subject categories.' SMSC aspects of education can be effectively threaded through a cross-curricular approach, not just through foundation subjects, but throughout core subjects as well (Myatt, 2018) … cross-curricular learning reduces issues such as fragmented, isolated skillsets, and supports creative thinking, and the transfer of skills to other areas of learning (Kukovec, 2014).

Jackie, Reflective Journal, Week 2

Despite the cognitive constructivist assumptions of her initial critique, Jackie's discussion of the benefits of a cross-curricular approach leaned more towards social constructivism. Highlighting the multiplicity of children's thinking and learning, she recognised how subject categories may not always neatly align with what and how pupils learn. She recognised that SMSC (spiritual, moral, social and cultural) aspects of learning might be encountered throughout different subjects. This clashes somewhat with her earlier notions of carefully designed content to build and transfer pre-determined knowledge and skills. Instead, it aligns more closely with learning as the co-construction of meaning, personal, situated, and responsive to context.

Through reflection, it seems that Jackie began to construct somewhat conflicting narrative unities. As noted earlier (see 4.1.1.3 Curriculum frameworks as "what you need

to know"), she held that "*teachers must sequence learning encounters for knowledge connections*", evident in her assertions about a clear and precise rationale for topic design, sufficient depth of content for meaningful connections, and pre-defined, measurable learning outcomes. However, her reflection also implied a new narrative unity, that "*learning is an emotional, relational and situated experience*". This was evident in her consideration of the opportunities the museum offered for meaningful links across subjects, and the spiritual, moral, social and cultural aspects of learning that may be encountered across different curriculum subjects or outside of them.

4.2.1.2. Experience to prompt independent thinking

Eve felt that workshops in PE and DT, where she had been taught through '*practical aspects*', had been particularly effective in supporting her learning:

I talked about the idea of myself, and therefore children, being able to learn more through physically completing an activity as opposed to directed teaching. From this week, I have learnt more within the active lessons within university than the knowledge I acquired from the directed teaching lessons… as I seemed to be more engaged and active within the learning.

Eve, Reflective Journal, Week 3

Eve drew a clear distinction between workshops where she had been "doing something" and workshops where she had been a passive receiver of information. She attributed her deeper understanding to '*physically completing'* activities, which made her learning more engaging and meaningful. This suggests she conceptualised learning as a process of personal meaning-making through embodied, situated experience. It aligns with a

socio-constructivist approach of “hands-on, minds-on” authentic activities (Rodriguez, 1998).

Eve connected this to Dewey’s (1938) concept of experiential learning:

Dewey talks about the importance of experience… the role of a teacher shouldn’t just be to dictate and pass on knowledge but should work on the children’s experiences to build their learning…. He explains that freedom of thought is essential for children to develop intellectually and morally. This implies that children should be given time to think on their own and come up with their own ideas and knowledge.

Eve, Reflective Journal, Week 3

Here, Eve explicitly rejected learning as transmission and emphasised that the teacher’s role is to design and implement educative experiences that build on existing knowledge. She also suggested that children need the freedom to ‘*think on their own*’ and generate their own ideas. In this, she positioned *agency* as central to the learning process, underscoring the socio-constructivist assumptions of her reflection.

That said, while Eve emphasised how practical activities often deepened her learning, she was not entirely dismissive of more structured, teacher-led approaches. She reflected on a PE lesson she had observed previously:

… children were given idea of balances and rolls and then given time to create their own routines. The children learnt how to complete the individual moves over time by doing them repetitively.

Eve, Reflective Journal, Week 3

Here, Eve described how the parameters of the problem were clearly defined, and the children were supported to practise different components of possible solutions. Because of this, the children were then able to act with agency and solve problems, with the implication that their solutions were of a higher quality because of the defined parameters and prior experience of possible solutions. This chimes with Dewey's *pattern of reflective inquiry* (Allison & Seaman, 2017, p. 3). However, it is subject to the same criticism that Prawat (1997) makes of Hiebert et al's (1996) problem-solving approaches in mathematics, in that it overlooks the learners' idea-generation and reflection phases in favour of action. Indeed, Eve went on to explicitly connect this example of practice with Dewey:

Dewey expresses the idea that children should be "provided with quality experiences that engage them and build on their existing experiences." (Bates,2019, p 21). This suggests that schools should work more on adding worthwhile activities for children to complete that allow them to learn freely.

Eve, Reflective Journal, Week 3

This re-emphasises Eve's view of the teacher's role as to carefully sequence educative experiences, building on what the children already know while providing opportunities for children engage in freedom of thought. However, she consistently positioned experiential learning as one of many approaches that could inform her practice, rather than a universal theory of learning. For example:

I feel that children learn in different ways and having a range of teaching strategies within your classroom and your teaching is important for children to be able to learn and make progress…

For some aspects I do feel that children learn from experiences and hands on active learning much more than directed teaching…

I will ensure that children are exposed to a range of teaching strategies that involve practical experiences and direct teaching. I am aware that children learn differently to each other as I learn differently to fellow students within university and this will influence my practice because I will make sure that I assess my children and see what works best for them and their learning experiences.

Eve, Reflective Journal, Week 3

Through reflection, it seemed Eve was constructing narrative unities that existed in tension with each other. She held that "*learning is personal connection making"*, as she emphasised learner agency and freedom of thought to support learners to construct their own meanings across educative experiences. She began to conceptualise the role of the teacher as the creator of educative experiences based on knowledge of learners' prior experiences. However, alongside this, she also held the narrative unity that '*learning is making progress'*, which implies it is measurable against pre-defined criteria. This led her to conceptualise her practice as "*teaching is knowing and selecting the right techniques to meet the needs of learners*", a common narrative unity across many of the student teaches (see 4.1.2. Inclusion as the right techniques).

4.2.1.3. Depth of reflection for evaluating teaching approaches that enable learning

Jackie's reflection aligns mostly with the third level, *pedagogical reflection*. In a sense, she was concerned with *"what works"*, which could indicate the earlier level of *surface reflection*. However, she grounded her reflection in literature which she used to interpret and critique her prior observations of practice. Furthermore, she also drew on academic

literature to justify how cross-curricular teaching might support learning. This indicates that she was attempting to *understand the theoretical basis for classroom practice*, a characteristic of *pedagogical reflection*. By using the literature to critique her prior observations, identifying opportunities for cross-curricular learning, and asserting that her future planning would need to be carefully considered, she successfully connected practice with conceptual ideas, again suggesting *pedagogical reflection*.

There were emerging indicators of the deepest level, *critical reflection*, in that she questioned whether teaching the curriculum as discrete subjects truly aligns with how children think and learn, implying an *ethical concern* for her practice. However, there is a lack of *examination of her own value system*. While she seemed to be aware of her narrative unity relating to building meaningful connections, she appeared not to notice the implications of learning as emotional, relational and situated. Her reflection reads as though she was synthesising the arguments of Myatt, Barnes, Plowden and Kukovec, with some links to her prior experience, rather than engaging in *dialogue with herself* to *deeply examine her embodied values and beliefs*.

Like Jackie, Eve's reflection aligns predominantly with *pedagogical reflection*. Noticing how practical experience supported her own engagement in learning, she explored the work of Dewey. This deeper understanding of the experiential learning helped her to *interpret the theoretical basis for classroom practice* that she had observed as a student teacher. There were also some elements of *critical reflection*. She drew on Dewey's work to suggest that learners being able to think for themselves is a *moral* concern. She acknowledged that, if she assumed that learning occurs through building on prior experiences, then the *ethical implication* would be that that teachers have a

responsibility to understand pupils' prior experiences. There was a hint that she was in *dialogue with herself*, as she recognised that while an experiential learning approach had been effective for her in PE and DT, she recognised that it may not in appropriate for all learners in all contexts. This concern for adapting her practice to meet diverse learning needs suggests that she was *seeking to connect her practice to democratic ideals*.

This again exemplifies how the student teachers' reflections that share the same lens and same topic might vary in terms of depth. The reflections in this section also suggest that the student teachers had differing levels of awareness of their own narrative unities, and that this is related to the depth of their reflection. Jackie was able to connect conceptual ideas with practice. However, ultimately, she still positioned cross-curricular teaching as an approach that could have positive or negative outcomes for learning depending on how it was implemented. In contrast, Eve's reflection could be viewed as more critical because she engaged in more of a dialogue with herself, recognising the benefits of experiential learning, but implying that the success of teaching approaches also requires the teacher to have a deep understanding of leaners. That said, Eve still overlooked the large social and political realities in which teaching practices occur; she did not, for example, consider that measuring progress in learning by the achievement of pre-determined learning outcomes is at odds with experiential learning.

4.2.1.4. Paradigms of student teacher learning for evaluating teaching approaches that enable learning

Jackie's reflection illustrates how she combined her past experience of '*Wow*' days, her recent museum visit experience, and ideas from academic literature about sequencing and organising knowledge to construct new personal understanding. This suggests that

her reflection aligns with the cognitive paradigm, as she expressed her knowledge as a way of thinking that would guide her future practice. The museum visit seemed to extend her thinking about cross-curricular approaches, recognising the need for balance between organised and sequenced knowledge, encountered in connected and meaningful ways. This implies a shift towards conceptualising teaching as interaction, aligning with the situated sociocultural paradigm.

Eve conceptualised her own learning as occurring through interaction and situated practice. She framed the teacher's role as the designer of encounters that build on prior understanding and experience, and knowing which tools and practices might be most effective in creating these conditions. This means her reflection is best described in terms of the situated sociocultural paradigm, where student teacher learning involves the appropriation of tools and practices.

4.2.2. Emotional engagement to enable learning

The student teachers noticed positive emotions they experienced during the FARE module, such as pride, wonder and enjoyment. They often began their conversations discussing what they had enjoyed learning that week, topics which frequently became the focus of their written reflective journals. However, there was a strong pattern of the student teachers being more concerned with the teaching strategies that had prompted these emotions, and how they might shape future teaching practice. Emotions were conceptualised as enhancing learner engagement but rarely viewed as inherently valuable or implicit in the learning experience.

4.2.2.1. Affective experience but cognitive interpretation

Sarah reflected on the visit to the Gurdwara, noticing the affective and situated dimensions of her learning experience:

The way the man spoke about his religion was very inspiring, and it was admirable to see how passionate he is about his way of life. We were then lucky enough to have a free full meal prepared for us, which was a lentil curry and a vegetable curry served with fresh tandoori roti. The man then explained that everyone, no matter of race, religion, gender or who you are, can come into any Sikh Gurdwara and have a free meal. He told us that everyone is valued as equal in the Sikh religion. I found this very moving, and it made me be grateful for all the work they do in the community.

Sarah, Reflective Journal, Week 1

Sarah used particularly emotive language to describe the emotions she felt during the Gurdwara visit. She characterised the visit leader as *inspiring, admirable,* and *passionate*. She felt *lucky, moved,* and *grateful* to witness the community's practices. This suggests she was able to easily recall the affective, multi-sensory and relational aspects of the experience. Notably, she connected these emotive and sensory memories to the concept of equality and its significance in Sikhism. This suggests that she experienced learning as personal meaning-making as she engaged with ethical and social concepts, such as community, belonging, and the enactment of social justice.

However, when Sarah later summarised her reflection on the visit, she reframed her learning experience:

We learned the knowledge in university the day before we went to the Gurdwara. The following day, we applied our knowledge through visiting the Gurdwara and observing the Sikh religion being practised. This embedded the knowledge and made it more concrete.

Sarah, Reflective Journal, Week 1

Despite describing rich emotional and ethical engagement earlier on, Sarah reframed the Gurdwara visit a means for strengthening knowledge acquisition. Her language shifted to echo science of learning and mastery discourse, suggesting the purpose of the visit was to *apply* and *embed* knowledge, making it *'more concrete'*. This aligns with the cognitive constructivist view of learning (Rodriguez, 1998), occurring through assimilation and accommodation of new information within the learner's existing cognitive structures (Piaget, 1971). This suggests that ultimately Sarah held an instrumental view of teaching, conceptualising it as objective practice (Turu Porcel, 2020). She overlooked the affective and ethical dimensions of learning, even though she experiences strong emotions and reflecting on ethical concepts in her own learning.

4.2.2.2. Storying experience to support learning

Abigail, Jackie and Rebecca explored their reflections on the museum workshops that were taught through interactive storytelling:

***Rebecca**: Yeah, so <u>everything</u> was a story, wasn't it? That's what I got from it. Everything's a story-*

***Abigail**: But it's stuck, it's stuck for me!*

***Rebecca**: Sally's story, Brenda's story...*

***Abigail**: If you read that, if you read a diary in front of you, I won't remember that.*

***Rebecca**: If we just got given a diary, we just got given a piece of Sally's diary, it wouldn't have stuck, but it –*

***Jackie**: No, it wouldn't have done.*

***Rebecca**: But it was listening to it -*

***Jackie**: - And also going down the mine and seeing the little trap door that - it all linked.*

***Rebecca**: It put it in practice -*

***Abigail**: So if you did something like that and <u>then</u> a diary, then it, it intertwines then, doesn't it? It secures your understanding...*

Abigail, Jackie & Rebecca, Reflective Conversation 7

Here, Rebecca foregrounded storytelling as a teaching strategy, indicating that her experience in the museum had made her aware of its potential. Abigail's emphatic *'it's stuck, it's stuck for me!'* indicates that she was excited by her own memory retention, and that she evaluated the success of the teaching strategy by its ability to support memory retention. Abigail compared different teaching strategies, determining that being told a story is more effective for memory retention than reading from a page. Jackie and Rebecca's agreement shared the narrative unity *"learning is a change in long-term memory"*. This closely aligns with cognitive constructivism (Rodriguez, 1998), as well as Ofsted's definition of learning *(Ofsted, 2024b)*.

Jackie highlighted the multi-sensory aspects of the museum visit and its sequencing (*'going down the mine and seeing the little trap door... it all linked'*), which she believed strengthened their understanding and memory retention. Abigail built on this, suggesting that pupils would benefit from combining teaching strategies, providing pupils with

experience, then storytelling, and then reading or writing a supporting text. Alongside this, Rebecca's earlier emphasis that '*everything was a story*' indicates that the student teachers valued the "wholeness" of storytelling as a teaching approach. This implies that they conceptualised learning as an integrated, personal meaning-making experience, rather than a technical process of discrete steps. Principles of social constructivism and experiential leaner seem to underpin their assumptions. Implicit in their dialogue is that learning is situated, shaped by the physical context, the sequencing of activities, emotional engagement and narrative structure, and that meaning is co-constructed through participation and reflection. Notably, this chimes with both Jackie's previously noted narrative unities that "*teachers must sequence learning encounters for knowledge connections"* and that "*learning is an emotional, relational and situated experience"* (see 4.1.1.3 Curriculum frameworks as "what you need to know"; 4.2.1.1 Learning does not fit into subject categories). There seems to be a tension between these narrative unities in terms of implications for teaching. The first implies that a teacher needs to carefully map out experiences that support learners to make connections. This was often imbued with the assumption that the connections leaners made would enable them to acquire pre-determined knowledge set out by the curriculum framework. However, the second narrative unity implies that the student teachers conceptualised learning as an emotional, relational and situated experience, one that could not be disassembled into discrete parts.

Adam, Phoebe and Sarah noticed strong positive emotions about their learning during the museum visit, but reframed their enjoyment in terms of the pedagogical conditions that had brought it about:

***Sarah**: So, what did you two think of the educational visit to the mine museum?*

***Adam**: I loved it… I think I preferred for the actual trip down the pit [over the workshops led by educators-in-role], because I feel like the more practical work - like they have the little activities down there and everything – I feel like when a child can complete a practical activity they might more be more likely to engage in it.*

***Sarah**: Yeah, yeah. I felt that it was really good that we went down the pit first and then we had the workshop afterwards that made you - When you're in the pit, you were thinking, "oh, gosh, yeah, this looks like hard work." And "Oh gosh, I don't wanna work down here." But then when you have the workshop where she [the actor] was pretending to be a young Victorian girl. You could put it-*

***Adam**: You could put it into context.*

***Phoebe**: Be the child.*

***Sarah**: It actually made me think 'wow'*

***Phoebe**: Yeah, and seeing the trapper, you know, you understood because we'd already seen the trapper and the where the trapper would sit.*

Sarah, Adam & Phoebe, Reflective Conversation 6

Here, Adam and Sarah's language conveys the joy and wonder they felt during their learning experiences in the museum ('*I loved it*'; '*it actually made me think 'wow'*'). Adam immediately connected his enjoyment to the practical learning activities that took place during the pit tour, suggesting that these would be particularly engaging for children. This chimes with Rodriguez's (1998) 'hands-on, minds-on' activities, a cornerstone of social

constructivism. Here, it is likely that Adam conceptualised learning as a technical process, concerned with the sorts of activities that might engage children in thinking.

In contrast, Sarah explored the thoughts and feelings she experienced during the tour of the pit, noticing the empathy she felt for people worked there in the past. However, her 'wow' moment seems to have arisen during the workshop where an educator-in-role told the story of a Victorian child who worked in the pit as a trapper. The sense of wonder she experienced seems to have been prompted by being able to situate more abstract concepts of a trapper's life within her own experience of the physical conditions of the pit. Adam and Phoebe supported Sarah in evaluating how she had arrived at this understanding ('*You could put it into context*'; '*…you understood because we'd already seen the trapper and the where the trapper would sit'*). Their emphasis on the sequencing that led to Sarah's deeper appreciation of history aligns with cognitive constructivism, in that understanding is built iteratively and that concrete experiences can act as the foundations for more abstract ideas (Taber, 2015). It also chimes with the notion of the "wholeness" of the learning experience that seemed to be beneath the surface of Abigail, Jackie and Rebecca's conversation (see above), suggesting that the student teachers share similar narrative unities.

4.2.2.3. Immersive learning for personal knowledge

Marcia was one of the few student teachers who explicitly connected the affective, relational and situated dimensions of learning with the cognitive:

…we were able to watch people acting as if they were living in the Victorian time. This brought everything to life and made me feel as though I had met someone from that era.

It opened my eyes to how knowledge can also be more personal, making you feel empathy for what people went through in the past.

Marcia, Reflective Journal, Week 2

Marcia emphasised the way that watching the Victorian actors made knowledge feel '*personal*' and helped her empathise with lives of the past. The meaning she ascribed to the actors' performances came through her own emotional response, suggesting she was constructing knowledge by blending historical facts and concepts with her personal affective experience. Here, unlike the other student teachers, she was explicitly noticing that she held the narrative unity *"learning is an emotional, relational and situated experience".*

She explored this further:

Sultan & Al-Lail (2015, p. 4) defines 'creative learning' as understanding new concepts which allows a learner "to go beyond notional acquisition" and focuses on thinking skills. Similarly, Cooper (2017, p. 5) draws attention to the importance of "engaging children's interest" with "stimulating activities" that will "fire children's imagination".... Due to this creative approach being fun, children are less likely to realise they are also learning. Equally, Abswoude, Buszard, Kamp & Steenbergen (2020, p. 3) points out learning obtained implicitly is "more resilient to psychological and physiological stress"... the new knowledge resonated within me as I learnt about the tough life people faced ...

Marcia, Reflective Journal, Week 2

It is likely that Marcia chose these quotes because they mirrored her own experience of learning. She felt her experience went further than acquiring factual knowledge, she was

able to *think* about new concepts at a deeper level. Watching the Victorian actors fired *her* imagination; her thinking was active and generative, *engaged* with new concepts, rather than being passively receptive. She described this as *implicit learning,* suggesting it felt effortless and that she did not notice she was "doing the work" involved in learning. This connects with ideas of intrinsic motivation (Deci & Ryan, 1985): because the experience engaged her emotions, she was curious and naturally motivated to think more deeply about historical concepts. Her implicit emotional investment in this thinking meant that she was more connected to the resultant knowledge, meaning it would be more *resilient* to forgetting.

That said, Marcia's conceptualisation of learning as memory retention and teaching as a technical process continued to underpin her reflections:

This was a very memorable experience… I believe it is crucial for learning experiences to be memorable for children to fully understand a concept and retain information for a long time… if I incorporate these and other creative ideas into my lessons this can help make it easier for children to learn and retain information, ultimately creating successful and purposeful learning.

Marcia, Reflective Journal, Week 2

Marcia viewed the connection between affective, situated and cognitive aspects of learning as creating '*a very memorable experience'*. She valued this, not because of what it meant to her on a personal level, but because she believed it could help her '*fully understand'* and remember the new concepts for a longer time. Creative approaches, in her view, were effective because they supported recall and lead to '*successful and purposeful learning'*. This implies that, despite Marcia *noticing* how she constructed

personally meaningful knowledge through a combination of affective, sensory and cognitive engagement, she held onto the narrative unity of "*learning is a change in long-term memory*".

4.2.2.4. Depth of reflection for emotional engagement to enable learning

Sarah's reflection, while not as inconsistent as Eve and Heather's in the earlier section (see 4.1.3.4. Depth of reflection for preparing children for future health, wellbeing and citizenship), bears indicators of different depth levels. She vividly recounted the affective, multi-sensory and relational aspects of her learning experience yet, somewhat jarringly, used principles of cognitive constructivism to frame her learning. This implies she was attempting to *apply theory to practical situations* based on *teaching knowledge, theory or research,* aligning with the third level, *pedagogical reflection*. However, she did not *successfully discuss practice situations* in relation to learning theory, as she overlooked theories that aligned with the situated and personal elements of her learning experience. This arguably prevented her from generating *personal insights that go beyond theory*.

Therefore, her reflection could be more closely aligned to the lower level of *surface reflection*. At this level, her description of her situated experience could be framed as a description of *strategies and methods used to reach predetermined goals*, where the "goal" is for learners to memorise and apply pre-determined knowledge. Sarah's use of language implies that she understood some of the principles of cognitive constructivism, another indicator of surface reflection. However, failing to notice the misalignment between her experience and learning theory suggests an *unquestioning* approach and a *lack of conscious consideration*, which would be more aligned to the first level of *pre-reflection*.

The two museum reflections in this section align closely with *surface reflection*. While cognitive assumptions of learning underpinned these reflections, the conversation was initially prompted by the student teachers noticing their emotional engagement. However, they were almost entirely concerned with how affective aspects of learning could support the pupils' personal constructions of knowledge, rather than valuing the emotion in and of itself. They viewed their feelings of joy, awe and empathy as indicators of effective teaching strategies that might engage future pupils. They were *focused on strategies and methods that could be used to reach predetermined goals*, concerned with *"what works" rather than considering the value of goals as ends in themselves*. In particular, the assumption that the "wholeness" of the emotional and situated experience had been important to their learning, this remained *beneath the surface* of their conversation.

In contrast, Marcia's reflection is more aligned with the deeper level of *pedagogical reflection*. Through her discussion of academic literature concerning creative and engagement learning activities, there is the sense she was *striving to understand the theoretical basis* that underpinned her experience of learning as affective and relational. Her intention to implement some of these approaches into her future practice suggests that she was *striving to foster consistency between espoused theory and theory in use*. It could also be argued that there was an element of *critical reflection*, as in stating '*it opened my eyes to how knowledge can also be more personal',* she implied that there had been a *change in her perspective over a fundamental belief of the understanding of a key concept*. That said, towards the end of her reflection, she suggested that her new understanding of learning could support her teaching, as her future pupils would be

better able to fully understand and retain a concept for a longer time. This is arguably indicative of *surface reflection*, a concern with *"what works" rather than considering the value of goals as ends in themselves*.

It could be that Marcia's reflection aligned with deeper levels because it is a written reflection rather than a conversation. Through written reflection, leaners might gain a greater sense of ownership of their learning, acknowledge the role of their emotions, make sense of ill-structured material, and begin to think metacognitively (Moon, 2006). This could account for why Marcia seemed to be more aware of emotion as an inherent dimension of learning, rather than an instrumental support or a natural consequence. Marcia's reflection may have benefited from the 'contemplative silence' that comes with writing, and is perhaps less likely to be an aspect of a conversation between peers (Moon, 2006, p. 26). An increased sense ownership over her learning, made possible by the writing process (Moon, 2006), may have given Marcia the confidence to explore the affective dimension of learning.

In contrast, in the conversations, the student teachers may have felt they needed to stay within the realms of shared narrative unities (in this case, "*teachers must sequence learning encounters for knowledge connections"*). It may be that they felt that it would be professionally or socially risky to explore conceptions of learning beyond constructivism, particularly if this could be seen as in conflict with prevalent cultural and political views on education. Equally, challenging these prevalent views could create cognitive dissonance for the student teachers, which could lead to confusion or vulnerability. This suggests that there are barriers to student teachers engaging in deeper levels of reflection on problems that 'cannot be described with a high degree of completeness' or

'resolved with a high degree of certainty' (King and Kitchener, 1994, in Moon, 2006, p. 30). Indeed, even in Marcia's written reflection, she sought to resolve the connection between the conflicting narrative unities, suggesting that leveraging the affective and relational aspects of learning could support memory-retention.

4.2.2.5. Paradigms of student teacher learning for emotive engagement to enable learning

Sarah's reflection suggests a tension in how she conceptualises her own learning. She described the affective and situated dimensions of learning, connecting her experience of the shared meal in the Gurdwara with the Sikh values of equality and social justice. This hints at the critical-transformative paradigm, where student teacher knowledge is expressed through moral and political values. However, she explicitly framed her learning in terms of the cognitive paradigm, suggesting the visit to the Gurdwara had been an opportunity to apply her prior knowledge.

The second reflection (Abigail, Jackie and Rebecca) and the third reflection (Adam, Phoebe and Sarah) shared a similar topic. Both aligned with the cognitive paradigm and the situated sociocultural paradigm, but to different degrees. Abigail, Jackie and Rebecca understood their own development as teachers as shaped by immersive, narrative and emotionally resonant experiences. In discussing *how* they had learned, they implied that their teacher knowledge was being co-constructed through context and interaction. They began to appropriate the approaches that had supported their learning, imagining how they might bring them into their own practice. Abigail noted the benefits to her memory retention, which would align with the cognitive paradigm, but overall, the reflection is best understood through the situated sociocultural paradigm.

In contrast, the second conversation is more aligned to the cognitive paradigm, as Adam, Phoebe and Sarah evaluated the experience in terms of how it helped them acquire or remember information more effectively. They framed their learning in terms of mental assimilation of structured content, reinforced by the order and the type of activities. Although they noticed their emotional responses, these were positioned as contributing to knowledge acquisition, rather than as integral to their professional development.

Marcia's reflection suggests that she also made sense of experience across the same two paradigms. She articulated how emotional and sensory experiences supported the construction of personally meaningful knowledge. This suggests she experienced learning to teach as a situated and embodied process, aligning with the situated sociocultural paradigm. For Marcia, learning to teach was more than acquiring historical facts, she began to value learning experiences that foster empathy and personal engagement. However, she ultimately evaluated the experience in terms of memory retention, suggesting that creative and emotionally engaging approaches are effective *because* they support memory retention. This more instrumental view of teach aligns better with the cognitive paradigm. This exemplifies how student teachers may experience competing conceptualisations of knowledge and learning, holding both relational and instrumental views simultaneously.

4.2.3. Inclusion as belonging

4.2.3.1. A feeling of community

In Week 3, Terri's reflective journal suggested that she was beginning to think about inclusion as more than implementing the right techniques, as her earlier reflections had implied (see 4.1.2.1. Acquisition of better techniques for inclusion):

Inclusivity isn't something which I have thought too much about during my lessons, and now I am realising that it is essential.... It made me think of the issue of just how many children are not being treated fairly in the classroom, and how many children's quality of life is not being made better whilst they are at school due to the lack of inclusivity... Having inclusion and the STEP principle at the forefront of my mind can positively impact my practice and the feeling of community in my own classroom as I would always be thinking of how to improve learning and include all pupils.

Terri, Reflective Journal, Week 3

Terri's reflection suggested a shift as she began to position inclusion more centrally in her pedagogical thinking. She began to consider issues of social justice, acknowledging that many children are *'not being treated fairly'* and that schools can fail to *'improve their quality of life'*. She emphasised that she wanted to create a '*feeling of community'* in her own classroom. This implies that, at this stage for Terri, inclusion was more than implementing the "right" techniques; she was starting to conceptualise that it should actively address causes of exclusion and create a sense of belonging for all.

That said, Terri still conceptualised inclusive practice as beginning with the teacher's knowledge, attitudes and actions. She determined that, when teaching, she would hold inclusion at the '*forefront'* of her mind, alongside the STEP framework. The STEP framework suggests that, in PE, 'teachers can differentiate activities by Space, Task, Equipment or People' (Makopoulou et al., 2022, p. 247), providing a practical and efficient way of adapting practice across different contexts. Terri suggested that this framework could also be applied when teaching other subjects. This again indicates that she was thinking of inclusion more broadly, extending beyond specific teaching strategies that

had been introduced in the university PE workshop. However, her reflection remained centred on a technique that could support a teacher's *individual* actions, rather than considering the deeper social or relational dimensions of inclusion and exclusion.

4.2.3.2. Enjoyment and achievement for all

Abigail viewed inclusion as teaching approaches that could be flexibly adapted to enable all learners to be appropriately challenged, as well as participate in shared experiences. She reflected on the Teaching Games for Understanding (TGfU) (Bunker & Thorpe, 1982) approach in PE, noticing her own enjoyment and progression in learning:

I was able to identify my own enjoyment and how the small steps of progression worked well to help me participate... All children, no matter what the child's skill level could take part, offering additional challenges to meet the progression of the child.... By using TGfU, all children can enjoy and achieve a sense of value, as it focused on the intrinsic motivation of the child.

Abigail, Reflective Journal, Week 3

This was one of the few instances where enjoyment was conceptualised as integral to the learning process, rather than as a support to engagement or memory retention (see 4.2.2. Emotional engagement to enable learning). Abigail recognised that the TGfU approach allowed learners to meaningfully participate and be challenged relative to their personal starting points. She implied that a sense of intrinsic motivation was generated through learners noticing their incremental achievements. Furthermore, she highlighted how the TGfU approach could provide increased levels of challenge for learners, not just make activities accessible for those who needed more support. In this, she implicitly emphasised how the TGfU approach fostered democratic ideals (Dewey, 1916), where *all*

pupils could experience the emotions associated with progress and achievement, developing positive attitudes to learning and community participation.

… I could recognise the benefits of using pedagogy such as this to help individuals bond and become more familiar with one another. Enjoyment was evident throughout the session and everyone was taking part and that all abilities were able to participate; no focus was on the technical part of the lesson or the rules of the game. This helped me identify how students' special educational needs and development (SEND) are easily differentiated to allow inclusion and an inclusive environment for all children (Goepel. Et al, 2015).

Abigail, Reflective Journal, Week 3

Here, Abigail connected the enjoyment of learning with the creation of stronger social relationships, which she recognised was dependent on all being able to participate meaningfully. She implied that focusing on meaningful participation for all, rather than the technical skills or rules of the game, enabled learners to feel safe and connect with each other. In this sense, Abigail was starting to conceptualise inclusion as more than equal access to achieving predetermined outcomes. She was now viewing it as a shared experience and emotional connection, involving the creation of community and a sense of belonging for all.

This chimes with the narrative unity *"learning is an emotional, relational and situated experience"*, but it is more nuanced than in the previous reflections. Abigail appeared to suggest that *"the purpose of education is to belong to a learning community"*, whereby all may participate meaningfully. This marks a notable shift from the more instrumental narrative unities, such as *"teachers must sequence learning encounters for knowledge*

connections" or *"learning is a change in long-term memory"*, both of which were implicit Abigail's other reflections. This new narrative unity resonates with democratic ideals of education (Dewey, 1916; Freire, 1970), framing teaching as more than a technical process, and learning as more than the reorganisation of an individual's cognitive structures. Instead, it implies that Abigail was beginning to view teaching as a social and moral practice, with learning as a relational and ethical act of community participation.

4.2.3.3. Depth of reflection for inclusion as belonging

Both Terri and Abigail's reflections align with elements of *critical reflection*, but with varying depth and consistency. Each engaged in re-thinking their prior assumptions about inclusion, implying a *change in perspective over a fundamental belief of the understanding of a key concept*. They each linked their conceptualisations of practice to *broader moral purposes* and *democratic ideals*. However, while both addressed the *ethical consequences and implications of their actions*, Abigail's reflection more fully considered the broader purpose of education.

Terri's reflection holds indicators of *critical reflection*. There is the sense of *change in perspective over a fundamental belief of the understanding of a key concept*, chiefly, that she was beginning to understand inclusion as a principle that might underpin all aspects of her practice, something that she had overlooked in her previous teaching experiences. In this, she was considering the *moral and ethical implications and consequences* of her teaching, she was concerned with *issues of equity and social injustice*, and she was *seeking to connect her practice to democratic ideals*. There is a sense of accountability in her reflection; she determined that she would implement strategies in her future teaching that would generate a feeling of community and belonging in her classroom.

This suggests she was *focusing attention inwardly at her own practice*. However, she did not *focus attention outwardly at the social conditions in which practices are situated*, which could have enabled her to explore systemic structures of exclusion, and perhaps conceptualise the teacher's actions as one of many dimensions of inclusive practice. Furthermore, her suggestion of how she might implement the STEP principle suggests an instrumental framing of teaching, concerned with *"what works"* in achieving predetermined goals, indicative of *surface reflection*.

Abigail's reflection aligns closely with *pedagogical reflection*. It is deeper than *surface reflection*, because her discussion goes beyond framing TGfU as *a method used to reach predetermined goals*. Rather, Abigail's reflection explores the *field's knowledge base about quality practices* (the TGfU approach in PE) and provides a more nuanced consideration of how it supports *educational goals* relating to meaningful participation, intrinsic motivation and community-building. There are also strong indicators of *critical reflection*. There are also indicators of *critical reflection*. In framing learning as a relational and ethical act of community participation, Abigail was *seeking to connect her practice to democratic ideals* and considering the *moral and ethical implications and consequences of practice*. Although she does state it explicitly, there appeared to have been *a change in her perspective over a fundamental belief of the understanding of a key concept*, namely, that she conceptualised the purpose of education as being more than the instrumental and technical processes that facilitated knowledge acquisition. That said, Abigail's reflection did not strongly engage in considering structural inequalities.

These reflections show how the same *topic* (inclusion) of reflection may be viewed through different lenses – in this case, *teacher* and *learner*. Notably, where the student

teachers reflected on inclusion through the lens of teacher, they conceptualised inclusion as a set of techniques to be implemented appropriately. However, through the lens of learner, the student teachers reached deeper levels of reflection, conceptualising inclusion as creating a sense of community and belonging for all learners.

Both reflections can be categorised as emerging critical reflection. However, Abigail's reflection suggests a stronger orientation to the moral and ethical dimensions of teaching than Terri's reflection. This indicates a limitation of depth models of reflection, as despite aligning with the same level of reflection as Terri, Abigail's writing was arguably more theoretically grounded and integrated into her conceptualisation of practice. This indicates that there are different degrees of depth and coherence in reflection, even within the same levels, that depth models do not fully account for. It resonates with the previously identified limitation, that some reflections do not neatly align with the descriptors of one category, or even adjacent categories (see 4.1.3.4 Depth of reflection for preparing children for future health, wellbeing and citizenship; 4.2.2.4 Depth of reflection for emotional engagement to enable learning). While the aim of this study was not to evaluate depth models of reflection, it suggests that there may be potential to improve how these are conceptualised.

4.2.3.4. Paradigms of student teacher learning for inclusion as belonging

Terri's reflection suggest that she was beginning to reconsider inclusion as more than just a set of strategies or adaptations. While she referred to the STEP framework as a technique for inclusion, her emphasis on keeping inclusion '*at the forefront*' of her mind implies she was beginning to conceptualise inclusive practice as a way of thinking. This suggests an overlap between the process-product and cognitive paradigms of student

teacher learning. Her learning seemed to involve both the acquisition of techniques and the reconfiguring of her attitudes and priorities, suggesting cognitive restructuring.

Abigail initially framed the TGfU approach as enabling participation and progress for all learners, suggesting alignment with the process-product paradigm. However, she also explored how this approach supported social connection, enjoyment and a sense of belonging. Her emphasis on shared experiences and intrinsic motivation implies alignment with the situated sociocultural paradigm. From this perspective, Abigail's teacher values were shaped by relational and experiential elements of learning, where inclusion was related to community creation and participation.

4.3. Person lens

Through the person lens, the student teachers foregrounded their personal commitments and emotional responses to experience. In varying degrees, the student teachers noticed and challenged their existing worldviews, signalling a shift in perspective. The reflections were often prompted by the same immersive, situated learning experience – the visit to the Gurdwara – suggesting that that educative experiences that extend the student teachers' partial view of reality (Freire, 1970) hold the greatest potential for transformative learning. However, the depth of reflection shaped the nature of the transformation. At the earlier levels of reflection, perspective transformation remained implicit, aligning more with adherence perspectives of learning to teach (Lofthouse et al., 2021). In contrast, pedagogical or critical reflection enabled student teachers to become consciously aware of their shifting assumptions, and aligned more with enquiry perspectives of learning to teach (Lofthouse et al., 2021).

4.3.1. Shifting worldviews on diversity

The visit to the Gurdwara prompted many reflections both in the conversations and the reflective journals. Notably, Rebecca, Heather and Cara all reflected on their perspectives of RE as a curriculum subject, which led them to construct personal commitments around how and why they would teach RE.

4.3.1.1. Unexamined bias

In their reflective conversation, Eve and Heather explored ideas related to how and why to teach RE. Throughout the conversation, there were instances where they considered their professional aims as future teachers and how teaching RE could challenge social and racial injustice (see 4.1.3.3. Inclusive and democratic societal values). However, Heather's personal perspectives were an undercurrent that ran through the conversation. In this sense, her reflection kept shifting between the lens of teacher and the lens of person. The aspects of her reflection that relate to the lens of person are discussed here.

Heather initially explored her memories of how she was taught RE in school:

Heather: *So, I don't feel comfortable teaching RE, and I don't feel like I did enough at primary school... we did RE with just a supply teacher that used to come in every week. And obviously when you're in primary school, when a supply teacher comes in, it messes your routine up, doesn't it? So, the quality of learning isn't as good.*

Eve & Heather, Reflective Conversation 1

Heather opened the reflective conversation identifying that she felt discomfort at the thought of teaching RE. She attributed this to her former experiences as a pupil in primary

school, in which she remembered RE either not being taught, or having an implicitly lower status than other curriculum subjects as it became the responsibility of a supply teacher. Her tone of voice suggested that she was unhappy about her past experiences; there was the implicit assumption that she *should* have been taught RE better.

She continued to contrast her former experiences of RE with the university visit to the Gurdwara:

Heather: *...I think for the trip to the temple was really beneficial because it did open- it made me aware of the fact that there is other ways of teaching [RE], for example, Sikhism... by going to a temple.*

Eve & Heather, Reflective Conversation 1

It appears that Heather began to consider how the visit to the Gurdwara had shifted her worldview but cut herself off (‘*...because it did open-’*). It may be that she was about to say words to the effect of ‘*it did open my eyes’*, possibly relating to her preconceptions of Sikhism or the rationale for RE’s place as a curriculum subject. However, she quickly switched to a different track, changing the subject of the conversation to teaching strategies for RE. Although it is not possible to know precisely how the Gurdwara visit may have ‘*opened her eyes’* or why she stopped herself from speaking, she later returned to talking about her experiences of schooling:

Heather: *... when you go to high school, you’re thrown in with everybody... And if you come from a very sheltered background like I was, I went to a Church of England school. We never set foot in any other place other than a church.*

Eve & Heather, Reflective Conversation 1

This gives indication that Heather was perhaps beginning to conceptualise her childhood as only a partial view of reality, one that was broadened as she moved to a high school with a more diverse community than her primary school. As with her reflections on her RE education, her tone implied that she was critical of her '*very sheltered background*' but did not state this explicitly.

As Heather considered with Eve how RE might address social and racial injustices, her initial discomfort with the prospect of teaching RE seemed to subside:

Heather: *...I think that RE is a subject that needs to be tackled face on, and I feel like people are shying away from teaching RE because they're scared of insulting people and they're scared of coming across as racist for whatever reason. But I don't think it should be like that. I think that people should teach it.*

Eve & Heather, Reflective Conversation 1

Notably, Heather talks in the third person here. Originally, she had said '*I don't feel comfortable teaching RE*', but as she started to become convinced of the ethical and moral rationale for teaching RE, she shifted to '*I think that people should teach it*'. This implies that while she was beginning to accept a rationale for teaching RE, she kept it at her distance from herself. It could be that her assumptions around why others might not teach RE were, in fact, her own fears: *she* was scared of '*insulting people*' or '*coming across as racist*' in her teaching practice. This implies a shifting worldview, but it was tentative and cautious. She did not fully embrace the implications of this shift, which would mean confronting the possibility that she may be unconsciously racist.

This partial shift towards but not complete acceptance of a new worldview was underlined as Heather closed the conversation:

Heather: *...no, but I did enjoy the Sikh temple because it made me realise that I actually don't know anything and how are we expected to teach children and how are we expecting for children to understand when we don't understand it? That's not fair ...The opportunities are endless, but how will we expect to teach it when it is so broad? And we don't get training?*

Eve & Heather, Reflective Conversation 1

This seems to exemplify the tension that was underlying Heather's reflection. The visit to the Gurdwara had *opened her eyes* to how RE could support the development of learners' understanding of equality, diversity and inclusion. This was an important professional aim for Heather (see 4.1.3.3. Inclusive and democratic societal values). She seemed daunted by this challenge, which she framed as being due to her lack of subject knowledge and her prior experiences of schooling. However, other aspects of her reflection implied that her emotional response was also shaped by her childhood experiences and fear of being perceived as racist. This prevented her from fully exploring the implications for her practice, as she distanced herself from other teachers who were *scared to tackle RE face on*. This meant that she was left suspended between the strong rationale that she had constructed for teaching RE and the fear of its implications for her on a personal and professional level. As such, she turned the focus outwards, citing a lack of training and guidance as the barriers to her teaching RE. This allowed her to maintain socially acceptable views concerning racial injustice, while keeping her safe from looking at her own existing worldviews.

This emphasises the vulnerability that critical reflection might require of student teachers. In terms of narrative inquiry, Heather's reflection might be understood in terms of *sacred stories, secret stories* and *cover stories* (Clandinin & Connelly, 1996). Heather perhaps held the sacred story that "*teachers uphold just and equitable values in their practice*". However, her secret story was "*I might be racist*". Sharing this secret story would not only clash with the dominant sacred story but could have strong negative consequences for her socially and professionally. Therefore, she constructed various cover stories, such as "*My sheltered upbringing let me down*" and "*I wasn't taught RE well enough*". As these were stories that related to herself, they could be considered *teacher stories* (Clandinin & Connelly, 1996). Heather also constructed cover stories that were *stories-of-teachers* (Connelly & Clandinin, 1985), such as "*Teachers shy away from teaching RE because they fear being offensive*" and "*Teachers don't have enough training to teach RE well*". These stories-of-teachers could then legitimise Heather's inaction around examining her own worldviews. They meant that Heather was not alone in shying away from teaching RE, and the responsibility for her teaching preparation lay within broader structures, such as the university ITE programme or government policy.

4.3.1.2. Challenging prior values

In her journal, Rebecca reflected on the recording of the earlier conversation:

I notice that I begin to speak about Religious Education (RE) with a negative tone and uncertainty during my reflection. 'I am not into RE as a whole' I say honestly and after un-picking this I admit that this is due to being uneducated in RE. This is followed with 'how lovely would it be to bring my children?'- referring to the Gurdwara. I realise here that my

children are also uneducated in other religions as they have never attended other places of worship, other than church.

Rebecca, Reflective Journal, Week 1

Listening back enabled Rebecca to begin a dialogue with herself, unpicking why she was '*not into RE*'. In this, she attributed her negative, uncertain attitude as the result of '*being uneducated*' in the subject. She connected her reflection to her family life and her role as a parent, considering the positives her own children might experience if they were to visit the Gurdwara. She considered how they might not know much about religion, implying that she had perhaps overlooked this facet of life in her approach to parenting. Her choice of language implies she felt as sense of shame, as she *admitted* to being uneducated, rather than, for example, "realising" or "noticing". The reflection on personal aspects of her life beyond the ITE programme and the implication of self-judgement indicates that Rebecca was willing to both experience feelings of vulnerability. Furthermore, she was willing to share these feelings in her reflective journal that would be read by her peers and teacher educators. This contrasts with Heather, who appeared reluctant to consider the implications of a shifting worldview, presumably because it would have involved feelings of vulnerability in confronting potentially negative aspects of her self-image.

Rebecca continued, reflecting on the Gurdwara visit:

I speak fondly about the enrichment trip to the Gurdwara as the experience has 'made me excited' to teach children Sikhism due to the subject knowledge I acquired on the day... I am left thinking of how I could implement religion into my curriculum, which I realise has never been my priority.

Rebecca, Reflective Journal, Week 1

The visit to the Gurdwara and the support it gave her in developing her subject knowledge changed her emotional response to the prospect of teaching RE, leaving her feeling excited to do so. She noticed that she was starting to see religion as an important part of the primary curriculum. She was aware of this change, describing it as a change in priorities. This again implies a sense of judgement that it *should* have been her priority before.

Rebecca went on to connect the change in her perspective with the richness of the knowledge she had gained and its significance in RE lessons:

Myatt (2018) suggests that subject knowledge is not considered as pertinent today and this is due to been replaced with a focus on engaging children in one off lessons... they lack any substance and deep learning, due to the lack of rich subject knowledge. This could then suggest that... the negativity towards RE will continue as children are not being provided with knowledge that sparks their curiosity and interests them.

Rebecca, Reflective Journal, Week 1

Here, Rebecca explored ideas related to her professional responsibility to teach lessons with rich content knowledge, and the potentially motivating aspects of rich content knowledge for learners. While there are some overlaps here with the "lens of the teacher" and the "lens of the learner", her reasoning remained grounded in her own personal experience. In encountering rich knowledge during the Gurdwara visit, she became excited to teach RE and recognised this as a shift in her perspective. She now wanted her future pupils to encounter rich knowledge in RE to develop positive attitudes to the

subject and be intrinsically motivated to learn. Drawing on her own transformative experiences, Rebecca implied that pupils' negative views of RE would be likely to persist unless teachers prioritise teaching substantive content that sparks curiosity.

4.3.1.3. Acknowledging implicit bias

Cara's reflections on the Gurdwara visit enabled her to explore her beliefs about equality, diversity and inclusion, indicating a shift in her worldview:

I was also apprehensive about going to a different place of worship to see if I would be accepted, especially as a woman. This was due to previously having knowledge that women are sometimes not seen as an equal. We discussed how equality played a huge part in the Sikh religion. Men and women sit down at a table to eat, pray together and both cover their heads; there is no hierarchy of who is supposedly closer and more important to their God... To some extent this surprised me.... The trip rightly educated myself and changed my unconscious bias. The Sikhs are some of the kindest and warmest people I have met.

Cara, Reflective Journal, Week 1

Early on in her reflection, Cara shared her initial preconceptions, suggesting that women might not be seen as equal to men in the Gurdwara. This had shaped her initial attitude to the visit, which was one of apprehension. However, she noticed that the experience directly challenged her preconceptions. Visiting the Gurdwara gave her the opportunity to not only discuss the value of equality in relation to Sikhism, but also to see it enacted: the seats at the shared table, the shared prayer spaces, the shared practice of covering their heads. She noticed the emotions that this evoked and explicitly identified the shift in her thinking. She recognised that the experience had both educated her about the

nature of Sikhism and made her aware of the unconscious bias she had held prior to the visit. In contrast to Heather's reflection, Cara's reflection was more introspective, centred on how her perceptions had changed. She not only noticed her new beliefs, she also reflected how she had come to construct them.

Cara went on to consider on how this transformation in her beliefs might influence her future practice:

An awareness and respect for other's values would be an integral part of being in my class... This is how an understanding and supportive society is enabled ... Turnbull (2016, p.68), states the question "What messages do you carry, both conscious and unconscious as a result of your group membership(s)?" She therefore implies that you are the result of your environment. My aim is to help children gain a deeper understanding of different religions and cultures to overcome their unconscious bias.

Cara, Reflective Journal, Week 1

Quoting Turnbull (2016) allowed Cara to highlight the role of group membership and social context in shaping personal beliefs. This implies that she viewed her own initial misconceptions of Sikhism as shaped by her own group memberships – British, white, female, and perhaps influenced by prevailing Western views that misrepresent religions as inherently oppressive to women. Like Rebecca, there is again some overlap in Cara's reflection with the lens of the teacher and lens of the learner, as she considered the implications for her practice. However, also like Rebecca, these implications were grounded in recreating the salient aspects of *her* learning experience for her future pupils. Notably, she did not suggest replicating the visit itself, such as arranging similar visits for her future pupils. For Cara, it was not the visit in isolation that was important but creating

a respectful and tolerant classroom environment where similar transformations could take place for pupils.

4.3.1.4. Depth of reflection for shifting worldviews on diversity

There are aspects of Heather's reflection that strongly indicated she was reflecting at the earliest level, *pre-reflection*. Her language tended to make sweeping assumptions of other teachers' practice that went unquestioned (e.g., '*I feel like people are shying away from teaching RE because they're scared of insulting people*'). She also tended to portray herself as *a victim of circumstance* in that her experience of RE as a pupil had not been sufficient or through the implication that her *sheltered upbringing* had not prepared her to fully appreciate the diversity of the world. Similarly, she *attributed ownership of problems to others* through suggesting that *other* teachers feared portraying racist attitudes and emphasising that she remained apprehensive about teaching RE due to lack of adequate training.

However, there are also aspects of Heather's reflection that align with *critical reflection*. She had a sense of awareness of *the social conditions in which practices are situated,* for example, recognising that RE consistently being taught by a supply teacher is likely to negatively influence pupils' learning and perception of the subject. Similarly, she skirted around how her own *family imprinting and cultural conditioning* might shape her teacher behaviour, suggesting that she had a *very sheltered upbringing* and that fears of *coming across as racist* are a barrier to the teaching of RE. While it is not strong enough to claim that Heather was at the level of critical reflection, it is notable that very few other reflections across the whole of Data Sets 1 and 2 explored these aspects of reflection.

Rebecca's reflection holds indicators of both *pedagogical* and *critical reflection*. She attributed her newfound enthusiasm for teaching RE to the richness of the subject knowledge she encountered throughout the visit to the Gurdwara. She connected this to academic literature that suggested deep, substantive content knowledge can be highly engaging for pupils and motivational to learning. This suggests that she was *considering the connections between theoretical principles and practices*, as well as *striving to understand the theoretical basis for classroom practice*, both indicators of pedagogical reflection. In terms of critical reflection, there was a clear *change in her perspective over a fundamental belief of the understanding of a concept*, namely that RE was an important and valuable curriculum subject. She was in *dialogue with herself* as she described listening back to the recording of her reflective conversation. Noticing that she considered herself '*uneducated'* in RE, and that her children have never been a place of worship other than a church, she was *examining her own values, family imprinting and cultural conditions* that would shape her future behaviour as teacher. Similarly, by noticing how her perspective of RE as a curriculum subject was transformed by encounters with rich subject knowledge, she was *examining both personal and professional belief systems*, suggesting that there were *moral consequences* to ensuring RE was taught in a way that encouraged positive pupil attitudes to the subject.

Like Rebecca, Cara's reflection indicates a *change in her perspective over a fundamental belief of the understanding of a concept*, an indicator of *critical reflection*. In contrast to Heather, Cara engaged with the shift in her worldview and considered its implications for her self-perception and her future teaching practice. In this, she *examined both her personal and professional belief systems*, noticing how *cultural conditioning* had shaped

her initial apprehension towards visiting the Gurdwara. Furthermore, she connected this with academic literature to explain how social and contextual factors might influence unconscious biases, implying a *deep examination of her embodied values and beliefs*. For Cara, the *moral and ethical implications* of her perspective transformation was that she should strive to ensure her future classroom community would celebrate diversity and equality, to encourage pupils to develop respectful and tolerant worldviews themselves. In this, she connected her reflection to *issues of equity and social justice in and outside the classroom*.

Across the university reflections (Data Sets 1 and 2), it was far less common for student teachers to reflect through the lens of person, compared to the teacher lens or learner lens. However, it is notable that the reflections that were through the lens of person were the strongest examples of critical reflection. That said, reflecting through the lens of person alone was not sufficient for facilitating critical reflection. Heather's reflection is more closely aligned to the earliest level, *pre-reflection*, despite holding some elements of critical reflection. Both Rebecca and Cara's reflections involved their acknowledgment of potentially distressing thoughts and emotions. Rebecca implied a sense of self-judgement around her prior dismissive attitude to RE and her "failure" to educate her children about the diverse religions. Likewise, Cara named her unconscious bias towards members of the Sikh faith and attributed this to her former ignorance. This exemplifies how critical reflection requires a degree of vulnerability.

As previously discussed, Rebecca and Cara perhaps reflected more deeply because they were writing individual journals, rather than engaging in direct dialogue as Heather was. Like Marcia, the act of reflective writing may have increased their sense of ownership of

their learning and encouraged metacognitive thinking (Moon, 2006) (see 4.2.2.3 Immersive learning for personal knowledge). Furthermore, Rebecca and Cara may have experienced how reflective writing slows the pace of their learning, attuning them to the 'contemplative silence' that 'nourishes the creative impulse lying at the heart of all significant learning and living' (Dawson, 2003, in Moon, 2006, pp. 26–27). These aspects could have supported them in engaging with potentially uncomfortable realisations about themselves.

Reflective conversations are a more immediate form of communication, and student teachers, such as Heather, may have been cautious of exploring topics like unconscious bias that could leave them feeling vulnerable. The risk of peers, part of their social circle and future professionals themselves, misinterpreting what they say or perceiving them negatively could therefore have been a barrier to critical reflection in the conversations. In contrast, personal reflective writing is an opportunity to re-explore internal experiences, re-interpret meanings, and expand on ideas that arose during learning experiences (Moon, 2006). The student teachers could construct the reflective journals thoughtfully, carefully considering how to phrase concepts that could cast them in a negative light. That said, the fact remains that only a few student teachers reflected through the lens of person in the reflective journals.

4.3.1.5. Paradigms of student teacher learning for shifting worldviews on diversity

Heather's reflection suggests a tentative and conflicted shift in her worldview. She began to consider RE's role in addressing racial injustice, which aligns with the critical-transformative paradigm as it concerns moral and political values. However, she did not fully engage with the implications of this realisation. Her reflection was characterised by

cover stories which allowed her to distance herself from feelings of vulnerability. By deflecting personal responsibility and engagement, her learning could not be considered fully transformative. She was concerned with the purposes of education but did not position herself as an agent who might bring about change. As such, her learning process aligns more closely with the situated sociocultural paradigm, where personal experience, identity and participation in new contexts shaped her thinking, but did not lead to transformative values.

Rebecca's reflection indicates strong emotional engagement in the learning process and the construction of personally meaningful knowledge, as she interrogated her own assumptions, family context, and educational background. Her reflection is imbued with self-awareness and vulnerability, which suggest alignment with the situated sociocultural paradigm, where student teacher learning occurs through enculturation and community participation. Furthermore, her increasing enthusiasm for teaching RE implies a shift in professional values; she began to connect rich subject knowledge with positive attitudes to learning, which in turn could contribute to broader societal values of equality and respect for diversity. This hints at the critical-transformative paradigm. However, her focus is on how she might enrich learning experiences for future pupils, rather than interrogation of moral or political values, meaning Rebecca's reflection is best understood as aligned with the situated sociocultural paradigm.

Cara's reflection most clearly aligns with the critical-transformative paradigm. She directly acknowledged holding unconscious bias prior to the Gurdwara visit and reflected on how the experience had challenged and reshaped her beliefs. Importantly, she connected her prior implicit bias with social positioning, implying a change in her

worldview. Based on this, she articulated her aims for future practice, based on her new values, which implied she viewed teaching as moral and political action.

4.4. Summarising the findings for Research Question 1

The conclusion of this chapter returns to the first research question: *how do student teachers' reflections on university-based experiences illustrate the ways they make sense of learning to teach the primary foundation subjects?* The findings suggest that student teachers reflect on their university-based experiences through three lenses: *teacher, learner* and *person*. The teacher lens encompasses their perceived professional responsibilities and instrumental aspects of practice. The learner lens is concerned with the processes and conditions of learning. The person lens focuses on the student teachers' worldviews and moral orientations. Through each of these lenses, different topics are explored relating to teaching and learning the foundation subjects, such as subject knowledge, inclusion and teaching approaches.

Throughout this chapter, the student teacher reflections have also been described in terms of reflective depth and paradigms of teacher learning. These findings are returned to at the end of Chapter 5 (see 5.7. Addressing Research Question 3), where comparisons are made in terms of reflection, learning and knowledge across university and school settings. The next chapter presents and discusses the findings relating to the student teachers' reflections on their school-based placement.

5. Findings for Research Questions 2 and 3

This chapter presents the findings relating to Research Question 2: *how do student teachers' reflections on school-based placement experiences illustrate the ways they make sense of learning to teach the primary foundation subjects?* Having established these findings, it moves on to address Research Question 3: *in what ways do student teachers' knowledge, learning and reflection change as they move between university and placement settings?*

The student teachers' post-practice essays (Data Set 3) were analysed using Reflexive Thematic Analysis. Interpretation was initially guided but not constrained by the early construction of themes in Data Set 1 and 2. As the *person-learner-teacher* lenses developed iteratively through analysis of the university-based reflections, Data Set 3 was considered in relation to these lenses. The lenses again encompassed the "story" of the data (Braun & Clarke, 2006) but also prompted new insights.

In contrast to the university reflections, where student teachers reflected through one lens or moved between lenses, the placement reflections suggested a more complex picture. Student teachers rarely reflected through a single lens; instead, their reflections involved simultaneous engagement across multiple lenses, making the boundaries less easily distinguished. This chapter therefore presents the next stage of the model's development, conceptualising the lenses as overlapping rather than distinct categories (see Figure 4). The data indicates that the lenses are best understood as intersecting modes of meaning-making, through which the student teachers construct knowledge of

practice. The aim is not to categorise reflections but to trace these constructions as they unfolded in the placement reflections.

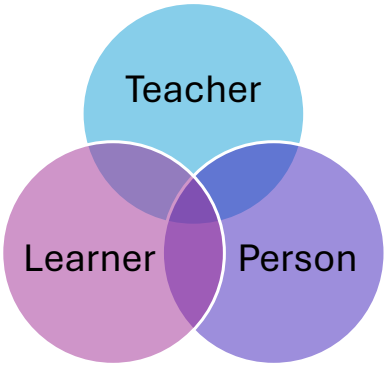


Figure 4: The Overlapping Lenses in the placement reflections

Finally, the chapter demonstrates how the lens model is conceptually distinct from depth models of reflections, which categorise reflections by levels of criticality. While depths of reflection are considered here to show how they may occur through each lens, they are addressed more briefly than in Chapter 4, as the central purpose is to present the iterative development of the Overlapping Lens model.

The chapter unfolds as follows. The teacher-learner lens encompasses two themes: evaluating teaching approaches that enable learning and inclusion as the right techniques. Depth of reflection and the paradigms of teacher learning are discussed after both themes have been presented. The learner-person lens encompasses two themes: evaluating teaching approaches in relation to learner experience and inclusion as belonging. Again, reflective depth and paradigms of teacher learning are discussed after both themes. The person-teacher lens encompasses one theme: learning to teach. The triadic lens encompasses one theme: valuing interaction and continuity for learning.

Lens fluidity is demonstrated through the theme of emotional engagement to enable learning. Again, after each of these themes are presented, reflective depth models and paradigms of teacher learning are considered. Following this, the chapter addresses Research Question 3 and develops the Overlapping Lens model.

5.1. Teacher-learner lens

Through this lens, the student teachers reflected on how their teaching behaviours and choices had shaped pupils' learning. When the student teachers reflected on their actions in the classroom (the teacher lens), they often evaluated their effectiveness in terms of how it had shaped or supported pupils' learning (the learner lens). These accounts rarely focused on personal beliefs or identity; instead, teaching was framed as a technical craft where strategies were selected, applied, and judged effective (or not) based on pupil performance and/or participation. These reflections were united by the student teachers' assumption that they were responsible for pupil outcomes, underlining the narrative unity "*teachers are responsible for children knowing the correct knowledge*".

5.1.1. Evaluating teaching approaches that enable learning

In these accounts, the student teachers were primarily concerned with why and how the teaching strategies implemented supported children to meet the curriculum outcomes.

5.1.1.1. Strengthening children's procedural knowledge

Kit reflected on taking learning outdoors for geography, encouraging children to recreate maps, based on a lesson he had previously taught indoors:

The purpose for this was for the children to take their learning outside and use the large open space with mark making materials… When planning this session, I spoke to my mentor about doing this session outside, who agreed it to be a good strategy for children to demonstrate the learning outcomes from the previous session….

Kit, Post-Practice Essay

Kit's rationale partially aligned with Bruner's (1976) *spiral curriculum*, where pupils have the opportunity to revisit and connect concepts, which leads to deepened or expanded understanding (Takaya, 2008). The activity could be considered a form of Bruner's *enactive representation,* where learners engage in physical action to reinforce existing concepts (Zuliana et al., 2019). However, Kit's focus was on *reinforcing* prior learning objectives, rather than enabling pupils to reconstruct knowledge in new or deeper ways. This suggests a tension between Kit's view of teaching as enabling physical and active participation, and his evaluation of learning as the reproduction of measurable outcomes. His reflection exemplifies *pre-reflection*: he suggested that pupils demonstrating outcomes was sufficient evidence of learning, without questioning his underpinning assumptions or trying to connect practice with theory.

Phoebe also reflected on revisiting prior learning in new contexts, incorporating mathematical knowledge into PE activities:

I could see that children had a higher understanding of clockwise and anticlockwise movements at the end of my PE lesson than the week before… especially the EAL children because they applied their maths knowledge in context…. [The cross curricular approach] "is seen as a way to support the transfer of learning and skills from one

situation to another, teach pupils to think and reason, and provide a more relevant curriculum to engage their interest" (Hayes, 2009, page 383).

Phoebe, Post-Practice Essay

Phoebe emphasised how physically active contexts enabled pupils to transfer and apply mathematical knowledge in meaningful ways. She drew on academic literature to justify her practice, suggesting that cross-curricular approached support knowledge transfer, reasoning and relevance. This suggests that, while her focus remained on technical strategies that supported predetermined outcomes, she attempted to connect her practice with the broader knowledge of the field. In this, her reflection sits between surface reflection (concerned with strategies to achieve goals) and pedagogical reflection (explicitly linking theory and practice).

She highlighted how pupils with EAL were able to apply prior knowledge through enactive representation (Zuliana et al., 2019) and suggested that the PE lesson provided a relevant context for pupils to explore their prior knowledge in new ways. In this sense, both Phoebe appeared to hold the narrative unity "*teachers must sequence learning encounters for knowledge connections"*. Furthermore, her emphasis that her interdisciplinary approach supported pupils with EAL indicates that she also held the narrative unity "*teaching is knowing and selecting the right techniques to meet the needs of learners*".

That said, both Kit and Phoebe's reflections both imply a predominantly technical view of teaching. Their concern was not with how pupils constructed meaning through affective or relational engagement, but with how well pupils performed the tasks in new contexts. Neither student teacher explicitly connected their practice to constructivist theory, and consideration of pupils' feelings, emotional engagement or meaning making were largely

absent, with only Phoebe briefly noting that cross-curricular approaches might engage pupils' interest.

Kit's reflection aligned with *pre-reflection*: he took for granted that pupils needed to demonstrate prior learning objectives in new ways, without questioning where this assumption had come from. Phoebe's reflection seems to sit somewhere between *surface* and *pedagogical* reflection. She was concerned with *technical strategies* that could meet *pre-determined goals* but also did relate her pedagogical choices to *the field's knowledge base* concerning interdisciplinary approaches.

Heather described how she had noticed, in the first computer lesson she taught, that her detailed modelling had led children to copy her example directly. In a subsequent lesson, she purposefully adapted her approach:

The next lesson was all about adding animation to their stories. Taking into consideration what I had read about how to avoid copying, when showing the children the animation, I did not add a specific one to my story book... this time children were just getting the guidance on where to find the animations. This was me 'building a gap' (Tharby, 2015)... [The children] got the scaffolding they needed through the modelling... [They] also got the freedom over what they could pick as they had nothing to 'copy' from and didn't think they had to select the same one as me... This meant that I got a lot of different work from the children, which really showcased to me their capabilities as I knew it was their own work and not what they had just copied from the board.

Heather, Post-Practice Essay

Heather reflected on how this small adjustment – deliberately '*building a gap*' into her modelling – shaped the children's learning. By emphasising the wider variety in the work the pupils produced, she implied that pupils had had greater agency in their learning. Heather possibly held the narrative unity "*learning is personal connection making*". While her focus remined on the technical procedure of modelling, she used it create opportunities for pupils to use their imaginations and make their own judgements.

Like Phoebe, Heather's reflection seems to sit between surface and pedagogical reflection. She grounded her approach in professional knowledge (Allison & Tharby, 2015) showing an attempt to apply theoretical ideas to practice, implying *pedagogical reflection*. However, she did not problematise her assumptions about modelling, nor consider the broader purposes of learning beyond task outcomes, which suggests her account more closely aligns with *surface reflection*.

5.1.1.2. Cognitive interpretation of experiential approaches

Leonie reflected on how she implemented a '*hands-on*' approach in teaching geography:

Knowing the importance of Geography and its link to Dewey's theory of hands-on experiences meant that I Included hands-on opportunities to give children the ability to interact with their environment... children were exploring different types of materials ... [so they could] feel, think about, manipulate and talk about the materials... I then explained to the children what makes materials human (man-made) and physical (natural)... [so they could] use this information to sort the materials... This is where I could check their understanding of human and physical materials and address any misconceptions.

Leonie, Post-Practice Essay

Although Leonie described her lesson as an example of experiential learning (Dewey, 1938), her reflection was framed by a sense of responsibility for ensuring the children understood the *correct* curriculum-defined knowledge. The children's hands-on exploration gave them opportunities to describe and classify materials, but the central purpose of the activity was '*checking understanding*' and '*addressing misconceptions*'. This resonates with Prawat's (1997) critique that experiential learning is too often reduced to physical manipulation of objects, with success ultimately judged relative to predetermined outcomes. In this sense, Leonie appeared to hold the narrative unity that "*teachers are responsible for children knowing the correct knowledge*".

Leonie reflected on how her teaching approach shaped the children's learning experience:

It allowed the children a chance to think about the different types of materials that we have on the earth and helped them to understand what features make human and physical materials… children were able to use geographical vocabulary to identify human and physical materials… children need to be exposed to natural and human environments to help them to learn and understand it.

Leonie, Post-Practice Essay

Here, Leonie emphasised how her teaching approach supported the children's thinking and use of vocabulary. She noted that exposure to real environments was essential for learning, implying that she saw children's direct engagement with phenomena as key to their understanding. This part of her reflection suggests a second narrative unity: "*learning is personal connection making*".

Leonie's account sits between surface and pedagogical reflection. She based her pedagogical choices on Dewey's experiential learning, valuing the pupils' cognitive engagement and how their learning connected to direct experiences. However, she interpreted experiential learning as '*hands-on*' activity and aimed to secure pupils' understanding of predetermined knowledge. In this sense, she attempted to apply theoretical knowledge to practice but did not fully interrogate her own assumptions as what counted as "successful" learning.

Sarah framed outdoor learning as motivating and engaging for pupils, suggesting that children might work in more explorative ways, constructing knowledge through direct experiences:

...learning outside the classroom is a key idea to draw in children's interests and motivate children... they become constructors of their own learning and have more opportunities to utilise the knowledge they have learned... Learning outside the classroom has also been praised as a method of 'sticky learning' which is when children remember the learning that has taken place.... This means children are more likely to make the progress needed to meet the learning outcomes (Inglis, Dawson & Nishioka, 2014).

Sarah, Post-Practice Essay

Here, Sarah's rationale appears to align with social constructivist approaches (Rodriguez, 1998), echoing the narrative unity of "*learning is personal connection making"*. However, even with this framing, Sarah emphasised the potential of outdoor learning to support pupils' memory retention and progress towards curriculum objectives. This foreshadows her more dominant narrative unity: '*learning is a change in long-term memory*'.

Sarah illustrated this with her description of a PSHE lesson she taught outdoors:

I asked the children what they thought made a good friend. The children had lots of ideas, and we made a list as a class. We then made a friendship web and the children had to roll the string to someone who they thought was a good friend and say why. This met the new Relationships and Health Education outcome: 'pupils should know the characteristics of friendships' (DfE, 2020, p 21)... all children managed to meet the learning objective.

Sarah emphasised that she began with the children's ideas, organised them collectively, and then structured an activity to apply these ideas to their own experiences. Like Leonie (see 5.1.1.2 Cognitive interpretation of experiential approaches), she built a shared foundation of understanding before introducing a problem to solve framed by curriculum objectives. Again, like Leonie, Sarah judged success by whether '*all children managed to meet the learning objective*', drawn from the curriculum framework. This exemplifies the teacher-learner lens, and suggests she shared Leonie's narrative unity that "*teachers are responsible for children knowing the correct knowledge*".

Finally, Sarah reinforced the importance of memory-retention in a subsequent lesson:

The following week... the children had remembered and retained the learning. It supports the idea of 'sticky learning' as the children were able to remember the information we had learned (Inglis et al, 2014).

Sarah, Post-Practice Essay

By beginning and ending her account with this emphasis, Sarah positioned memory retention as her central marker of success. Outdoor learning was valuable because it produced knowledge that was "sticky", not because of its potential for personal or

relational meaning-making. This indicates that '*learning is a change in long-term memory*' was a central organising unity through which Sarah evaluated teaching and learning.

5.1.1.3. Balancing direct instruction with developing pupil agency

Adam reflected on a PE lesson in which he deliberately shifted from direct instruction to conditions that enabled pupils to take more responsibility:

Once I had taught the basic skills to the children, I allowed them to take responsibility for the games with their partner including remembering the rules, counting their points, etc. I then periodically stopped them to show a model example to continuously check understanding before allowing them to continue. I found that this teaching strategy allowed the children to improve their performance in their lessons whilst simultaneously remaining engaged in their learning (Sawyer, 2004).

Adam, Post-Practice Essay

Here, Adam described stepping back to create conditions for learner agency, while still retaining an active role as the teacher, observing children's learning and re-modelling skills as appropriate. This suggests that he valued strategies that fostered independence but perceived that these needed to be balanced with teacher input. Like Heather, he implied that agency depended on prior instruction, describing how children first needed acquire '*the basic skills'*. This suggests that Adam held both narrative unities, that "*learning is personal connection making"* and "*teaching is knowing and selecting the right techniques to meet the needs of learners".*

This realisation prompted Adam to '*re-think*' future lessons. He reflected on a dance lesson:

The dance lesson required children to think of and perform movements that resembled different animals we had been learning about... I did not give the children a lot of promoting or modelling with the intention of allowing the children to be expressive with their ideas. This was a very successful strategy for most children as their movements were unique and imaginative... However, some children still struggled and required more assistance. Therefore, I believe that it is useful to set greater challenges, but we as teachers must also remember to ensure every child understands the activity before they complete it.

Adam, Post-Practice Essay

Adam explicitly connected one teaching experience to another, showing how his practice had changed iteratively. However, here he noticed that some pupils might have benefited from more detailed modelling before starting the independent task, highlighting the challenge of knowing when to withdraw support. Alongside this, he noticed that reduced modelling meant that children were able to be *expressive* and *imaginative* with their ideas. However, Adam still framed these outcomes procedurally, evidence of '*greater challenges*' rather than emergent meaning-making.

Adam's account therefore aligns with *pedagogical reflection*. His reflection goes beyond surface concerns of 'what works' as he evaluated the same teaching strategy across different contexts. He began to theorise his own practice, iteratively revising his prior assumptions about modelling, and articulating generalisable principles (in this case, findings a balance between greater challenge and agency with ensuring that every learner

understands the task). However, his reflection remained largely focused on procedural effectiveness, rather than critically examining his assumptions.

5.1.2. Inclusion as the right techniques

These reflections illustrate how student teachers framed inclusion as the use of techniques to secure pupil participation and progress. All contribute to the construction of the teacher-learner lens, but they vary in the narrative unities that underpin them. In some cases (Heather, Milly and Sarah), inclusion was framed as the application of strategies that allowed lessons to run smoothly and enabled all children to participate in achieving prescribed learning outcomes. This reflects the narrative unity that "*teaching is knowing and applying the right techniques to keep learning on track*". Other student teachers (Phoebe, Adam and Terri) framed inclusion as implementing techniques that enabled all children to access learning and be challenged appropriately. In this sense, they held the narrative unity "*teaching is knowing and selecting the right techniques to meet the needs of learners*". Furthermore, these reflections exemplify how reflections on the same topic, through the same lens, can vary across depth levels.

5.1.2.1. Implementing techniques to support individual learning

Heather described how, in computing, she was able to freeze every child's computer screen to get their attention and give further instruction. However, for one child with SEND, this caused emotional dysregulation:

When the child's computer stopped working it really threw this child off and disrupted his learning.... To overcome this in future I could disconnect that child's computer and get the adult who was working with the child to stop what the child was doing.

Heather, Post-Practice Essay

Heather recognised that not all children will be able to self-regulate when their work is interrupted, but her solution was framed in technical terms. She suggested disconnecting the child's computer in advance and using support staff to intervene, so she could continue delivering whole class instruction without disruption. This exemplifies the teacher-learner lens, as Heather foregrounded her teaching strategy (teacher lens) and evaluated its impact on pupil engagement (learner lens). A strong instrumental tone underpins her reflection, positioning inclusion as the managing of behaviour to maintain lesson flow, rather than aiming to meet the individual needs of each child. Heather's reflection aligns with *surface reflection*, as her concern was with "what works" in relation to pre-determined goals, without attempting to apply theory to practice, or questioning underlying assumptions about inclusion or the child's lived experience.

Milly reflected on how she did not anticipate how implementing a new teaching strategy would alter the routine of the day, something that caused one child experience emotional dysregulation:

...I knew he would love the practical activities the actors had planned for the children, however, when I was notifying the children about the visit, he ran out of the classroom and hid behind the coats in the cloak room where he felt safe. ... After I told him the routine for the afternoon, he came out from behind the coats and held my hand. I made sure that when we were in the church, I sat near him when the actors told the story, to help reduce the anxiety he felt. If I was teaching this lesson again, I would talk to the child before announcing to the class...

Milly, Post-Practice Essay

Milly recognised that the change in routine had triggered the child's anxiety, and she reflected on how she might have anticipated this by preparing the child in advance. Unlike Heather, she described co-regulating the child's emotions by holding his hand and staying near him during the out-of-routine activity. This implies a slightly deeper attentiveness to the child's experience. However, the purpose behind her actions remained the same: to minimise disruption so the lesson could proceed smoothly. Her account therefore could be considered *surface reflection*, concerned with "what works". That said, there is a gesture towards *pedagogical reflection*, as she considered relational, anticipatory strategies and drew on her own reasoning about pupil needs.

Sarah described a broad range of ways in which she adapted her teaching in PSHE to ensure inclusion:

According the National Curriculum, DfE (2014), 'lessons should be planned to ensure that there are no barriers to every pupil achieving,' (p 9)... I embedded inclusive strategies to ensure all children were able to meet the learning objective... I differentiated resources... by giving the children different pencils based on their fine motor development. I provided scaffolds... such as sentence starters and picture prompts to help them generate ideas. I also asked every child for an idea... so that every child was able to participate... I believe this lesson was very effective, and all children met the learning objective, including the child with SEND.

Sarah, Post-Practice Essay

Sarah's reflection indicates a strong instrumental conceptualisation of inclusive practice, anticipating barriers and removing them so that pupils could meet the learning objective. Like Heather and Milly, she judged success in terms of whether children achieved the intended outcome. Later, Sarah described supporting a child with autism, noting her mentor's feedback to '*enable the child to work more independently*', rather than relying on additional adults to support. This suggests a tentative shift towards a view of inclusion that was not entirely based on children meeting curriculum outcomes, but also considered broader aims, such as fostering independence. In this sense, her account appeared to shift between *surface reflection* (focusing on "what worked" to meet objectives) and emerging *pedagogical reflection* (considering the broader aims of education).

Like Heather and Milly's accounts, Sarah's reflection exemplifies a view of inclusion through the teacher-learner lens. She was concerned primarily with the anticipatory actions she took to remove barriers to learning (teacher lens). Her evidence that her practice was effective is based on her assessment that all pupils met the learning objective (learner lens). However, she did not consider the children's lived experience of her anticipatory actions – for example, how a child might feel demotivated if they are deemed to need a scaffold before they even attempt the task.

5.1.2.2. Techniques for equitable participation

Both Phoebe and Adam implemented the STEP framework (adapting PE activities either by Space, Task, Equipment, or People) (Makopoulou et al., 2022) into their PE teaching. Phoebe wrote:

I incorporated STEP differentiation into my planning to alter the degree of challenge… by using the whole hall for warm-up activities, space was maximised which calmed the child with autism as he had enough personal space… I altered the equipment to use a larger ball, and therefore it was easier for him to practice catching despite his physical impairment (tapered fingers) … all children could access the same task and none were excluded.

Phoebe, Post-Practice Essay

Phoebe described how she adapted *space* and *equipment* to ensure a pupil with SEND could participate alongside their peers. She judged her practice to be effective because '*all pupils could access the same task*' and meet the learning objective. This exemplifies the teacher-learner lens: her focus was on the teacher strategies she selected (teacher) and on their effects on pupil access and outcomes (learner). Her reflection aligns with surface reflection, as she described technical adaptations in terms of "what worked". However, her attention to preventing exclusion and ensuring shared participation suggests a more tentative move to pedagogical reflection, since she began to connect her strategies to broader principles of social inclusion. Furthermore, in drawing on the STEP framework, she was applying *the field's knowledge base and current beliefs about quality practices*.

Adam also implemented the STEP framework, but framed inclusion more broadly:

…a common misconception is that the term 'inclusion' only refers to including children with special educational needs. However, it should focus on all children of different abilities as every child has their own needs. As such, we as teachers must ensure the strategies that we utilise meet the specific needs of every child…

Adam, Post-Practice Essay

Adam emphasised that all pupils require inclusion, not just those with SEND. This indicates that he was moving away from conceptualising inclusion as a "bolt-on" practice for specific children, and towards a mindset that attended to every child's needs. He went on to describe how he used the STEP framework to guide formative assessment:

…Throughout all my PE lessons I utilised the STEP principle and found it to be an extremely efficient way of assessing children… I could continuously check the children's understanding of the tasks they were completing and which areas they were struggling with… it allowed me to respond, planning next steps and developments for every child …

Adam, Post-Practice Essay

Unlike Phoebe, Adam used the framework dynamically, adjusting challenges based on learners' emerging needs. This exemplifies the teacher-learner lens, as he connected teaching strategies (teacher lens) to supporting the children's learning (learner lens). His account aligns with *pedagogical reflection*, as he applied knowledge of practice and articulated inclusion as a fluid, relational process. This suggests that Adam was developing the narrative unity "*inclusion as a mindset*", one that should guide ongoing planning, teaching and assessment.

Terri reflected on her use of Makaton (Grove & Walker, 1990) and visual aids to support children with early levels of English and communication-related SEND:

…using the Makaton aided in children remembering key ideas and aspects of their learning as well as allowing participation for all pupils… During independent learning, pupils would also see pupils using the signs they had learned to communicate with their

peer with SEND, to involve them in play... I found that the visual aids supported all children in identifying the categories and support inclusion.

Terri, Post-Practice Essay

Terri highlighted how strategies originally intended for children with communication needs benefited all learners, both in whole-class lessons and in their play. This implies that she conceptualised inclusion less as a technical "bolt-on", and more as a way of fostering shared participation. Later, she emphasised how she planned to expand her use of Makaton, but also perceived a need to integrate it with other strategies:

I aim to expand my use of Makaton and apply it to more lessons as it was an immense tool for inclusivity and communication. However, I am aware that I cannot rely on this skill complete and look to utilise other means to allow my teaching to become more inclusive or pupils of all abilities including those of greater depth.

Terri, Post-Practice Essay

This reflection exemplifies the teacher-learner lens, as Terri foregrounded her teaching strategies (teacher lens) and judged their effectiveness by pupils' participation and communication (learner lens). Her reflection aligns firmly with *pedagogical reflection*, as she applied theoretical tools (Makaton, visual aids), recognised how they shaped pupils' experiences, and evaluated them in relation to wider goals of inclusion. The narrative unity underpinning her account is "*teaching is knowing and selecting the right techniques to meet the needs of all learners*", with an emerging orientation towards inclusion as participation for all.

5.1.3. Depth of reflections through the teacher-learner lens

These reflections illustrate how the teacher–learner lens was constructed through accounts that linked teaching strategies with pupil outcomes, spanning a spectrum of reflective depths. Some reflections aligned with *pre-reflection*, such as Kit's, where practices were taken for granted and unexamined. More commonly, student teachers engaged at the level of *surface reflection*, describing techniques that ensured lessons ran smoothly or enabled all pupils to meet objectives. Heather and Milly exemplified this when framing inclusion as behaviour management strategies, while Sarah extended it to technical adaptations such as scaffolds and differentiation, with tentative consideration of independence.

Other accounts indicated emerging *pedagogical reflection*, where student teachers applied professional knowledge to their practice and considered how specific approaches shaped learning. Phoebe and Heather, for instance, reflected on how their pedagogical choices supported children in achieving predetermined outcomes, while Phoebe also began to frame inclusion as participation, emphasising the prevention of exclusion and equal access to shared activities. Leonie and Sarah highlighted a different tension: they drew on conceptual knowledge such as Dewey's experiential learning or ideas of "sticky learning" but did not fully interrogate the implications, leading to misalignment between their espoused theories and theories-in-use.

The strongest examples of *pedagogical reflection* came from Adam and Terri. Adam connected his practice across lessons, weighing the benefits and limitations of reducing modelling in PE and beginning to theorise principles that could generalise beyond a single context. Terri similarly evaluated her use of Makaton, noting how it enabled

communication and participation for all children, not only those for whom it was initially intended. Both illustrate a shift towards conceptualising inclusion as a dynamic, responsive process guided by pedagogical tools rather than fixed techniques. This demonstrates how reflections of different depths contributed to the construction of the teacher-learner lens, distinguishing the lens as distinct from depth models of reflection.

5.1.4. Paradigms of student teacher learning for the teacher-learner lens

Across these reflections, student teachers mostly conceptualised their learning and knowledge development through the process-product paradigm. Many student teachers described their learning as the accumulation of effective teaching techniques that could be selected and applied to ensure pupils met predetermined learning outcomes. This was especially evident in the accounts of Kit, Milly and Heather (inclusion), who framed learning to teach as improving their ability to plan and implement strategies that resulted in observable pupil success. Their development as teachers was described in terms of refining behaviours and techniques, rather than shifts in values or identity.

Some reflections incorporated elements of the cognitive paradigm, particularly where student teachers articulated learning as the development of professional judgement about how pupils learn best. For example, Phoebe used academic literature to explain how applying prior knowledge in new contexts can engage pupils and support learning. Similarly, Heather (teaching approaches) drew on academic literature to implement modelling strategies that improved pupil engagement and autonomy. In these cases, student teacher learning could be understood as the development of mental structures that incorporate both conceptual and practical knowledge.

There are also some elements of the situated sociocultural paradigm. Adam and Terri's reflections suggest a change in their conceptualisation of inclusion, coming to view it as an ongoing, responsive process requiring awareness of pupils' diverse needs. Their accounts imply that their learning occurred through participation, interaction and situated experience. However, across all the reflections, emotional, moral or political aspects of learning were largely absent, meaning the critical-transformative paradigm is not evident.

5.2. Learner-person lens

Through the learner-person lens, the student teachers' reflections foregrounded the conditions of learning (learner lens) and their developing values and beliefs about what learning should feel like for the children (person lens). Unlike the teacher-learner lens, where pedagogy was judged primarily by outcomes or compliance, here the focus was on how learning was experienced emotionally, relationally and meaningfully. Reflections through the learner-person lens were often underpinned by the narrative unities "*learning is personal connection-making*" and "*learning is an emotional, relational and situated experience*". These reflections were concerned with whether pupils engaged, curious, and able to learn in ways that resonated with their own experiences, rather than if they reached fixed outcomes. Other reflections through this lens conceptualised "*inclusion as belonging"*, concerned with establishing shared values, mutual respect, and the role of the teacher in building relationships that supported every learner's participation. In this way, the learner-person lens is distinguished from the teacher-person lens by its values-based orientation.

5.2.1. Evaluating teaching approaches in relation to learner experience

These reflections involved the student teachers describing their perceptions of the children's experiences of learning, usually brought about by their implementation of specific teaching approaches. These reflections also included a sense of the student teachers' values being affirmed or changed through reflection on practice. Unlike the reflections through the teacher-learner lens, these accounts did not include detailed description or analysis of how the teaching approach was implemented. The focus was on the children's learning experience and the student teachers' own professional values.

5.2.1.1. Continuity of experience

Eve reflected on how she had made links between the children's learning in art and a recent visit to a local safari park:

The safari park visit taught the children about the different animals that could be found and background information that they could then recall when back in the classroom. I chose to incorporate what the children had seen and learnt about on the visit into the African mask art lesson. I feel this was effective as the children had been given first-hand experience of looking at the animals and were more equipped to distinguish what they looked like and how they could implement that into their animalistic African mask designs.

Eve, Post-Practice Essay

In her university reflections, Eve had explicitly connected her own learning through practical activities with experiential learning (Dewey, 1938) (see 4.2.1.2 Experience to prompt independent thinking). While she did not make the explicit link here, her

discussion relates to *continuity*, one of Dewey's (1938) key principles of experiential learning. Eve viewed the visit to the safari park as offering pupils a meaningful opportunity to observe African animals; this knowledge could then support pupils in designing an African animal mask. In this way, the personal meaning pupils' ascribed to the safari park visit could be *reconstructed* and *reorganised* (Dewey, 1916), influencing the trajectory of their future learning. In this way, she likely held the narrative unity "*learning is personal connection making",* aligning with her university reflections. That said, Eve's language still chimes with "*learning is a change in long-term memory*" as she considered how the background knowledge could be '*recalled when back in the classroom*'.

However, Eve went on to critique her practice:

I feel that the children could use what they had learnt on the trip to describe African animals and incorporate the detail and colours into their design. However, the verbal input I gave to them had very little focus on the educational visit and had more emphasis on the actual physical sketching of the mask design and the art and design outcomes highlighted in the national curriculum.

Eve, Post-Practice Essay

While Eve recognised the potential for the principle of continuity within this learning experience, she also noted that she could have made this process of reflection and reconstruction more explicit for learners. Instead, she felt her teaching was focused on modelling how to meet the learning outcome from the National Curriculum POS for Art and Design (Department for Education, 2013). On the one hand, she valued relating new learning to pupils' prior experiences. On the other hand, she recognised that her choices in practice were shaped by ensuring the pupils met the learning outcomes determined by

the National Curriculum. Eve's understanding of learning was therefore in tension with what she perceived to be her professional responsibility. Through practice, Eve perhaps came to hold the narrative unity "*teachers must balance their professional values and responsibilities*".

This implies that Eve was reflecting beyond a *surface* level. While she did not explicitly cite the principle of continuity (Dewey, 1938), she viewed the safari park visit as an opportunity to make meaningful links with their learning in art. This aligns with *pedagogical reflection*, as she implicitly linked theory and practice. Noticing the perceived pressure to ensure curriculum coverage implies she was seeking alignment between her espoused theories and her theories-in-use, another indicator of pedagogical reflection. However, she did not question the underlying assumptions associated with the pressures of curriculum coverage, meaning that her reflection could not be described as *critical*.

Eve's reflection contrasts with Leonie's reflection (see 5.1.1.2 Cognitive interpretation of experiential approaches). While both were concerned with the children's learning, Leonie positioned the curriculum as the authority in defining the knowledge that she should teach. For Leonie, learning through experience was means to ensure that pupils' reasoning aligned with "the right answers". In contrast, Eve noticed how the responsibility she felt to teach the curriculum accurately diminished her ability to support children to reflect on prior experiences.

Comparing these two examples is particularly helpful in distinguishing the lenses from each other. Leonie's reflection included a detailed description of how she taught a geography lesson and how children learned as a result, exemplifying reflections through

the teacher-learner lens. Eve's reflection explored the potential to enhance learning through continuity of pupils' experiences. However, she noted the tension in her practice as she prioritised delivery of National Curriculum learning objectives over supporting children to make connections with their prior experience. This exemplifies reflections through the learner-person lens, where student teachers are concerned with the conditions through which learning can occur, alongside noticing their own beliefs and values. Although Eve refers to modelling, it is more of a passing acknowledgement rather than a detailed evaluation of a teaching strategy. This contrasts with reflections that provide explicit description and/or analysis of specific strategies in relation to pupils' learning, distinguishing Eve's reflection from 'teacher-learner' lens reflections.

Importantly, these examples demonstrate how the three-lens model of reflection is distinct from depth models of reflection. Eve's reflection is not simply "more critical" than Leonie's because she has noticed a tension in her practice. Both reflections encompass elements of surface and pedagogical reflection, but they are differentiated by the lenses through which the reflections were enacted. For Leonie, deeper critical reflection through the teacher-learner lens might involve questioning the ethical responsibility of teachers to transmit agreed curriculum knowledge and pupils' entitlement to this. For Eve, critical reflection through the learner-person lens might involve examining the moral and ethical dimensions of pedagogical decision-making when balancing curriculum requirements with children's lived experiences. This shows that the lenses capture the *stance* of reflection, not its level, offering a qualitatively different way of understanding how student teachers construct meaning from their own practice and experiences.

5.2.1.2. Affective, meaningful experience

Marcia reflected on the children's learning experience during a PSHE lesson:

...on placement I gave children some friendship scenarios to act out and create freezeframes. This allowed children to feel sympathy for the characters as well as think about their own experiences... As well as allowing children to question how actions can make others feel, whilst deepening there understanding of distinguishing between good and bad behaviour... I believe, the understanding of this lesson was only successful due to the "authentic learning situation" as all children were "actively immersed" in the role play, linking to Lave & Wenger theory (Bates, 2019, p, 193).

Marcia, Post-Practice Essay

Marcia conceptualised how the use of freeze frames shaped the children's learning in that it encouraged children to inhabit the perspectives of others, engage empathetically, and connect knowledge with lived experience. She appeared to hold the narrative unity "*learning is personal connection making*", emphasising that the children's understanding was deepened because they could relate the scenarios to their '*own experiences*' and emotional lives. She also implied that "*learning is an emotional, relational and situated experience*", in that she wanted the children to imagine how different characters might feel in situations that closely related to the children's own lives, to prompt empathy and moral questioning. This is further reinforced by her use of the term '*actively immersed*', implying that, for Marcia, learning is more than a cognitive experience.

That said, Marcia's connection to learning theory appears to be somewhat inaccurate. Lave and Wenger's (1991) theory of situated learning conceptualises learning as a social process that occurs through legitimate peripheral participation in a community of

practice, where newcomers gradually become full participants in shared cultural practices. While the PSHE lesson may have contributed to pupils feeling like they were becoming a closer community and established shared values, this was not the focus on Marcia's reflection. Instead, she emphasised that knowledge could be constructed meaningfully when embedded in lived, affective contexts, where children could actively connect with themselves, their peers, and the curriculum content.

Marcia's emphasis on emotional and relational engagement was emphasised later in her reflection:

...effective teaching in PSHE needs to be approached through creative strategies which are memorable for children to retain these learning experiences as well as the skills learnt for now and later in life.... [my lesson] allowed me to witness when children really engage in an activity making them feel happy, they take pride in their learning. Due to this innovative activity, the effectiveness of this memorable experience was clear in the lesson and should hopefully remain and reflect in children's actions in the future.

Marcia, Post-Practice Essay

Here, Marcia articulated her belief that effective teaching in PSHE should generate memorable and meaningful experiences that shape children's future identities. She foregrounded her values – happiness, pride and creativity – and linked them directly to what she saw as successful teaching. This exemplifies the person dimension of the learner-person lens. Her reflection went further than simply considering conditions that enabled pupils' learning, she was concerned with practice that aligned with her personal values.

Marcia's account aligns with emerging *pedagogical reflection*. She attempted to ground her reflection in theory (Lave & Wenger, 1991), even though this was somewhat misaligned. She foregrounded the affective qualities of learning experiences, implying she was attempting to align her espoused theories with her theories-in-use. While she articulated clear values – pride, happiness and creativity in learning – she did not interrogate the cultural or ethical assumptions underpinning her practice. In this sense, her reflection remained at a pedagogical level, rather than moving into critical reflection.

5.2.1.3. Teacher agency and pupil agency

Abigail reflected on how she planned and taught a cross-curricular unit of work on the Great Fire of London that incorporated storytelling. Early in the sequence of learning, the class was visited by an educator-in-role as Samuel Peyps:

... he told the account through storytelling from his own personal experience. You could have heard a pin drop; all of the children were engaged... the quality of information they retained was astounding.

Abigail, Post-Practice Essay

Here, Abigail was convinced of the power of story to support children's learning. While she noted the retention of factual knowledge, her emphasis on the children's engagement and absorption in the storytelling suggested that she valued the transformative potential of teaching through narrative. She drew on academic literature and her own experiences to justify her conviction:

Myatt (2018) and Coles (1989) identify that an enthusiastic and compelling story narrative captures children's minds and understanding... because children can link their moral

judgement through the experiences of the story… I used my experience from my visit to the museum to plan a hook for the topic of history to be engaging, igniting children's interests and curiosity (Ayers, & Robinson, 2016).

Abigail, Post-Practice Essay

For Abigail, stories offered the opportunity for learners to explore, question and discover, concerned with personal meaning-making rather than simply the acquisition of facts. Furthermore, this quote illustrates how Abigail's personal experiences of storytelling shaped her pedagogical choices, aligning with the narrative unity "*learning as personal connection making*". She valued storytelling for the learning experiences it could offer pupils (learner lens), and she was personally convinced of its value, having both experienced it herself in university and having observed it in practice (person lens).

In her post-practice essay, Abigail explained how she had to move away from the school's existing planning, convincing her mentor to allow her to plan a cross-curricular topic. Abigail reflected on a history lesson where children had to collect research for their following English lesson:

… children loved taking ownership of their own research and write down new facts on the topic board. Even though this was only 15- minutes at the end of the lesson, enthusiasm from the children spoke volumes… This was like a light bulb moment. You read about theory in practice it's not the same as seeing it in motion, especially when you are the reason for its success.

Abigail, Post-Practice Essay

Abigail's reflection implies she felt a strong sense of pride and ownership, both over the children's learning and in her enactment of the values she had been developing through her university reflections. Her evidence for success was not how much the children had remembered, but how enthusiastic they had been to engage in learner-led enquiry. Seeing this '*in motion*' affected her more profoundly than her university-based reading and reflection; it resonated with her beliefs about teaching. The experience perhaps confirmed for her that learning might be fostered through enjoyment and peer interaction, maybe made even more powerful because she was trying out something new, rather than replicating the school's normal practices.

This indicates a deepening conceptualisation of teaching and learning for Abigail. In university, she had begun to conceptualise "*learning is an emotional, relational and situated experience"* (see 4.2.2 Storying experience to support learning). In the placement, she had sought out ways to enact these values, even when they went against the grain of established school practices. Her reflection on practice affirmed her conviction in her values.

Abigail also reflected on observing a lesson she had planned and resourced, but was delivered by a more experienced teacher. She described the teacher's practice as '*unenthusiastic*':

...children became unfocused and behaviour started to decline.... the children mimicked the level of enthusiasm from the teacher... learning may be jeopardised because of the lack of enthusiasm and knowledge through the input.

Abigail, Post-Practice Essay

Here, Abigail emphasised how the affective and relational presence of the teacher shaped the pupils' learning experience. She suggested that the children's attitudes to learning were directly influenced by the teacher's (lack of) enthusiasm and subject knowledge. In this, she implied that these are both essential conditions for meaningful learning, marking a shift in her thinking. In her university reflections, she positioned the teacher's presence as somewhat neutral, attributing learning success to the teaching approaches implemented (see 4.2.2 Storying experience to support learning; 4.2.3.2 Enjoyment and achievement for all). However, in the placement, she positioned the teacher as a co-creator of the learning environment's emotional climate, suggesting that both relational presence and rich subject knowledge were imperative to fostering positive learning outcomes and attitudes.

Abigail's account moves across different levels of reflection, suggesting that student teachers might move between the reflective levels fluidly. There is alignment with *surface reflection* in her valuing storytelling for its effect on recall. Her account closely aligns with *pedagogical reflection* as she drew on theory to justify storytelling as transformative. There were some indicators of *critical reflection* as she highlighted the role of teacher enthusiasm and subject knowledge in shaping the emotional climate for learning. However, her reflection did not extend to consider broader systemic conditions, which would have been a stronger indicator of *critical reflection*.

5.2.2. Inclusion as belonging

Through the learner-person lenses, student teachers tended to conceptualise inclusion as the creation of community and belonging, rather than a set of techniques to enable attainment or participation (see 4.1.2 Inclusion as the right techniques). The student

teachers reflected on their own values (person lens) and their pupils' experiences of their teaching practice (learner lens).

5.2.2.1. Inclusion as emotional safety

Marcia reflected on the need to both challenge all learners, but was also conscious that explicitly differentiating tasks for specific learners could create conditions for exclusion:

…Killen, Mulvey & Hitti (2013, p. 780) argue [explicit differentiation] could lead to social exclusion where children classify a group such as NTE [New To English] children and make negative personality trait attributions… Brownlee, Walker, Scholes & Johansson (2019, p. 616) point out a child experiencing social exclusion during school years can have significant consequences for psychological growth.

Marcia, Post-Practice Essay

Marcia explicitly considered the relational aspects of inclusion, recognising that her teaching practice could communicate unintended messages about difference. Rather than focusing on adapting teaching strategies to meet leaners' needs, she was concerned with the emotional impact of such adaptations and the long-term relational consequences for pupils. This indicates she was developing the narrative unities of "*inclusion as a mindset*" and *"inclusion as emotional safety*".

This stance was evident in her description of a PSHE Circle Time lesson:

…Goleman, Barlow & Bennett (2012, p. 118) claim that circle time has many benefits like "creating an atmosphere that is intellectual, heartfelt and practical… to prevent inappropriate and negative comments, as a class we would start by creating rules to ensure every child felt secure.

Marcia, Post-Practice Essay

Here, Marcia was concerned with creating an '*intellectual, heartfelt and practical*' atmosphere for learning. She framed the creation of ground rules for circle time as a way of establishing emotional safety, rather than reinforcing compliant behaviours. The ground rules could engender a sense of mutual respect and security so children could participate authentically in the discussion. It implies that Marcia evaluated the success of her teaching based not only on the achievement of learning objectives, but by whether all children felt safe to contribute.

Marcia's understanding of inclusion as belonging was also evidence in her use of visual aids to support the discussion:

To meet the needs of learners such as NTE/EAL and SEN, I also placed prompts, e.g. emotion cards, in the middle of the circle. This allowed them to pick a card or copy the expression on one of the cards if unable to describe the emotion. The option of picking a card also allowed others, e.g. reluctant children, to contribute without feeling put on the spot... this was an attempt to make the activity inclusive, so it wasn't obvious to the children who I was targeting.

Marcia, Post-Practice Essay

By making these visual aids available to all children, Marcia avoided singling out individuals for support. This enabled pupils to choose autonomously whether to use the scaffold, which not only enabled participation but reduced the risk of peers forming negative trait attributions. In this way, her teaching strategy was underpinned by values of equity and emotional safety. Furthermore, it implies she was developing the narrative

unity *"the purpose of education is to belong to a learning community"*, as she emphasised shared values of mutual respect and personal autonomy.

Marcia's reflections moved beyond *surface* descriptions of strategies. She noticed how explicit differentiation could unintentionally signal difference and lead to long-term social exclusion. By drawing on literature, she connected her practice to wider theoretical concepts, implying *pedagogical reflection*. At the same time, her concern with pupils' emotional safety, belonging, and the subtle messages communicated through her practice indicated an emerging *critical reflection*. She was beginning to situate her teaching within broader ethical commitments, moving beyond technical adaptations to a values-based understanding of inclusion.

5.2.2.2. Inclusion as a community of shared values

Cara's post-practice essay showed how she moved beyond teaching strategies that would manage behaviour or adapt tasks, toward understanding as creating belonging in a community with shared values. This exemplifies the learner-person lens, as she reflected on both the children's emotional experiences (learner) and on her own professional values (person).

Cara described her involvement in the school's breakfast club:

... This was an explicit way the school focused on inclusion and the most disadvantaged pupils. I was encouraged to sit down and eat with them. The children sat around a large table, with members of staff, and ate their breakfast together. It was creating a family environment... a positive start to the day compared to what a morning at home would perhaps be like. The school set the children up emotionally for the day by providing them

with the acceptable social skills; sit down at the table to eat, wash your kitchen equipment, listen to what people have to say and eat with your mouth closed.

Cara, Post-Practice Essay

Through her reflection, Cara realised that the purpose of the club was more than simply providing a meal for the children at the start of the day. She described how community values and behaviours were both made explicit verbally *and* implicitly communicated through consistent modelling. She recognised how the adults and children co-created a sense of belonging and community, emphasising the importance of this for children's wellbeing and success both in and out of school.

Cara went on to reflect how she taught PSED (Personal, Social and Emotional Development) through an integrated approach, which she framed as being inherently inclusive to meeting the needs of the children:

Children were rewarded for such acts as trying hard, being kind and tidying up. To build their social etiquette, I routinely impelled manners and how we were to conduct ourselves in class. The teachers were role models... My role as a member of staff was to make sure that those children who needed care, not just an education, felt valued...

Cara, Post-Practice Essay

Cara emphasised that inclusion meant ensuring that children felt cared for and valued, particularly those with less stable family backgrounds. She positioned herself as a role model, recognising that a teacher's behaviour and words implicitly communicated the values of the community. Rather than viewing inclusion as a technical procedure, she

was likely developing the narrative unities "*inclusion as a mindset*", "*inclusion is emotional safety"* and "*the purpose of education is to belong to a learning community*".

Cara's developing awareness of the concept of the hidden curriculum further illustrated her shifting view of inclusion:

According to The Glossary of Education Reform (2014), the 'hidden curriculum refers to the unwritten, unofficial, and often unintended lessons, values, and perspectives that students learn in school.'... Kiss, Szeger & Hera (2013) highlight the importance of having a hidden curriculum that is customised towards the demographic, the community and the children's experiences to have the most successful outcome.

Cara, Post-Practice Essay

Cara recognised that community shared values are not always explicitly taught but embedded in the '*unofficial*' curriculum of routines, expectations and relationships. For Cara, inclusion related to being intentional about these implicit messages, ensuring they aligned with the children's needs and promoted a sense of community.

Finally, Cara reflected on how her pedagogical values had been transformed by her school-based placement experiences:

My block placement has had a significant impact on my thoughts and beliefs regarding inclusion. From my experience, I will take an active role with an integrated approach to PSED rather than carrying out a lesson that focuses on the theme independently... Inclusion is a value I will strongly carry, which will influence the type of teacher I strive to be. In practise it is difficult to be inclusive of everyone all the time, however it is possible to consistently make every child feel valued.

Cara, Post-Practice Essay

This statement illustrates how Cara's conceptualisation of inclusion had shifted through reflection on practice. She came to view PSED as best taught through integrated, everyday modelling, rather than discrete lessons. Significantly, her perspective on inclusion was transformed. Rather than understanding inclusion as a responsibility enacted *by* the teacher *for* pupils, she now appeared to hold the narrative unity "*inclusion is a process of co-creation within a community*". This transformation mirrors Cara's university reflection about the Gurdwara visit, where confronting her implicit bias led her to a deeper understanding of her pedagogical values (see 4.3.1.3 Acknowledging implicit bias). However, her acknowledgement that inclusion cannot always be perfectly achieved also implies a more nuanced understanding through her reflection on practice.

Cara's reflections most clearly exemplified emerging *critical reflection*. She recognised inclusion not as a set of techniques but as belonging, emotional safety, and the co-construction of shared values. She extended this to the hidden curriculum, suggesting that implicit social and cultural messages may be communicated through the relational dimension of teaching. She emphasised that these messages should align with children's needs and wellbeing. Importantly, she examined her professional values, framing her placement experiences as transformative for her beliefs about inclusion and her future values as a teacher. In noticing that inclusion can never be "fully achieved", she hinted at consideration of broader ethical and social conditions.

5.2.3. Depth of reflection through the learner-person lens

Across the learner-person lens, these accounts illustrate the spectrum of reflective depth. Eve's reflections sit at the emerging *pedagogical level*, as she noticed how

curriculum demands prevented her from aligning her espoused theories with her theories-in-use. Marcia's reflections aligned more fully with *pedagogical reflection*, as she connected her practice to literature and recognised the relational and emotional consequences of differentiating scaffolds, though her theoretical application was sometimes misaligned. Her concern for long-term relational impacts on pupils suggests she was beginning to tentatively move towards critical reflection. Cara's reflections exemplify emerging *critical reflection*, as she examined her values, engaged with the concept of the hidden curriculum, and reconceptualised inclusion as a co-created process of belonging within a community. Abigail's reflections shift through surface and pedagogical reflection, verging on critical reflection, as she sought to enact her values in practice and critically contrasted her own and others' teaching. This implies that student teachers may move fluidly through the different levels of reflection within one account (see Figure 5). Overall, the accounts that construct the learner-person lens suggest that reflections through this lens are likely to be more consistently engaged at deeper levels of reflection than through the teacher-learner lens.

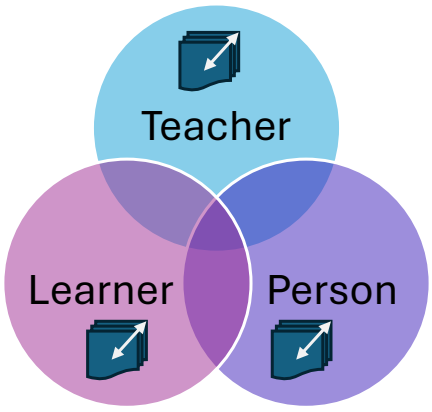


Figure 5: Depth fluidity within the Overlapping Lens model

5.2.4. Paradigms of student teacher learning for the learner-person lens

The reflections suggest that, through the learner-person lens, the student teachers' learning most aligned with the situated sociocultural paradigm, with a few accounts indicating emerging elements of the critical-transformative paradigm. In reflecting on pupil engagement, emotion and inclusion, the student teachers implied their own developing professional values. For many, learning to teach was about recognising how emotional, relational and experiential aspects of learning shaped pupils' participation. This often resonated with the student teachers' values, such included belonging, creativity and care. In several cases, such as Abigail and Cara, the reflections suggested a shift in how the student teachers conceptualised the purpose of education, tentatively aligning with the critical-transformative paradigm. However, these shifts were not always underpinned by interrogation of moral or political values, meaning that they were best understood as aligned with the situated sociocultural paradigm.

5.3. Person-teacher lens

Through the person-teacher lens, student teachers reflected on professional values and broader educational contexts (person lens) and their pedagogical choices and actions (teacher lens). Unlike the learner-person lens, where the focus was on children's experience, or the teacher-learner lens, which prioritised learning outcomes, these reflections centred on how the student teachers' beliefs shaped their pedagogical choices and how these actions, in turn, transformed their beliefs. In this way, the process of learning to teach might be conceptualised as a reciprocal relationship between beliefs and practice, mediated through reflection.

5.3.1. Learning to teach

The reflections that constructed this lens each constituted accounts of how the student teachers felt they had learned to teach.

5.3.1.1. Learning teaching strategies through observation

Heather emphasised the preparatory steps she took to teach computing, where she prioritised observing the subject being taught across different age groups:

I was still unsure of the best teaching methods, so felt I needed to observe lessons in different classes to develop my teaching knowledge further. Personally, I think observation is the best way to learn something as it provides concrete experiences to learn from... ultimately, I just wanted to pass on the knowledge I had learnt to the children as clearly as possible. The teaching strategies I used made this happen.

Heather, Post-Practice Essay

This indicates that she ascribed high value to learning the routines and established strategies of the specific school setting, more than she valued developing deep conceptual knowledge of computing. This aligns with Hennissen et al's (2017) argument that socialisation processes within the school setting have a more significant influence on student teacher practices than other aspects of their ITE, such as their understanding of theory. Heather's assertion that she learns best from '*concrete experiences*' implies she wanted to think about and evaluate the teaching strategies she saw implemented. This suggests that she perceived pedagogical knowledge to be situated and contextual to a particular curriculum in a particular school. However, she went on to emphasise how the teaching strategies observed had enabled her to '*pass on the knowledge... to the*

children as clearly as possible'. This implies a tension between how she conceptualised her own learning (personal connection making) and what she perceived as her professional responsibility (transmitting curriculum knowledge to pupils). While this is evident in her language, she did not appear to notice the tension herself.

Heather's reflection aligns most closely with *surface reflection*, with some elements of pedagogical reflection. She valued observation and concrete experience for her own learning, suggesting she was beginning to think about the contextual and situated nature of pedagogical knowledge. However, her focus remained on acquiring and replicating teaching strategies to '*pass on the knowledge… as clearly as possible*', rather than questioning the underlying values or purposes of her practice. The presence of the tension between her personal view of learning as connection-making and her professional responsibility to transmit curriculum knowledge was implied through her language but not explicitly acknowledged. This suggests that she was not at the level of *pedagogical reflection*, as this would have involved some examination or interrogation of her values and assumptions.

5.3.1.2. Learning teaching strategies through reflection on practice experience

Jackie reflected on how her understanding of meeting the needs of all learners had changed through reflecting on practice:

…before I fully knew the children… I was unable to envisage a scenario whereby a child could not access my activity… I was unable to reach all the children through my planning and teaching strategies, due to the language barrier… my skill in this area still needs some development…

Jackie, Post-Practice Essay

This illustrates the personal dimension of the student teachers' knowledge. Initially, Jackie, a mature student teacher with prior experience of working in schools, had assumed her planned teaching strategies would ensure all pupils could access learning. However, when teaching children who were new to English, she encountered the language barrier in ways she had not anticipated. She recognised that she needed to expand her repertoire of teaching strategies to meet learning needs she had not encountered in her prior experience. This chimes with the narrative unity "*teaching is knowing and selecting the right techniques to meet the needs of learners*" (teacher lens). However, Jackie also underlined the need for her own professional development and implied a sense of personal responsibility for this (person lens).

Her reflection continued:

I believed that differentiation would be straightforward in EYFS compared to Key Stage 1 but did not understand that discussion and even just exploration of a practical activity would be differentiation... "All that's required is that teachers are flexible and skilled enough to be able to veer off-piste to collect up confused students as and when required" (Didau, 2017) is something I would agree with.

Jackie, Post-Practice Essay

This indicates a shift in Jackie's understanding. She came to perceive meeting diverse learning needs as a dynamic, situated and interactive process, rather than '*straightforward'* aspect of lesson planning. Her emphasis on '*discussion*' and '*exploration*', along with the Didau quote, indicates that she conceptualised learning as something constructed "in the moment" through interaction between teacher, learner and environment, rather than something that just the teacher does. This suggests that

she shared Cara's the narrative unity: "*inclusion is a process of co-creation within a community*" (see 5.2.2.2 Inclusion as a community of shared values).

Jackie's reflections suggest a shift across *surface* and *pedagogical reflection*, again implying that student teachers' reflections might move between different depths within one account. Initially, she described how she had assumed her planning would be sufficient for all learners but realised that pupils new to English experienced barriers she had not anticipated. This perception of limitations in her own practice, and her expressed need for professional development, aligns with *surface reflection*. She noticed "what worked" (and what was not working) and suggested that she needed to acquire new teaching strategies but did note interrogate broader assumptions or values that underpinned her planning.

In her second account, Jackie articulated a more responsive understanding of practice. She suggested that she might adapt her teaching based on '*exploration*' and '*discussion*' with the pupils. She grounded this in academic literature, drawing on Didau's assertion that teachers need to be flexible and knowledgeable to respond to learners' needs that emerge in the moment. This suggests that she was beginning to connect her practice to theoretical ideas about adaptive teaching as situated and interactive, reframing her role as a teacher in dialogic, relational terms, indicating *pedagogical reflection*.

5.3.1.3. Noticing changes in personal knowledge

Cara reflected on how adapting to pupils' needs in practice developed her understanding:

Lessons did not always go as planned. Instead, I had to adapt.... EYFS taught me about my patience; the importance of giving a child the time to think after a question. The few

extra seconds waiting for an answer. Previously I would have moved on and asked another child... My teaching practise has developed significantly, I have a greater understanding of child development and how children learn at a different pace.

Cara, Post-Practice Essay

Cara attributed her changing understanding of teaching practice to the experience of having to adapt in the moment to children's needs and giving children time to respond. This suggests that her perspective on her professional responsibility shifted from ensuring a smooth lesson flow ('*previously I would have moved on and asked another child...*') toward ensuring that every child had time to think and engage. She recognised how the way she taught changed as her values became more oriented towards flexible, responsive pedagogies, exemplifying the teacher-person lenses.

Her reflections on self-efficacy underlined this stance:

According to McAnaney, (2020) the aim of self-efficacy is the inner belief that you can reach your goals through being confident and controlling your decisions. ... My self-efficacy has been built through hours of teaching practise, in an environment where I felt comfortable. I received praise and support which was encouraging.... My professional relationships were very secure... It has had a significant impact on my teaching journey as I experienced two very different approaches to teaching.

Cara, Post-Practice Essay

Here, Cara suggested that her confidence in her ability to make pedagogical decisions that aligned with her professional aims was developed through her experiences of practice. Learning to teach was not just about enacting the right behaviours; Cara

recognised that the enactment of these behaviours contributed to her feelings of self-efficacy. She also noted the significance of her professional relationships, suggesting that she viewed herself as a learner and valued belonging to a community. Furthermore, she found value in observing two contrasting styles of teaching, suggesting that she was beginning to conceptualise practice as 'contestable, provisional and contingent' (UCET, 2020). This reflection suggests that Cara held the narrative unity that for student teachers (not only pupils), *"learning is an emotional, relational and situated experience"*.

Cara's reflections align with *pedagogical reflection*, with some elements moving towards *critical reflection*. In her first account, she recognised how her teacher needed to shift from maintaining lesson flow to ensuring every child had time to think and engage. Drawing on professional knowledge and current beliefs about quality practices, she reconsidered her approach in line with child development and responsive pedagogy. Her reflection indicates a move towards *critical reflection*, as she articulated a change in her professional values, not just her behaviours.

Cara's reflections on self-efficacy also indicate emerging *critical reflection*. She framed the relational and situated aspects of the placement as being key to her learning. In valuing the opportunity to observe contrasting styles of teaching, implying she conceptualised teaching practice as contestable and contingent. This aligns with *critical reflection*, as it indicates that she viewed teaching as shaped by values, contexts and relationships. It contrasts with Heather's person-teacher lens reflection, which suggested that observation of different teaching styles would enable her to learn "the" teaching strategies she required, implying a fixed view of practice.

Comparing this reflection to Cara's reflection through the learner-person lens exemplifies how the two lenses are distinguished (see 5.2.2.2 Inclusion as a community of shared values). In Cara's earlier reflection, she emphasised the children's experiences of belonging within a learning community alongside her developing values about the teacher's role in fostering emotional safety and shared values. This exemplifies the learner-person lens, where the focus is on the conditions of learning as experienced by the children, integrated with the teacher's emerging professional values. By contrast, her reflections on adapting to pupils' pace of learning in EYFS foreground her own developing understanding of responsive teaching. Here, she emphasised her growth in patience and her self-efficacy. This exemplifies the person-teacher lens, where the focus is on the teacher's professional development and sense of responsibility, in relation to how teaching strategies shaped children's opportunities to learn.

Significantly, both of Cara's reflections sit at the level of emerging critical reflection. This shows how the overlapping lens model generates a more nuanced understanding of student teacher reflection than the depth models alone. If Cara was going to deepen the level of criticality in her learner-person reflection, she might explore wider social and political implications of community creation, belonging, and the hidden curriculum. If she were to deepen the criticality of her person-teacher lens, she might interrogate her assumptions about self-efficacy and consider the systemic conditions that can support or impair teacher agency. This demonstrates how the overlapping lens model integrates the stance, the topic, and the depth to better describe that nature of student teacher reflection.

5.3.1.4. Developing more nuanced understanding through practice experience

Rebecca's reflection on teaching RE illustrated how she connected her personal beliefs about learning with her understanding of subject knowledge and pedagogy. She began by reflecting on her university experience (see 4.3.1.2 Challenging prior values).

I began to reflect on the negativity I first felt towards RE and how this changed once I experienced a wealth of knowledge… I hoped to replicate this motivation through my subject knowledge during my practice… subject knowledge could be the driver of intrinsic motivation and therefore pertinent to the curriculum.

Rebecca, Post-Practice Essay

Rebecca described how her own deepened subject knowledge had transformed her attitude to RE. She perceived a reciprocal relationship between epistemic emotions, such as curiosity (Pekrun, 2022), intrinsic motivation (Deci & Ryan, 1985), and rich subject knowledge. She hoped to recreate these conditions for her pupils, indicating how her personal experiences shaped her pedagogical values.

However, Rebecca acknowledged the limits of her preparation in her first RE lesson:

…this became the downfall of my first lesson as it was evident, I lacked subject knowledge as I failed to address misconceptions regarding Lent and Advent… There was a lack of enthusiasm from the children in the lesson that led to an absence of motivation and poor attainment.

Rebecca, Post-Practice Essay

This indicates that Rebecca initially overestimated her subject knowledge and underestimated challenge of addressing misconceptions. It may be that, prior to the

lesson, Rebecca had considered her *common content knowledge* to be sufficient for teaching RE and did not appreciate the nature of *specialised content knowledge* (Loewenberg Ball et al., 2008). Even though she highlighted the lack of children's enthusiasm, she did not examine the nature of their learning. Instead, her reflection focused on what she had learned about herself as a teacher and the values underpinning her practice, indicating the person-teacher lenses.

In the subsequent lesson, Rebecca took deliberate steps to deepen her subject knowledge and noted the positive response:

"A wonderful lesson, I was absolutely blown away by the knowledge and vocabulary the children were using. The children were so excited to share their knowledge and ideas about the topic." - Mentor

...I also received positive pupil voice, which could imply that the children were intrinsically motivated to achieve as they were provided with rich knowledge... This was a great achievement as I aimed to provide the children with a positive experience, so that they did not develop any negative thoughts towards RE...

Rebecca, Post-Practice Essay

Rebecca perceived her improved subject knowledge to be the key to the children's enthusiasm and attainment. While her own language ('*provided with rich knowledge*') implied a transmissive view of learning, her mentor's feedback highlighted children's active use and sharing of knowledge, suggesting a more constructivist interpretation. This distinction suggests that Rebecca's reflections were framed primarily by her beliefs

about the motivating potential of rich subject knowledge, rather than evaluation of the pupils' learning experiences alone.

Later, she described this experience as a significant moment in her professional learning:

Later in her post-practice essay, Rebecca reflected on how practice had changed her perception:

...my understanding of subject knowledge has immensely developed due to my placement as this was the pinnacle moment in my learning as it was clear that having a secure subject knowledge enabled the children to flourish and progress. In the future I will thoroughly research my subject to create positive experiences for the children...

Rebecca, Post-Practice Essay

Despite her experience in university, where she had conceptualised rich subject knowledge as a key factor in generating intrinsic motivation for learners, it was only through the placement experience that Rebecca came to understand how the *specialised content knowledge* of the teacher extends beyond *common content knowledge* (Loewenberg Ball et al., 2008). The experience and reflection also affirmed for Rebecca the intrinsically motivating qualities of rich subject knowledge, recognising the pupils' enthusiasm for learning was implicitly tied to learning outcomes. Her language ('*the pinnacle moment in my learning*') emphasises the strength of the meaning she attributes to this experience.

However, Rebecca also reflected on the sustainability of her approach to improving her subject knowledge once she became a qualified teacher with wider responsibilities:

Although teaching RE was a positive experience, researching 'celebrations' to ensure I had secure subject knowledge became a lengthy process. Therefore, this left me questioning how much research I must endure, how realistic this is and what support is available to do this. Reiss and White (2013) questioned the appropriateness of an abundance of knowledge, suggesting that this can become unsuitable. This helped me to consider my wellbeing throughout teaching and to always acknowledge when I have acquired enough knowledge to teach across the curriculum…

Rebecca, Post-Practice Essay

Here, Rebecca shifted from reflecting on a single lesson to interrogating the broader demands of the primary teacher's role. She pragmatically questioned how feasible it would be to research every subject in such depth whilst also meeting wider professional expectations. Unlike her earlier reflections, which positioned subject knowledge as essential for sparking intrinsic motivation, here she acknowledged the limits of this stance: that striving for '*an abundance of knowledge*' could become unsustainable. She began to link the recognition to her professional wellbeing, suggesting that sufficient knowledge to teach effectively (rather than deep conceptual mastery) may be more realistic for a generalist primary teacher.

This reflection demonstrates the developing nuance in Rebecca's thinking. Even though her placement experience had affirmed the intrinsically motiving qualities of rich knowledge, it also prompted her to acknowledge the constraints that shape a teacher's practice, in this case, the multiple professional expectations that impedes the extent of possible preparation. Rebecca's reflection therefore exemplifies the person-learner lens as she grappled with reconciling her values about the importance of subject knowledge

with her emerging understanding of what it means to sustainably teach across the whole curriculum.

Rebecca's reflections align with *pedagogical reflection* and emerging *critical reflection*. Even though she initially underestimated the depth of subject knowledge needed, her intention had been to create conditions that would stimulate intrinsic motivation for pupils. She was attempting to apply her values and theory to practice. Her reflection on her first lesson illustrates that she noticed the misalignment between her espoused theories and her theories-in-use. In reflecting on her second lesson, she began to theorise her practice, affirming her belief that rich subject knowledge can inherently foster children's enthusiasm and attainment. These are all indicators of *pedagogical reflection*. Her account moves to emerging *critical reflection* as she questioned how realistic it would be to sustain similar levels of subject knowledge preparation when balancing the full range of responsibilities of a qualified teacher. She considered wider structural constraints and connected these to her wellbeing and capacity to enact her pedagogical values.

5.3.2. Depth of reflection through the person-teacher lens

Across the person–teacher lens, the student teachers' reflections spanned a spectrum of depth. Heather's account was closer to *surface reflection,* as she prioritised adopting school-based routines and saw her role as transmitting curriculum knowledge, though she hinted at the situated nature of pedagogical knowledge. Jackie's reflection exemplified *pedagogical reflection,* as she recognised the limitations of her initial assumptions, integrated theoretical perspectives, and reconceptualised adaptive teaching as a dynamic, interactive process. Cara also reflected at a *pedagogical level,*

with emerging *criticality*, weaving theory with her developing professional values of patience, care and responsiveness, and emphasising the emotional and relational aspects of practice. Rebecca's reflections moved from *pedagogical* to emerging *critical reflection*. She connected her belief in the motivational power of rich subject knowledge to practice but also interrogated the systemic constraints of workload and professional development, linking these to questions of teacher wellbeing. These reflections construct the person-teacher lens as foregrounding the integration of personal values with pedagogical reasoning. They suggest that, through this lens, student teachers reflect more consistently at pedagogical and critical levels, particularly in comparison to the teacher-learner lens.

5.3.3. Paradigms of student teacher learning for the person-teacher lens

Reflections through the person-teacher lens highlighted how student teachers described the reciprocal relationship between their personal values and their pedagogical choices. The accounts imply that student teacher learning occurred through participation in and reflection on practice, which contributed to developing professional identity, aligning with the situated sociocultural paradigm. However, there are emerging indicators of multiple paradigms within this lens.

Heather's belief that her professional development was closely connected with observing other teachers aligns strongly with the process-product paradigm. However, she also emphasised learning through '*concrete experiences*', suggesting an emerging perspective of learning to teach as enculturation and participation in a community. Cara's reflection more fully aligned with the situated sociocultural paradigm, as she described learning to teach as a process of responding to children in the moment and

recognising changes in her values in response to these moments. Her developing knowledge of teaching related to her appropriation of tools, such as increasing wait time to give children longer to think. Her knowledge was also developed through participation, feedback and community belonging, further aligning with the situated sociocultural paradigm.

Jackie's reflection also indicates how her knowledge of adaptive teaching changed through practice experiences, suggesting alignment with the situated sociocultural paradigm. However, she also drew on academic literature to reinforce her new perspective on adaptive practice. This could be framed as experience and conceptual knowledge being accommodated into her existing mental structures, aligning with the cognitive paradigm of teacher learning. Rebecca's reflection also suggests an interplay of paradigms. She conceptualised learning to teach RE as deeply tied to her personal subject knowledge and its potential to emotionally engage pupils, aligning with the situated sociocultural paradigm. While she framed learning as transmissive in places (process-product paradigm), she also began to see the role of the teacher as one who shapes learning environments to foster intrinsic motivation. Furthermore, she emphasised that engaging RE teaching could create positive attitudes to learning, which in turn could foster positive attitudes to diversity in future society. This hints at the critical-transformative paradigm, where teaching is a moral action. However, ultimately, she framed learning to teach as a process of negotiation and attunement within a community (situated sociocultural paradigm), questioning how to balance subject knowledge preparation with the other competing priorities teachers encounter.

5.4. Triadic lens

In these accounts, the student teachers reflected through all three lenses simultaneously. These reflections were relatively rare; Jackie's account provided the most consistent examples of triadic lens reflections as she reflected on approaches that enabled interaction and continuity (Dewey, 1938).

5.4.1. Valuing interaction and continuity for learning

Reflecting on a lesson in Expressive Arts and Design (EAD), Jackie expressed frustration at being unable to connect the activity with prior learning:

I incorporated the weather into one of my music lessons, and we made music to sound like rain and snow (loud and soft) but I was asked by my mentor not to link this back to the ice [a previous activity]. Hence my activity became compartmentalised with no links that the children could make to prior learning or existing knowledge that they could use in their independent investigations through provision following that lesson… learning involving the humanities, arts and sciences cannot be separated; young children learn in an integrated way and not in neat, tidy compartments (Bruce, 2011).

Jackie, Post-Practice Essay

Here, Jackie described her teaching strategy (teacher lens), evaluated how the children's learning had been restricted by lack of continuity (leaner lens) and articulated her belief that learning should be holistic and integrated (person lens). She grounded her assertion using literature that emphasised the experiential and holistic nature of learning ('*children learn in an integrated way and not in neat, tidy compartments'*). This resonates with Jackie's university reflection on the museum visit, where she noted a multitude of

opportunities for emotional, relational and situated learning experiences (see 4.22.2.2 Storying experience to support learning). Furthermore, she had emphasised the teacher's responsibility as sequencing learning in such a way that supported pupils to make connections across their knowledge (see 4.1.1.3. Curriculum frameworks as "what you need to know"). This suggests that her university experiences had shaped her conceptualisation of "good" practice, and she was frustrated that she could not enact these values in her placement setting.

She identified the wider systemic constraints that shaped her practice:

It was noted in the Bold Beginnings report that there is no clear curriculum to follow beyond the Early Learning Goals (ELGs) and it was found that many staff had created tasks that helped them to 'tick off' the ELGs and provide evidence of achievement, and this became the reception curriculum, leading to a loss of focus on learning. (DfE, 2017)... in practice, I noticed that learning was at times driven by objectives – so much so that I was unable to develop my activity and integrate it into other areas because we needed to move on to the next objective on the agenda.

Jackie, Post-Practice Essay

Jackie recognised how a focus on evidencing achievement against the Early Learning Goals (Department for Education, 2024a) narrowed the curriculum in many EYFS settings and undermined her professional aim for learning to be cumulative and learner-led (person lens). Despite her desire to extend and integrate activities to support continuity (learner lens), she was constrained by the expectation to prioritise curriculum coverage and move quickly through pre-set objectives (teacher lens). This indicates the complexity of the influences that shaped student teachers' practices. Even in cases like Jackie,

where values developed through university experiences had been clearly articulated and theoretically grounded, her pedagogical decisions were ultimately shaped by the established practices of the school setting.

Jackie's frustration was tempered when her class visited a local steam railway, which affirmed the value she ascribed to experiential approaches:

There is no richer experience than children seeing, riding, touching and smelling a steam train when the overarching theme is transport… this type of experience is accessible to all pupils, with the information being given to them at the most basic level. Being offered by way of live conversations and additional unpacking of the material where appropriate, encouraging children to use the information 'on their own terms' is a far cry from a prepared work sheet, pre-determining what a child can and cannot do. (Myatt, 2018).

Jackie, Post-Practice Essay

Here, Jackie celebrated the richness of multi-sensory experiences for all children (learner lens), recognised the role of teachers in adapting their communication to the needs of the individual pupil (teacher lens), and emphasised her belief that children should be able to engage with new knowledge '*on their own terms*' (person lens). This underscored how she valued learner autonomy and dialogic meaning-making as central to learning. She noted how all pupils could engage in an equitable experience regardless of their proficiency in English, facilitated through the adults' flexible responsiveness. This chimes with the concept of democratic society as encompassing participation and adaptation for all (Dewey, 1916). It suggests a shift in Jackie's understanding. In her university reflections, she framed educational visits as enhancing the curriculum through providing meaningful and integrated learning opportunities (see 4.2.1.1. Learning does not fit into

subject categories). However, in her placement reflection, she was more focused on the multi-sensory aspects and the opportunities for learner-led conversations to take place. In this sense, her understanding became more nuanced, moving beyond the instrumental aspects of teaching, such as planning and sequencing of learning, to stronger articulation of her pedagogical values, such as pupil autonomy and flexible dialogic approaches.

5.4.2. Depth of reflection through the triadic lens

Jackie's reflections align with *pedagogical* and emerging *critical reflection*. She is pedagogically reflective as she grounded her thinking in conceptual ideas and theory, articulating how her values of integrated, experiential learning aligned with her teaching choices. She noticed the dissonance between her espoused theories and theories-in-use and perceived the latter as being shaped by curriculum-driven constraints that extended beyond her immediate setting. Through reflection, she constructed a strong connection between her practice, professional values and educational theory, seeking to alignment between these aspects of practice. At points, her reflection edged into *critical reflection*. As she critiqued how systemic pressures shaped her practice, she situated her pedagogical choices within broader educational structures. Her implicit references to democratic participation and equitable access also indicated an emerging concern with the moral and ethical implications of practice. While this is one student teacher's reflective account, it indicates that that triadic lens can also support deeper levels of reflection.

5.4.3. Paradigms of student teacher learning for the triadic lens

Jackie's reflection through the triadic lens suggests she conceptualised learning to teach as an ongoing negotiation between pedagogical action, pupil experience, and personal values. Her reflection aligns most strongly with the situated sociocultural paradigm, where learning to teach is understood as relational, context-dependent, and shaped through participation in school communities. She also showed elements of the cognitive paradigm, particularly in how she connected literature and university learning with her evolving professional thinking. While she critiqued objective-driven planning and acknowledged systemic constraints, her reflection did not fully interrogate the moral or political assumptions underpinning those systems, meaning the critical-transformative paradigm was only partially evident.

5.5. Lens fluidity

In addition to triadic lens reflections, some reflections indicated that the student teachers' stance moved fluidly between lenses. This was like Reflective Conversation 1, where Eve and Heather moved between the teacher lens and person lens (see 4.1.1.3. Inclusive and democratic societal values; 4.3.1.1 Unexamined bias). Unlike the triadic reflections, where all three perspectives were held together simultaneously, these accounts suggested that the student teachers' reflections could shift from one lens to another, sometimes foregrounding children's experiences, sometimes their own values, at other times their teaching strategies. Lens fluidity was exemplified by Rebecca's account, where she reflected on story acting as an approach that could emotionally engage pupils.

5.5.1. Emotional engagement to enable learning

Rebecca reflected on an RE lesson where she planned for children to act out a Bible story.

I felt the learning came alive as the children took ownership of their learning by adapting their own interpretation of the story. This was highlighted as one child in character of a disciple referred to Jesus as his role model. The term role model had not been used beforehand, which emphasised his understanding of the Easter story and his ability to develop his own narrative… I would certainly use this method again as the skills the children were displaying were much richer than if they used a textbook.

Rebecca, Post-Practice Essay

Rebecca's emphatic description – '*the learning came alive*' -indicated she felt she had enabled agency among the children (person lens). Alongside this, she noticed how children used their own vocabulary to reinterpret the story, suggesting that they were drawing on existing knowledge to generate new understanding (learner lens). In this moment, Rebecca appeared to hold the narrative unity "*learning is personal connection making"*. As Rebecca grounded her practice in theory, connecting to storytelling and intrinsic motivation, her account continued to suggest she was taking a learner-person stance:

Storytelling and story acting could lend itself to the self-determination theory (Ryan and Deci, 2000) as the children may have being intrinsically motivated to learn, as they found these methods pleasurable and meaningful… Myatt (2018) also supports this as she argues that intrinsic motivation has a place within the RE curriculum as it encourages children to talk about RE from a personal level and not just because they have to…

Rebecca, Post-Practice Essay

Here, Rebecca combined the concepts of intrinsic motivation and personal constructions of knowledge through talk, implying that stories are effective in enabling learners to connect with content in ways that feel meaningful and self-directed, rather than externally imposed (learner lens). In her university reflections, Rebecca had noticed how she had been intrinsically motivated to learn during the visit to the Gurdwara. Her own experience likely influenced her evaluation of successful teaching, valuing teaching approaches than supported pupils to also experience intrinsic motivation (person lens). This suggests that Rebecca held the narrative unity *"learning is an emotional, relational and situated experience".*

Rebecca then reflected on her assessment and evaluation of the children's learning; here, her stance shifted to the teacher-learner lens:

During the plenary, the children could retain all the different elements of Palm Sunday including how citizens shouted 'Hosanna', when Palm Sunday is celebrated today and why palm leaves were significant... the retention was also demonstrated from the child who has memory problem... She could retell Palm Sunday confidently without the help of a teaching assistant... all the children demonstrated high levels of attainment, thus highlighting how storytelling and story acting can enhance learning.

Rebecca, Post-Practice Essay

Rebecca emphasised that all children had remembered key elements of the story. This suggested that she valued the teaching approach because it supported pupils in encoding and recalling information. She reasoned that it had "worked" even for a pupil

who typically struggled to recall information had been able to remember the key elements. This suggests that she held the narrative unity "*learning is a change in long-term memory*".

Across Rebecca's account, her stance can be seen shifting between different lenses. She did not remain fixed within one lens, but rather moved fluidly between different perspectives, foregrounding different aspects at different points. However, neither did she reflect through all three lenses at the same time, as Jackie had done in her triadic reflections. This suggests that when reflecting on practice, student teachers' stances are iterative, shifting between lenses as they construct meanings (see Figure 6).

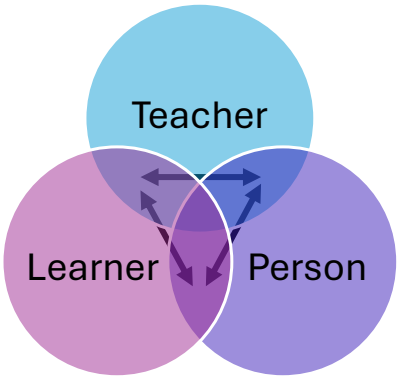


Figure 6: Lens fluidity within the Overlapping Lens model

5.5.2. Depth of reflection in lens fluidity

As well as lens fluidity, Rebecca's account illustrates depth fluidity. Through the learner-person lens, she reflected at a *pedagogical* level. She implemented story acting approaches in practice, which she underpinned with intrinsic motivation theory, and

perceived children engaging in personal meaning-making. In this sense, she found alignment between theory, practice and her personal beliefs about learning. However, through the teacher-learner lens, her reflection became more *surface* level, as she evaluated success primarily by children's factual recall and attainment of learning objectives.

5.5.3. Paradigms of student teacher learning for lens fluidity

As Rebecca shifted between lenses, her account also suggests a shift between paradigms of learning to teach, primarily moving between the situated sociocultural paradigm and the cognitive paradigm, with traces of the process-product paradigm.

Her attention to children's agency, emotional engagement, and the value of storytelling was underpinned by her belief that teachers should create meaningful, motivating experiences. This suggests she was learning to teach through reflection on her professional values and affective responses, consistent with the situated sociocultural paradigm, where knowledge is shaped through participation, emotion, and context. However, in evaluating the lesson's success in terms of how well children retained specific content, she framed her teaching knowledge enabling her to support children's mental processing, aligning with the cognitive paradigm. Furthermore, there were hints of the process-product paradigm, as she implied a linear relationship between story acting and memory retention.

5.6. Summarising the findings for Research Question 2

The conclusion of this chapter returns to Research Question 2: *how do student teachers' reflections on school-based placement experiences illustrate the ways they make sense*

of learning to teach the primary foundation subjects? The findings suggest that student teachers reflect on their placement experiences through overlapping lenses. Through the teacher-learner lens, the student teachers reflected on their teaching strategies in relation to the children's learning outcomes. Through the learner-person lens, reflections foregrounded the conditions of learning and the student teachers' developing values and beliefs about what learning should be like for children. The focus here was on how learning was experienced emotionally, relationally and meaningfully. Reflections through the person-teacher lens explored the relationship between emerging professional values and teaching practice. These reflections centred on how beliefs about teaching shaped the student teachers' pedagogical decisions, and, in turn, how practice transformed their beliefs. A small number of accounts encompassed all three lenses simultaneously, reflecting on their teaching strategies, the children's experiences, and their own developing beliefs and values. Distinct from this, some accounts suggested that the student teachers could move fluidly between lenses throughout their reflective accounts.

5.7. Addressing Research Question 3

Having addressed Research Questions 1 and 2, a comparison of the findings can now be made to address Research Question 3: *in what ways do student teachers' knowledge, learning and reflection change as they move between university and placement settings?*

5.7.1. Knowledge, learning and reflection in university

In university, reflections tended to be through single lenses. Through the teacher lens, reflections were predominantly at pre-reflection or surface levels. While there were some

elements of deeper reflection, they were not consistently represented. Student teachers are less likely to question or challenge ideas they explore through the lens of teacher. The teacher lens reflections indicated strong alignment with the process-product paradigm of student teacher learning. Teaching was often conceptualised as the performance of specific actions or the implementation of techniques, while learning to teach was viewed as the acquisition and refinement of these practices. Student teacher knowledge was typically treated as fixed and measurable, valued for its role in effective curriculum delivery. Even when student teachers engaged in morally or politically related topics, such as inclusion or social justice, they often framed learning in technical terms, focused on strategies rather than values.

Through the learner lens, the depth of reflection was more varied. While some were indicative of surface reflection, there was often stronger alignment with pedagogical reflection, and elements of critical reflection. This suggests that, when exploring the affective and relational aspects of learning, student teachers were more likely to engage in pedagogical reflection, seeking connections between their espoused theories and theories in action. Through the learner lens, student teachers' reflections implied a more varied engagement with different paradigms of student teacher learning. Many student teachers conceptualised their learning as the acquisition or structuring of knowledge, consistent with the cognitive paradigm. They often described their development in terms of mental organisation, memory retention, or the application of prior knowledge. At the same time, several reflections implied that emotionally resonant and context-rich experiences, such as the museum or Gurdwara visit, fostered new perspectives and challenged preconceptions. These reflections suggest alignment with the situated

sociocultural paradigm, where student teacher learning is relational, embodied, and shaped by participation and interaction. Some student teachers began to consider their values and beliefs, hinting at the critical-transformative paradigm. However, even in these instances, learning was often underpinned by instrumental or cognitive terms. Most student teachers did not fully reposition themselves or articulate changes in their identity. In comparison to the teacher lens, the learner lens implied a more complex and sometimes conflicting picture of student teacher development, where multiple paradigms coexisted, often within the same reflective accounts.

Through the person lens, there was evidence of critical reflection. That said, reflecting the person lens alone was not sufficient grounds for critical reflection, perhaps because it often involved a willingness to encounter uncomfortable feelings or challenges to self-perception. Furthermore, reflecting through the person lens was far less common than the teacher or learner lenses. This suggests that student teachers may be less likely to reflect through person lens, but that if they can be supported to do so, they may be more likely to reflect critically. Reflections through the person lens were primarily aligned with the situated sociocultural paradigm, where learning occurred through encounters that challenge prior assumptions and required student teachers to negotiate their values in relation to new contexts. For example, Rebecca and Heather began to reconsider their attitudes towards RE and religion more broadly, drawing on personal histories and emotional responses. However, Cara's reflection suggested fuller alignment with the critical-transformative paradigm, as she explored changes in her worldview and articulated its implications for her future teaching. In comparison to the teacher and learner lenses, reflections that constructed the person lens tended to be concerned with

student teacher identity and values, aligning with the situated sociocultural paradigm. Where the reflections considered broader political or social factors, and articulated potential implications for transformative practice, they aligned with the critical-transformative paradigm.

5.7.2. Knowledge, learning and reflection in placement

As with the university reflections, the practice reflections that constructed the lenses also spanned the full spectrum of reflective levels. However, in placement, the lenses of reflection overlapped, implying that student teachers took multiple stances simultaneously.

Through the teacher-learner lens, the student teachers tended to reflect at surface level, with some emerging pedagogical reflections. Through the teacher-learner lens, the student teachers' reflections suggest that their learning was primarily understood as mastering techniques to support curriculum delivery (process-product), developing strategies to enhance pupil thinking and memory (cognitive), and, for a few, beginning to respond to classroom interactions as part of their professional formation (situated sociocultural).

Through the learner-person lens, reflections tended to be more consistently pedagogical, with some evidence of emerging criticality. These reflections suggest that student teachers came to understand learning (both pupils' and their own) as contextual, affective and identity-forming. This suggests that the learner-person lens reflections were most aligned with the situated sociocultural paradigm, with emerging elements of the critical-transformative paradigm when reflections engaged with values, purpose, and equity.

Through the person-teacher lens, student teachers conceptualised learning to teach as a reciprocal process between their values and pedagogical choices, shaped by relational and contextual factors. The depth levels were more varied here, encompassing surface, pedagogical and critical reflection. Most reflections aligned with the situated sociocultural paradigm, where learning to teach was understood as shaped through relationships, participation in school contexts, and responsiveness to learners. A few aligned closely with the process-product paradigm, viewing teaching as the application of effective strategies to achieve curriculum aims. While reflections occasionally hinted at deeper shifts in professional identity, the critical-transformative paradigm was rarely evident.

5.7.3. Developing the Overlapping Lens model

Throughout Chapter 4 and Chapter 5, the student teachers' reflections have been described in terms of lens, depth, and research paradigms teacher learning. The findings suggest that student teachers may inhabit multiple lenses simultaneously, represented through the overlapping lenses in the model. Student teachers also appeared to move fluidly between lenses in a single account, particularly in the placement reflections – this was termed *lens fluidity*. Surface and pedagogical reflection was evident across both settings, whereas critical reflection was rare and usually only evident at emerging levels. Some accounts encompassed multiple depth levels of reflection, and depth sometimes varied within levels (e.g., accounts may include emerging aspects of a particular depth level, whereas others strongly aligned with the level descriptors) – this was termed *depth fluidity*. Finally, through each lens, the student teachers appeared to draw on multiple paradigms, sometimes within a single account, without noticing the tension or

inconsistencies in their assumptions – this was termed *paradigm fluidity*. These are represented in the Overlapping Lens model of student teacher reflection (see Figure 7).

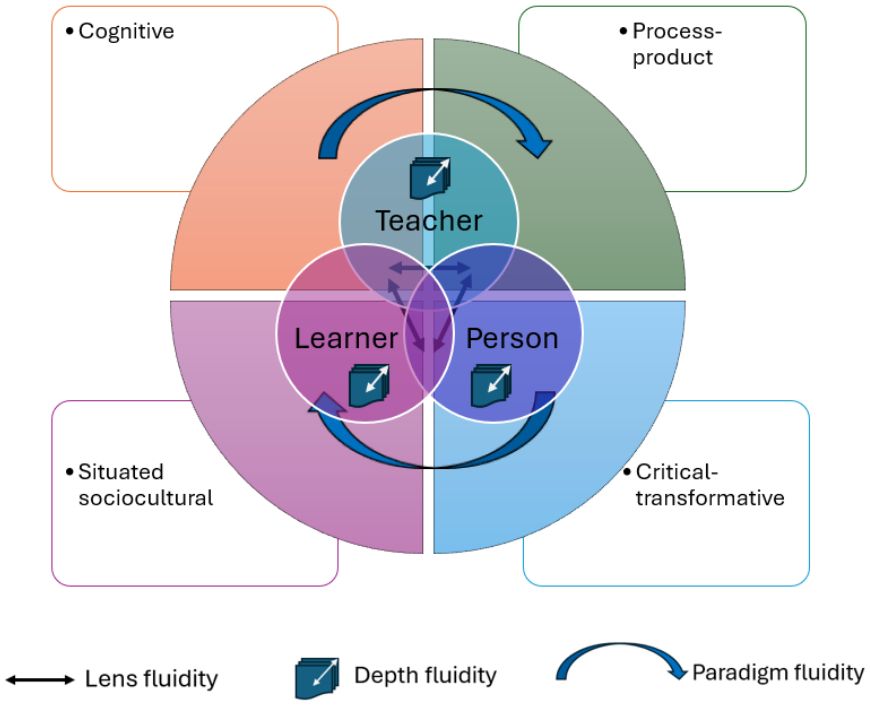


Figure 7: The Overlapping Lens model of student teacher reflection

The next chapter situates the three lenses of the model in existing research and theory, and grounds the Overlapping Lens model in existing frameworks of student teacher reflection and learning.

6. Discussion and Conclusions

The purpose of this study was to understand what and how student teachers learned to teach the primary foundation subjects, and to compare how student teachers' knowledge and learning changed, between university-based experiences and the school-based placement. Despite the increasing emphasis on the primary foundation subjects in England (Ofsted, 2019a, 2024a), there is a gap in the literature concerning what and how student teachers learn to teach in these subjects. The study has addressed this gap, framed by the research questions:

1. How do student teachers' reflections on university-based experiences illustrate the ways in which they make sense of learning to teach the primary foundation subjects?

2. How do student teachers' reflections on school-based placement experiences illustrate the ways they make sense of learning to teach the primary foundation subjects?

3. In what ways do student teachers' knowledge, learning and reflection change as they move between university and placement settings?

The findings were constructed through reflexive thematic analysis of the reflective conversations, journals, and essays of thirteen student teachers undertaking a university module – *Teaching and Learning in the Foundation Subjects and RE* – and their second assessed teaching placement. They described the student teachers' conceptualisations of knowledge and learning, and their reflective processes. The findings suggest that student teacher knowledge and learning may conceptualised through integration of reflective stance, depth (Kember et al., 2008; Larrivee, 2008) and the research paradigms

of teacher learning (Russ et al., 2016), which led to the iterative development of the Overlapping Lens model of student teacher reflection (see Figure 7).

This chapter compares the findings of this study to previous empirical research into student teachers' perspectives on knowledge and learning. It then discusses the theoretical grounding for the teacher, learner, person, and overlapping lenses and situates the Overlapping Lens model within existing frameworks for student teacher reflection and learning. From this, it discusses the Overlapping Lens model's originality and its contribution to the field. Following this, the limitations of the study are identified, as are its implications for practice, policy and research.

6.1. Discussion of student teachers' perspectives on knowledge and learning

This section discusses the findings in relation to previous empirical studies that explored student teachers' perspectives on their own knowledge and learning. In terms of how student teachers perceived the "problem" of teaching, the findings strongly support Tabachnick, Popkewitz and Zeichner's (1979) contention that teaching is understood as *action* rather than knowledge or being. Student teachers' reflections consistently foregrounded teaching strategies and approaches. For example, they considered how student teachers might ensure all pupils participate in PE lessons, how to enable pupils to apply prior knowledge through outdoor learning, and how to use familiar scenarios to prompt children's questioning and evaluative thinking in PSHE (see 4.2.1 Inclusion as the right techniques; 5.1.2 Inclusion as the right techniques; 5.1.1.1 Strengthening children's procedural knowledge; 5.2.1.2 Affective, meaningful experience).

However, these reflections moved beyond simple descriptions of action. Student teachers frequently evaluated pedagogical approaches in relation to pupil experience, particularly through the learner lens and the learner-person lens (see 4.2.1.2 Experience to prompt independent thinking; 4.2.2 Emotional engagement to enable learning; 5.2.1 Evaluating teaching approaches in relation to learner experience). This emphasises that student teachers highly valued pedagogical knowledge, which aligns with the findings of Pope (2017) and Fives and Buehl (2010). Furthermore, several student teachers described the positive emotions they felt when visiting the Gurdwara or participating in the museum visit and viewed these affective dimensions as implicitly linked to improved learning outcomes. This resonates with Ferguson and Bråten's (2018) finding that student teachers prioritise motivation and engagement through activation and variation.

Although knowledge of pedagogy and pupil engagement was strongly present, there was relatively little sustained attention to classroom management strategies, contrasting with Ferguson and Bråten (2018), and Fives and Buehl (2010). A small number of reflections considered organisation or flexibility, but these were infrequent across the data sets. This contrast is noteworthy, particularly given the overall tendency to frame teaching as action. This may imply that, when reflecting on the foundation subjects specifically, student teachers are more likely to be concerned with epistemic or pedagogical concerns over classroom management skills. That said, the data collection methods may have influenced these findings, in that the module outcomes (see Appendix D) may have shaped the content of the post-practice essays (DS3).

There was some evidence of the student teachers perceiving teaching as a problem of *knowledge*, which is somewhat at odds with Tabachnick, Popkewitz and Zeichner (1979)

depiction of student teachers as 'impatient' or 'indifferent' to questions of purpose (p.23). In the present study, some student teachers reflected upon the aims of different foundation subjects (see 4.1.3 Preparing children for future health, wellbeing and citizenship), implying a greater concern with the purpose of education than in earlier research. That said, subject purposes were instrumentally framed, either in terms of public health, academic progress, or contribution to a fair and just society. While these reflections explore the purposes of the foundation subjects, surface-level reflection, combined with process-product paradigmatic assumptions, can limit the extent to which the student teachers might critically grapple with questions of "what" and "why".

Consistent with earlier empirical studies (Fives and Buehl, 2010; Pope, 2017; Ferguson and Bråten, 2018), student teachers strongly believed content knowledge in the foundation subjects to be central for both teaching competence and professional confidence. Through the teacher lens in particular, the student teachers emphasised how they might prioritise developing their content knowledge in particular subjects, and how this might enhance their future teaching (see 4.1.1 Subject knowledge as a practical asset). As in Pope's (2017) study, the student teachers consistently perceived subject knowledge as hand-in-hand with pedagogical knowledge. For example, Heather described how she effectively taught computer programming through carefully planned modelling; comparing two RE lessons, Rebecca described the difference in her confidence and competence when she had prepared detailed subject knowledge (see 5.1.1.1 Strengthening children's procedural knowledge; 5.3.1.4 Developing more nuanced understanding through practice experience).

Aligning with Ferguson and Bråten (2018), there was a persistent underlying assumption that learning was the product of teaching, implying transmissive perspectives. This was evidenced both explicitly, in references to the "passing on" of knowledge, and implicitly, where effectiveness of experiential or affective approaches was evaluated primarily in terms of what knowledge pupils had remembered (see 5.3.1.1 Learning teaching strategies through observation; 4.2.2 Emotional engagement to enable learning; 5.1.1.2 Cognitive interpretation of experiential approaches; 5.2.1.2 Affective, meaningful experience; 5.5.1 Emotional engagement to enable learning). Even when student teachers noticed and valued situated, emotional and cognitive processes of learning, there remained a persistent belief that learning ultimately was a product, measured by how much new information could be remembered at the end of the lesson. This is perhaps indicative of the strong influence of Ofsted's (2019) current framing of learning as a change in long-term memory.

At the same time, the present study suggests a stronger emphasis on learner experience than is evident in earlier empirical research. Student teachers demonstrated sustained concern for inclusion, diversity, and responsiveness to how pupils learn (see 4.1.2 Inclusion as the right techniques; 4.2 Learner Lens; 5.1 Teacher-learner Lens; 5.2 Learner-person Lens; 5.3 Person-teacher lens; 5.4 Triadic lens; 5.5 Lens fluidity). Consistent with Fives and Buehl (2010), student teacher reflections encompassed both knowledge of the specific children that they taught, and more generalised knowledge of child development and how children learn. For example, aligning with the findings of Pope (2017), Cara emphasised how the children she taught learned at different paces and the importance of giving some children more time to respond to questions (see

5.3.1.3 Noticing changes in personal knowledge). Other student teachers reflected on knowledge related to the needs and background factors of different learner profiles, aligning with the findings of Ferguson and Bråten (2018). For example, Jackie reflected on how teaching experience broadened her understanding of barriers to learning that pupils may encounter and how teachers may plan to support children with EAL (see 5.3.1.2 Learning teaching strategies through reflection on practice). This heightened attention to learner experience may reflect broader shifts in educational thinking, echoing Biesta's (2010) critique of "learnification" whereby educational language increasingly centres on measurable learning outcomes, rather than aims and purposes.

There was also evidence, albeit less frequent, that some student teachers perceived teaching as a problem of *being* (Tabachnick, Popkewitz & Zeichner, 1979). In university-based reflections, Jackie described how she wanted to create coherent learning experiences for pupils; Abigail described her aim to create meaningful, holistic learning experiences for all pupils (see 4.1.1.3 Curriculum frameworks as "what you need to know"; 4.2.3.3 Enjoyment and achievement for all). Reflecting on practice, Adam and Terri both described how they valued teaching strategies that enabled inclusion of *all* pupils, not only those identified with SEND; Cara described how she came to value the implicit messages of the practice as much as her planned, explicit teaching (see 5.1.2.2 Techniques for equitable participation; 5.2.2.2 Inclusion as a community of shared values). Aligning with Pope (2017), these examples illustrate how both professional accountability and personal educational values were exemplified through the student teachers' reflections. However, in contrast to Ferguson and Bråten (2018), and Fives and Buehl (2010), it was far less common for student teachers to explore the personal

attributes they believed teachers needed. Marcia implied that teachers should be empathetic, and Cara emphasised the importance of care, but these were rare occurrences across the data sets (see 5.2.2.1 Inclusion as emotional safety; 5.2.2.2 Inclusion as a community of shared values). Again, the module outcomes may well have influenced the content of the student teachers' post-practice essays, which would have shaped the content of Data Set 3.

Emerging knowledge of educational contexts was also evident, aligning with Pope's (2017) finding that student teachers were aware of how curriculum implementation might be shaped in different schools and classrooms. For example, Heather and Eve discussed various ways in which the status of RE as a curriculum subject was diminished; Jackie reflected upon how national curriculum reviews might constrain rather than enhance teaching practice; Cara understood the implementation of the school breakfast club to be a contextual response to the pupils' needs, extending beyond statutory curriculum requirements (see 4.1.3.3 Inclusive and democratic societal values; 5.4.1 Valuing interaction and continuity for learning; 5.2.2.2 Inclusion as a community of shared values). These reflections imply a developing awareness of national educational priorities and how these might shape practice within local contexts. Often, the student teachers noticed how practice was constrained by broader influences, or else meeting a need that went beyond statutory requirements; this chimes with the notion that their professional becoming was constrained by the institutional contexts within which they worked (Tabachnick, Popkewitz & Zeichner, 1979).

Finally, in terms of their own learning, the student teachers frequently positioned practice experience as the most valuable source of teaching knowledge, consistent with Fives and

Buehl (2010). Heather and Kit both identified observing other teachers as an important way of developing their own subject knowledge; Rebecca described her practice experience as the *pinnacle* of her learning (see 4.1.1.2 Subject knowledge as instrumental to teaching; 5.3.1.4 Developing more nuanced understanding through practice experience). However, the findings complicate any simple dichotomy between experience and formal knowledge. While Fives and Buehl (2010) identify self-reflection as a source of knowledge, it is not presented as particularly valued by student teachers. By contrast, the present study illustrates how reflection can act as a central mechanism through which student teachers may interpret experience and construct personal meaning to connect learning across university and teaching practice. Student teachers often sought to recreate in school the kinds of meaningful, interactive and affective learning experiences they had encountered in their university module on teaching the foundation subjects. This was particularly evident in student teacher reflections through the learner lens (see 4.2 Learner lens). Specifically based upon their university reflections, Jackie and Eve sought to create interactive and continuous learning experiences for their pupils; Rebecca, Abigail and Marcia all implemented approaches that were inspired by their own experiences of storytelling (see 5.2.1.1 Continuity of experience; 5.4.1 Valuing interaction and continuity for learning; 5.2.1.2 Affective meaningful experience; 5.2.1.3 Teacher agency and pupil agency; 5.5.1 Emotional engagement to enable learning). As Fives and Buehl (2010) note, formal preparation alone might be insufficient as a source of knowledge for teaching. However, it would also be a misconception to conceive of formal preparation as being concerned entirely with theoretical knowledge. The findings of this study imply that formal teaching preparation

has the potential to be a deeply personal meaning-making experience that can influence professional intentions and shape practice.

Overall, the findings of the study both support and add nuance to prior empirical research. Consistent with earlier studies, student teachers tended to foreground pedagogical action and content mastery, often conceptualising learning as the product of effective delivery. However, when reflecting specifically on the primary foundation subjects, they also demonstrated sustained attention to learner experience, contextual influences and, in some cases, subject purposes. While instrumental framings of knowledge and process-product assumptions remained influential, there were emerging indications of more integrated perspectives in which knowledge, learning and professional becoming were intertwined. In this sense, the present study both corroborates and extends earlier findings by illuminating how student teachers conceptualise knowledge and learning within the specific domain of the primary foundation subjects.

6.2. Discussion of the teacher, learner, person lenses

This section discusses the lenses of teacher, learner, person that were constructed through analysis of the university-based reflections, followed by discussion of the overlapping lenses that were constructed through analysis of the placement-based reflections.

6.1.1. Teacher lens

Teacher lens reflections tended to be at the surface level of reflection and with a dominant orientation towards the process-product paradigm, aligning with other studies

that illustrate student teachers' tendency for linear, means-end thinking (Liakopoulou, 2012; Mansvelder-Longayroux et al., 2007). This emphasises the student teachers' *utilitarian orientation* in reflecting on their professional responsibilities (Zeichner, 1981). This orientation is consistent with long-standing critiques of student teacher learning, where learning encounters are valued based on their perceived practicality and theoretical, moral, or political dimensions are rarely questioned (Goodlad, 1990; Zeichner, 2010; Zeichner, 1981). Biesta (2009) warns that such perspectives narrow the purpose of education to compliance with policy and measurable outcomes. This narrow perspective on teaching contributes to the erosion of *subjectification* (Biesta, 2009), meaning that pupils do not learn to act with autonomy, responsibility or critical agency. The erosion of subjectification chimes with Freire's (1970) critique of education as a banking model that suppresses critical consciousness. The present study confirms this concern, showing that, through the teacher lens, student teachers tended to value *techne* over *episteme* or *phronesis*: foundation subjects were primarily seen as vehicles for delivering predefined outcomes, not as epistemic discipline or moral practices with intrinsic educational value (Kemmis & Smith, 2008a; Wiliam, 2008). Through the teacher lens, student teacher learning could be understood as experiential (Dewey, 1938). The student teachers interpreted their experiences of university-based workshops in light of their previous experiences (see 4.1.1.3 Curriculum frameworks as "what you need to know"; 4.1.2.1. Acquisition of better techniques for inclusion), resonating with the principles of interaction and continuity. Similarly, knowledge could be understood as personal practical knowledge (Connelly & Clandinin, 1985), grounded in personal experiences and concerned with how it may be applied to address practical problems.

6.1.2. Learner lens

The learner lens implied that student teachers' engagement with the primary foundation subjects in university-based ITE is strongly shaped by affective, situated and relational dimensions of learning. This aligns with experiential learning (Dewey, 1938), which foregrounds the principles of interaction and continuity. These principles resonate with the storied nature of teacher learning (Clandinin & Connelly, 1990, 1996), which emphasises how teacher knowledge development is inextricably situated within professional landscapes. This multidimensional view is reinforced by Korthagen (2016), who emphasises that feelings, motivation and integrity are integral to teacher learning. However, through the learner lens, reflections tended to return to cognitive conceptions of knowledge and learning. While accounts explored personal aspects of learning, these were often framed as a means to support pupils' memory retention in future practice. In this sense, the student teachers' *utilitarian orientation* persisted in underpinning learner lens reflections (Zeichner, 1981). This implies that student teachers were ultimately concerned with the development of *techne*, but that there was also an emerging sense of developing *phronesis*, as student teachers attended to the affective and relational aspects of learning (Wiliam, 2008).

6.1.3. Person lens

Through the person lens, the student teacher reflected on identity, values, and self-knowledge. In contrast to the teacher lens, surface level reflections through the person lens could be understood as resistance to deeper reflection that might have involved confronting discomfort and re-evaluating assumptions. Where this resistance was overcome, student teachers reflected both pedagogically and critically (see 4.3.1.4

Depth of reflection for shifting worldviews on diversity). These reflections could be understood in terms of transformative learning (Mezirow, 2000) and problem-posing education (Freire, 1970), as both Cara and Rebecca engaged with ethical, social and political issues, committing to future practice that would be underpinned by their newly emerging values (see 5.2.2.2 Inclusion as a community of shared values; 5.3.1.4. Developing more nuanced understanding through practice experience). In terms of the onion model (Korthagen, 2004), critical reflection through the person lens could be seen as reflecting at the inner layers of identity and mission, which then influenced the outer layers of competencies and behaviours in practice.

To an extent, Heather also implied a shift in values, but she did not explicitly confront her existing beliefs, and her reflection remained at surface level (see 4.3.1.1 Unexamined bias; 4.3.1.4 Depth of reflection for shifting worldviews on diversity). Notably, unlike Rebecca and Cara, Heather did not explore how these values shaped her practice in her placement reflections. This tentatively implies that if student teachers do not reflect at the deeper levels, their actions in practice may not align with their values and beliefs. In terms of the onion model (Korthagen, 2004), this could be understood as a disconnect between the inner and the outer layers of teacher learning. Nevertheless, the focus of these reflections centred on the teacher's duty to enact moral values in practice, suggesting that, through the person-lens, student teachers were developing *phronesis* (Wiliam, 2008). Furthermore, as with the other lenses, student teacher learning could be understood as experiential development of personal practical knowledge (Connelly & Clandinin, 1985; Dewey, 1938).

6.1.4. Overlapping lenses

Practice reflections were primarily described through overlapping lenses, where student teachers took multiple stances simultaneously. As with the single lenses, principles of experiential learning and the development of personal practical knowledge continued to underpin these student teacher learning through the overlapping lenses (Connelly & Clandinin, 1985; Dewey, 1938).

Reflections through the teacher-learner lens were largely situated in the process-product and cognitive paradigms, where learning to teach the foundation subjects was conceptualised as mastery of pedagogical techniques to support pupil attainment. Through this lens, student teachers positioned themselves as expert technicians (Winch et al., 2015), emphasising lesson delivery, memory retention and observable pupil outcomes, as valued by adherence perspectives of learning to teach (Menter, 2021b). While some reflections hinted at more situated forms of knowledge, where classroom interactions shaped pedagogical choices (see 5.1.4. Paradigms of student teacher learning for the teacher-learner lens), such instances were relatively rare and did not prompt questions relating to values or identity. This suggests that knowledge was conceptualised as procedural and related to practical problems (Toom, 2019), and learning was primarily concerned with behaviours rather than beliefs or mission (Korthagen, 2004). As with the single teacher lens, this suggests that, through the teacher-learner lens, knowledge was primarily focused on the development of *techne* (Wiliam, 2008).

Through the learner-person lens, reflective accounts of practice focused on interpretations of affective and contextual dimensions of pupil learning, which both

shaped and were shaped by student teacher beliefs. Like the single lenses of learner and person, these accounts resonated strongly with interaction and continuity, as student teachers' prior personal experiences influenced their pedagogical actions and their interpretations of new experiences (Dewey, 1938). In terms of the onion model, (Korthagen, 2004), reflection through this lens might be understood as interplay between the layers of beliefs, behaviours and environment, as student teachers were concerned with alignment between their beliefs, their teaching strategies, and how they perceived pupil learning experiences. In some cases, reflection extended toward the critical-transformative paradigm, as student teachers began to interrogate issues of purpose and equity in their own practice (Biesta, 2010; Freire, 1970), which could be seen as shift towards the inner layers of identity and mission in the onion model (Korthagen, 2004). This shift implies that through the learner-person lens, student teachers developed both *techne* and *phronesis* (Wiliam, 2008).

Finally, reflections through the person-teacher lens focused on how the student teachers' beliefs shaped their pedagogical choices and how these actions, in turn, transformed their beliefs. These reflections emphasised the communal and contextual aspects of teacher knowledge and learning (Connelly & Clandinin, 1985; Shulman & Shulman, 2004), as student teachers considered how they learned from colleagues and in response to pupils' needs (see 5.3.1.1 Learning teaching strategies through observation; 5.3.1.2 Learning teaching strategies through reflection on practice experience). In terms of the onion model, (Korthagen, 2004), these reflections might be understood as focusing on the outer layers of behaviour and competencies, particularly reflections that were either surface level or situated in the process-produced paradigm

(see 5.3.1.1 Learning teaching strategies through observation). This implies a focus on the development of *techne* knowledge (Wiliam, 2008). However, the deeper reflections, which tended to be positioned in the situated sociocultural paradigm, might be understood as seeking alignment between competencies and identity (Korthagen, 2004) (see 5.3.1.3. Noticing changes in personal knowledge; 5.3.1.4. Developing more nuanced understanding through practice experience). Here, knowledge could be understood in terms of *phronesis* (Wiliam, 2008).

6.1.5. Summary

The above discussion presents how the Overlapping Lens model offers a nuanced illustration of student teachers' learning and knowledge in relation to the primary foundation subjects. Across the lenses, student teacher learning could be understood as the experiential development of personal practical knowledge (Connelly & Clandinin, 1985; Dewey, 1938). Korthagen's onion model (2004b) is particularly helpful to describe this, as within each lens, student teacher learning can be understood in terms of alignment between different layers. When reflecting through the teacher lens, both single and overlapping, student teachers were concerned with the development of *techne*. However, when the learner or person lens was present, knowledge development shifted to *phronesis*, particularly at pedagogical or critical levels of reflection.

Notably, there was little evidence to suggest the development of *episteme*, the generalised, codified knowledge of theory and research (Wiliam, 2008). This is perhaps explained by the prevalence of the principles of experiential learning and personal practical knowledge that underpinned reflections through each of the lenses. Interaction and continuity emphasise how learning occurs through socially constructive

transactions, in and with the environment, the interpretations of which are shaped by prior interpretations of experience (Beard, 2018; Dewey, 1938; Harfitt & Chan, 2017; Mayer, 2015). Knowledge, then, is not characterised by the formal, codified nature of episteme, but as cultural sensitivity and expertise, which develops incrementally, integrated into the learning cycle of experience and meaning making (Beard, 2018; Mayer, 2015; Miettinen, 2000). This aligns far more closely with phronesis than episteme (Wiliam, 2008).

Connelly and Clandinin (1985) suggest that the concern of the teacher is the child in front of them. In the reflective accounts, as student teachers prioritised the children's learning experiences, either in terms of their professional responsibilities (teacher lens), the child's affective and relational experiences (learner lens), or moral and social development (person lens). Building on this, Connelly and Clandinin (1985) emphasise that practice-based knowledge feels 'undefinable' and cannot be precisely represented through the formalised products of disciplined inquiry (p.177). Therefore, it should perhaps be expected that student teacher reflections were more concerned with the development of the practice-based knowledges of techne and phronesis.

Furthermore, Connelly and Clandinin (1985) propose that, for the skilled practitioner, epistemic modes of knowing are *tools* for thinking and understanding, rather than encountered consciously and explicitly. The metaphors of a pencil as a tool and writing as thinking are used to illustrate this idea:

In skilled use, the user "dwells in" the tool and is only subsidiarily aware of it as his attention is focused on its use. We attend to what is written, not to the pencil, and we attend to what is thought and not the mode of knowing by which we do our thinking... the

user's goal is to put the modes of knowing out of "sight". The more effective the tool, the less the user attends to it.

Connelly & Clandinin, 1985, p. 182

In this sense, epistemic modes of knowing become submersed in their personal practical knowledge. In submersion, the modes of knowing become conditioned by the practitioner's narratives of experience and the context of the teaching situation. They infuse the practitioner's personal knowledge but cannot be "called up" in isolation; the 'entire armoury' of personal practical knowledge is "on call" (Connelly & Clandinin, 1985, pp. 183–184). This perhaps explains why the understanding of episteme was rarely foregrounded in the student teacher reflections, but was often used by student teachers to ground their experience in broader perspectives (see 6.2.6. Four lenses for critical reflection (Brookfield, 1998)).

Having considered the nature of the lenses, iteratively developed through this study, in terms of established research and theory, the next section extends the discussion to situate the Overlapping Lens model within existing frameworks of teacher reflection and learning.

6.2. Grounding the Overlapping Lens model in existing frameworks

The overlapping lens model suggests that student teachers adopt different stances when they reflect on their learning – they reflect through the lenses of teacher, learner or person. These lenses may overlap, particularly when reflecting on practice, meaning that the student teachers may simultaneously adopt multiple stances within one reflective account. They may also move from one stance to another, which this study terms *lens*

fluidity. Likewise, across the lenses, reflections do not always fit neatly into one depth category, suggesting that student teacher reflections may be characterised by *depth fluidity*. Finally, the student teachers' reflections convey diverse conceptualisations of teaching and learning, often within the same reflection, suggesting *paradigm fluidity*, where multiple perspectives on teaching and learning shape the student teachers' interpretations. This model is now discussed in relation to existing models of student teacher reflection, learning and knowledge.

6.2.1. Liakapoulou's content and forms of reflection

The findings of the present study imply that student teachers' reflections can be understood at different depth levels, even where the lens and the topic of reflection are the same. This aligns with the work of Liakopoulou (2012), who also suggests that teacher reflections can be understood in terms of their *content* and *form of* reflection (see 2.3.2 Depth models of reflection). Through the teacher lens, reflection tended to be at the surface level, particularly for the accounts concerning subject knowledge and inclusion. When reflecting on the purposes of different subjects, the levels of reflection were more varied. Liakopoulou's study (2012) shows similar patterns, where the content of student teacher reflections tended to focus on methods and objectives. In terms of form, Liakopoulou suggests that student teachers were more likely to reflect at technocratic (surface) levels, rather than interpretative (pedagogical) or critical levels. This strongly aligns with the present study's findings across the data, where critical reflection was rare and mostly confined to the person lens, suggesting that opportunities for moral and political engagement remain limited in early professional learning.

At first sight, the predominance of surface reflection through the teacher lens might suggest that the lens is equivalent to surface reflection itself, potentially weakening the originality of the overlapping lens model. However, importantly, Liakapoulou's (2012) findings suggest that even when the content of reflection is narrowly focused on a teacher's professional duties, student teachers can, albeit rarely, engage in deeper levels of reflection. This suggests that the teacher lens should not be equated with surface reflection. Rather, the lens provides a perspective on professional responsibility that may most often generate surface-level engagement, but which remains distinct from depth levels of reflection.

The learner lens extends Liakopoulou's (2012) framework for student teacher reflection. As discussed above, Liakopoulou suggests that the content of reflection is associated with professional duties and factors associated with the task of teaching. The reflections that constructed the learner lens suggest that the content of student teacher reflection might encompass broader dimensions of teaching, such as seeking to make sense of learning experiences. Notably, through the learner lens, the depth (or form) of reflections was more diverse and there were more instances of pedagogical reflection, in contrast to the teacher lens. Although Liakopoulou rejects the notion of a hierarchy of forms of reflection, the findings of the present study imply that encouraging student teachers to reflect through the learner lens may support them to engage in interpretative/pedagogical reflection, enabling them to identify the theoretical assumptions that underpin their practice (see 6.5. Implications for ITE practice).

The reflections that constructed the person lens also suggest that student teachers moved beyond consideration of their minimum professional duties, to exploring their

values and identity, particularly when prompted by immersive and situated experiences such as the Gurdwara visit. This suggests that the person lens captures reflections that extend beyond Liakopoulou's (2012) framework, foregrounding the ethical and existential dimensions of learning to teach. Markedly, the person lens reflections included the only occurrences of critical reflection in this study's findings, where student teachers interrogated prejudice and acknowledged the sociopolitical significance of teaching (although there were hints of emerging critical reflection through some of the overlapping lenses). This indicates that, while Liakopoulou's model captures the dominant technocratic form of reflection, encouraging student teachers to reflect through the person lens may support deepening criticality (see 6.5. Implications for ITE practice).

6.2.2. Toom's framework of teacher competencies

This section discusses the Overlapping Lens model in relation to Toom's (2019) framework of teacher competencies. The teacher lens reflections imply that student teachers were primarily concerned with the competencies required to address the *practical challenges* of teaching: applying pedagogical strategies effectively (*procedural knowledge*) and accumulating sufficient subject matter (*declarative knowledge*). There was far less alignment between the teacher lens reflections and the *theoretical challenges* of teaching, such as using broader principles to develop practice or developing deeper disciplinary understanding.

Reflections through the learner lens partially align with Toom's (2019) dimensions of teacher competence. Here, student teachers emphasised affective engagement, curiosity, and the relational quality of learning experiences. This suggests an implicit engagement with the *theoretical challenges* of teaching, though not always in the sense

that Toom describes. In terms of the *declarative knowledge* needed, student teachers did not articulate generalised 'theories [or] principles of education' (Toom, 2019, p. 815). However, their reflections often conveyed emerging beliefs about how learning happens, e.g., through curiosity, through shared experience, through emotional experience. These beliefs could be seen to represent a tentative form of *declarative knowledge*, grounded in their own situated experience rather than generalised concepts. Likewise, in terms of *procedural knowledge*, the student teachers drew on lived experiences as learners rather than educational theory. For example, they reflected on how enjoyment fostered engagement, or how group participation supported belonging (see 4.2.2. Emotional engagement to enable learning; 4.2.3.2 Enjoyment and achievement for all). This implies that their conceptualisation of teacher competence was based on generating situated understandings from experience, rather than applying formal theories as Toom's (2019) framework suggests. In this way, the overlapping lens model can be seen to extend Toom's framework of teacher competence to encompass experiential and affective dimensions of knowing.

Unlike the teacher lens, the learner lens implied little direct concern with the *practical challenges* of teaching, such as applying pedagogical strategies or delivering curriculum content. Where such links were implied, they were framed in terms of the student teachers' own experiences of learning. In this sense, the student teachers evaluated competence in terms of relational and emotional insights, rather than application of practical techniques. This suggests that the learner lens offers an further extension to Toom's (2019) framework, in that it integrates interpretations of personal experiences of learning.

The person lens reflections foregrounded aspects of learning that Toom's (2019) framework of teacher competence does not explicitly capture - namely, the personal and ethical dimensions of becoming a teacher. Toom's framework conceptualises teacher learning as cognitive and behavioural change that leads to being better prepared for the challenges of teaching. By contrast, the person lens reflections were less concerned with *declarative* or *procedural knowledge* and instead foregrounded personal and cultural knowing, as they recognised their own worldviews and (re)interpreted experiences. Similarly, the person lens reflections were less concerned with the theoretical or practical challenges of teaching, but more concerned with moral and existential challenges. For example, the Gurdwara visit prompted reflections that grappled with prejudice, inclusion, and social justice (see 4.3.1. Shifting worldviews on diversity). This suggests that the person lens extends Toom's (2019) framework by emphasising that learning to teach goes further than the acquisition and application of knowledge; it involves the development of dispositions that enable teachers to act with moral purpose in complex and dynamic contexts.

6.2.3. Fives and Buehl's framework of beliefs about teacher knowledge

This section considers the Overlapping Lens model in relation to Fives and Buehl's (2010) framework of beliefs about teacher knowledge. The teacher lens reflections align most strongly with the frame of domain knowledge. There is strong resonance with *content knowledge* and *pedagogical knowledge* (see 4.1.1 Subject knowledge as a practical asset), with some engagement with *knowledge of children* (see 4.1.2 Inclusion as the right techniques). There was little evidence of *knowledge of the self and others*, or of *classroom management and organisation* in relation to the foundation subjects. This

suggests that, through the teacher lens, the student teachers believed the foundation subjects to be associated with content delivery and pedagogical effectiveness, rather than the more relational or ethical aspects of domain knowledge. The teacher lens reflections also relate to Fives and Buehl's (2010) final frame, *domain qualities and skills,* as student teachers were concerned with what they perceived to be their professional responsibilities, including developing sufficient subject knowledge, enacting curriculum purposes, ensuring that practice was inclusive.

Through the learner lens, comparisons could also be made with Fives and Buehl's (2010) frame of domain knowledge. The learner lens accounts aligned most closely with *pedagogical knowledge*, *knowledge of children*, and *knowledge of self and others*. The student teachers frequently attended to how learning felt and how these emotions shaped their experience of learning. In turn, this informed their perceptions of effective pedagogy (see 4.2.2. Emotional engagement to enable learning). *Pedagogical knowledge* was not framed in instrumental terms, as in the teacher lens, but as integrally related to the relational and emotional dimensions of learning (see 4.2.1. Learning as more than curriculum delivery). Similarly, their emphasis on belonging and community resonates with *knowledge of children* and *of self and others* (see 4.2.3 Inclusion as belonging). In this sense, the learner lens extends Fives and Buehl's framework, foregrounding the affective, embodied and communal dimensions of knowledge.

Through the learner lens, there is less alignment with the frame of domain knowledge (Fives & Buehl, 2010). Within this frame, beliefs about knowledge of "how learning feels" or "emotions that support learning" are notably absent. However, connections can be made to Fives and Buehl's second frame, *sources of knowledge*. Like the learner lens

reflections, this domain emphasises the relational and situated aspects of teacher learning. Likewise, Fives and Buehl's final frame, *domain qualities and skills*, hints as the affective dimensions of learning, as it emphasises the importance of creativity and ingenuity as part of adaptability. This implies a concern with creating engaging learning experiences for pupils, like the learner lens reflections of the present study. Similarly, this frame emphasises teacher enthusiasm as a pre-requisite for learner motivation. Furthermore, through the learner lens, the reflections on inclusion imply a sense of fairness and respect for all pupils, again resonating with the final frame that highlights the teacher's integrity and nurturing qualities (Fives & Buehl, 2010).

The person lens reflections aligning with *knowledge of self and others*, part of the frame of domain knowledge (Fives & Buehl, 2010). However, in the present study, self-knowledge was not limited to identifying strengths and weaknesses in practice, as described by Fives and Buehl. Instead, it encompassed recognition of personal worldviews and ethical values, implying a broader conceptualisation of self-knowledge. Similarly, the person lens accounts resonate with frame of sources of knowledge, which are largely described in terms of formal learning, or through relational, practice-based experiences (Fives & Buehl, 2010). However, the person lens highlighted immersive, affective experiences, such as the Gurdwara visit, as potential disorienting dilemmas, prompting perspective transformation (Mezirow, 2000) (see 4.3.1. Shifting worldviews on diversity). In this way, the person lens extends Fives and Buehl's (2010) framework, by identifying sources of knowledge that are experiential and ethical, rather than only those that are formal or practical.

Finally, the frame of domain qualities and skills resonates strongly with the person lens reflections, especially in relation to nurture and integrity (Fives & Buehl, 2010). This frame captures beliefs about the personal attributes teachers should embody in their professional role, where teaching is conceptualised as more than transmission of information. The person lens reflections echoed these qualities, but in a way that foregrounded ethical and relational dimensions. For example, the reflective accounts emphasised deepened respect for cultural diversity (see 4.3.1.1. Unexamined bias; 4.3.1.2 Challenging prior values) and framed inclusion as a moral responsibility (see 4.3.1.3 Acknowledging implicit bias). It may be that reflection on immersive, affective experiences can support student teachers to develop their commitment to the domain qualities and skills outlined by Fives and Buehl (see 6.5. Implications for ITE practice).

6.2.4. Shulman and Shulman's attributes of learning to teach

This section discusses the Overlapping Lens model in relation to Shulman and Shulman's (2004) model, which emphasises that accomplished teaching develops within a professional community, around five clusters of attributes: cognition, disposition, motivation, performance, and reflection.

Through the teacher lens, reflective accounts were most strongly aligned with the performance and motivational dimensions, as subject knowledge and knowledge of specific techniques were viewed as underpinning competent performance (see 4.1.1 Subject knowledge as a practical asset; 4.2.2 Inclusion as the right technique). The cognitive cluster was somewhat present, for instance, in recognising gaps in subject knowledge or critiquing curriculum frameworks, but this was narrowly focussed on content coverage rather than disciplinary or pedagogical analysis (see 4.1.1.1 Subject

knowledge for confidence and competence; 4.1.1.3 Curriculum knowledge as "what you need to know"). The disposition cluster was evident implicitly, in unexamined beliefs such as "teachers must sequence knowledge for connections" or "inclusion is about the right techniques" which functioned as guiding assumptions for practice (see 4.1.1 Subject knowledge as a practical asset; 4.1.2 Inclusion as the right technique). Engagement in the reflective cluster was limited, as the teacher lens reflections were typically confined to surface level engagement, with little evidence of deeper self-criticism or theoretical interrogation. This suggests that the teacher lens might narrow professional learning to performance and motivation for effective delivery, possibly marginalising the dispositional, cognitive and reflective dimensions of teacher learning.

Through the learner lens, student teachers articulated how their own affective and embodied experiences of learning shaped their developing beliefs about pedagogy (see 4.2.1 Learning as more than curriculum delivery; 4.2.2 Emotional engagement to enable learning). This resonates with Shulman and Shulman's (2004) dispositional cluster, which emphasises the need for student teachers to develop a *vision* for their practice, and the cognitive cluster, as the student teachers drew connections between their own learning experiences and future pedagogical implications. Likewise, the learner lens also captured reflective attributes, as some student teachers began to reframe their assumptions (see 4.2.3.3 Depth of reflection for inclusion as belonging). The motivational cluster was implied in student teachers' willingness to interpret immersive experiences, particularly in the student teachers' enthusiasm for storying experience (see 4.2.2 Emotional experiences to enable learning). Unlike the teacher lens, performance attributes were less central, since the learner lens reflections were more

concerned with understanding the situated and contextual conditions for learning, rather than application of techniques. This suggests that by reflecting through the learner lens, student teachers may be supported to develop many aspects of Shulman and Shulman's (2004) attribute clusters.

In the person lens reflections, student teachers were concerned with how their values and beliefs might shape or be constrained in practice (see 4.3.1 Shifting worldviews on diversity). This resonates with Shulman and Shulman's (2004) dispositional cluster of attributes, which encompasses vision and beliefs, and the motivational cluster, which includes resilience and persistence. The cognitive attribute cluster was less represented through the person lens, as the reflections were more concerned with beliefs and values over analytical understanding. Similarly, these reflections were more concerned with the values that underpinned practice, rather than instrumental techniques, meaning that the performance cluster was also less represented. Shulman and Shulman's (2004) reflective cluster emphasises the attributes of 'self-criticizing and learning from experience' (p.256), which implies critical reflection (Kember et al., 2008; Larrivee, 2008). Through the person lens, one student teacher - Cara - reflected critically, the only secure example of critical reflection across the entire data set (see 4.3.1.4 Depth of reflection for shifting worldviews on diversity). Within the placement reflections, there were indications of emerging critical reflection in the learner-person and the person-teacher accounts, but none through the overlapping lens of teacher-learner (see 5.1.3. Depth of reflection through the teacher-learner lens; 5.2.3. Depth of reflection through the learner-person lens; 5.3.2 Depth of reflection through the person-teacher lens). These findings imply that to access deeper levels of reflection, student teachers might reflect through

the person lens. This suggest that the person lens aligns closely with Shulman and Shulman's (2004) reflective cluster of attributes, and more so than the teacher or learner lenses.

This discussion of the clusters of attributes that encompass learning to teach (Shulman & Shulman, 2004) in relation to the Overlapping Lens model highlights the significance of all three lenses. Deeper levels of reflection and broader paradigmatic perspectives seem to be more common through the lenses of learner and person, which could be interpreted to mean that these are more valuable to student teacher learning. However, Shulman and Shulman's (2004) model emphasises the importance of the performance cluster, which is foregrounded in the teacher lens reflections, but relatively underrepresented within the accounts of the other single lenses. Perhaps unsurprisingly, the performance attributes were more evident in the practice-based reflections. Here, each of the overlapping lenses emphasised aspects of teacher behaviours in relation to their effectiveness to support pupil attainment (teacher-learner lens), their alignment with pupil learning experience and student teacher beliefs (learner-person lens), or the interplay between behaviours and beliefs in relation to situated contexts. This finding implies that, while performance attributes might be likely to develop through reflections on practice, developing these attributes in university-based ITE could involve encouraging student teachers to reflect through the teacher lens (see 6.5. Implications for ITE practice).

6.2.5. Korthagen's onion model

This section discusses the Overlapping Lens model in relation to Korthagen's (2004a) onion model. Through the teacher lens, the student teachers' reflections resonate most closely with the onion model's outer layers of behaviour and competencies. Student

teachers were concerned with acquiring subject knowledge, sequencing content, and applying inclusive techniques, which maps onto the competency layer, while their descriptions of “getting it right” aligned with the behavioural layer (see 4.1.1 Subject knowledge as a practical asset; 4.1.2 Inclusion as the right techniques). However, these reflections rarely explored concepts related to personal beliefs or identity, suggesting that through the teacher lens, student teachers’ reflections tended to be limited within the outer circles of the onion model. This is to be somewhat expected, given the instrumental orientations and prevalence of the process-product paradigm in the reflections that constructed this lens.

The learner lens reflections suggest a concern with competencies and beliefs, aligning with the onion model’s middle layers. Through this lens, the student teachers reflected on effective approaches to learning, emphasising the affective and communal conditions that supported their own engagement. This implies an emerging awareness of how beliefs might shape pedagogy. However, the student teachers often retained cognitive conceptualisations of learning, despite emphasising the situated sociocultural dimensions of experience, meaning that their reflections remained at the layers of competency and belief, rather than moving towards the deeper layers of identity and mission.

The person lens aligned most strongly with the onion model’s inner layers of beliefs, identity, and mission. Here, student teachers explored personal worldviews and cultural assumptions, particularly in response to immersive, situated experiences, such as the Gurdwara visit. Their reflections foregrounded existential and moral issues (e.g., prejudice, diversity, social justice) and considered how values and beliefs might shape

future practice, closely resonating with the onion model's inner layers of belief and identity.

Comparing the Overlapping Lens model with the onion model suggests a tentative pattern, where teacher lens reflections are aligned with the outer layers, learner lens with the middle layers, and person lens reflection with the inner most layers. Given that learning at the inner layers is more likely to bring about lasting changes to practice (Korthagen, 2016), teacher educators might seek to encourage student teachers to engage in learner lens and person lens reflections (see 6.5. Implications for ITE practice).

Korthagen (2016) highlights that learning can take place at multiple levels, which resonates with Overlapping Lens model's concepts of depth and lens fluidity. However, Korthagen does not consider reflection in terms of depth, either in the onion model or the model of realistic teacher education, where reflection is suggested to enable learning through schematisation of gestalts and theorisation of schema (Korthagen, 2004; Korthagen & Lagerwerf, 2001). In this sense, the Overlapping Lens model offers a more nuanced perspective on teacher learning.

It is argued that much of the literature on reflection 'fails to incorporate the kind of social and political analysis that is necessary to see and then challenge the structures that continue to undermine' the achievement of teachers' aims (Zeichner & Liu, 2010, p. 75). The onion model is distinguished from others as it specifically acknowledges the interplay between learning and the environment, encouraging reflection on the environment as well as the personal layers of learning (Korthagen, 2004). Similarly, the Overlapping Lens model situates teacher reflection within the research paradigms of teacher learning (Russ et al., 2016), meaning that reflections can be understood in terms

of their underpinning assumptions of the nature of knowledge and learning. This emphasises that within reflections, conceptualisations of knowledge and learning remain contested and varying, as the findings indicated paradigm fluidity within reflective accounts (see, e.g., 5.4.3 Paradigms of student teacher learning for the triadic lens; 5.5.3 Paradigms of student teacher learning for lens fluidity). Notably, across the data, the student teachers did not indicate any awareness of inconsistencies in the paradigmatic assumptions that underpinned their conceptualisations of knowledge and learning. Understanding the paradigms of teacher learning (Russ et al., 2016) may support student teachers to notice their different, often competing, conceptualisations of teaching and learning, which could be an initial step towards the social and political analysis called for by Zeichner and Liu (2010) (see 6.5. Implications for ITE practice).

6.2.6. Brookfield's lenses for critical reflection

This section considers how the Overlapping Lens model aligns with Brookfield's (1998) four lenses for critical reflection. Brookfield's *autobiographical lens as a learner of practice* resonates with both the person lens of the Overlapping Lens model, as both emphasise the subjective nature of interpretation of experience. The learner lens of this model aligns with Brookfield's lens of *seeing through our learners' eyes*, as both centralise the learner's experience for the purpose of developing more responsive practice. However, Brookfield situates his learner lens within practice and emphasises the need to build trusting relationships with pupils to gain a more accurate understanding of their experiences. In contrast, the Overlapping Lens model extends Brookfield's learner lens, as it encompasses reflections on student teachers' own experiences of "being the learner" in university *and* their perceptions of pupils' experiences in practice.

Furthermore, Brookfield's learner lens is concerned with gaining feedback to adjust practice and support pupil learning (Brookfield et al., 2019), which relates more to the teacher lens in the Overlapping Lens model. Instead, the learner lens in the present study encompasses the student teachers' understanding of the relational and affective dimensions of learning experience.

Brookfield's (1998) *lens of our colleagues' experiences* emphasise the relational aspect of teacher learning. To an extent, this was evident in some of the student teachers' reflections, e.g., Cara emphasised how she learned from observing different colleagues' practice and secure professional relationships (see 5.3.1.3. Noticing changes in personal knowledge); Rebecca drew on feedback from her mentor to evidence positive changes in her practice (see 5.3.1.4 Developing more nuanced understanding through practice experience). These examples were both part of the person-teacher lens accounts, suggesting that when student teachers reflect on their professional responsibilities alongside their personal development and values, they may be more likely to engage with perspectives of experienced colleagues.

Finally, Brookfield (1998) suggests that the *lens of theoretical literature* might enable teachers to situate their interpretation of experience within multiple perspectives and become aware of the political and social conditions that shape and constrain practice. In this Overlapping Lens model, these sorts of interpretations were not conceptualised as a separate stance but were implied at some of the deeper levels of reflection or in the critical-transformative paradigm. For example, Jackie drew on academic literature to ground her understanding of the pressures of curriculum coverage (see 5.4.1 Valuing interaction and continuity for learning). Rebecca connected her own learning

experiences and those of her pupils with theories of intrinsic motivation (see 4.3.1.2 Challenging prior values; 5.5.1 Emotional engagement to enable learning). Cara's understanding of her own implicit bias was grounded in academic literature about group membership (see 4.3.1.3 Acknowledging implicit bias). Terri drew on academic literature to deepen her understanding of the purposes of PSHE and Eve explored how direct experience might support learning; in both cases, they raised questions of how the principles discussed might be enacted in practice, beginning to recognise possible complexities and nuances (see 4.1.3.2 Mental wellbeing for academic success; 4.2.1.2 Experience to prompt independent thinking). As Brookfield (1998) suggests, these examples illustrate how engagement with theoretical perspectives might deepen student teachers' understanding of their practice. However, in the Overlapping Lens model, this is represented at the deeper levels of reflection, or reflections within the critical-transformative paradigm.

However, it was very rare for student teachers to *begin* with theoretical perspectives in their reflections; consistently, their reflections were prompted by experiences, emotions, or concerns with the instrumental aspects of teaching, particularly in the initial reflective conversations (see 4.1.2 Inclusion as the right techniques; 4.2.2.2 Storying experience to support learning). This resonates with the earlier suggestion that student teachers tended not to prioritise declarative knowledge in relation to theoretical challenges, particularly not generalised theories (see Teacher competencies (Toom, 2019)). Instead, conceptual theory tended to be used to situate lived experience, rather than foregrounded as the main topic of reflection. This aligns with realistic teacher education, where knowledge is conceptualised initially at the *gestalt* level, before becoming

increasingly *schematised* and *theorised* through reflection on experience (Korthagen & Lagerwerf, 2001).

However, when reflection was at surface level, engagement with theory was often used to confirm unexamined assumptions, even when these were in tension with descriptions of experience. For example, despite describing rich sensory and affective experiences, Sarah consistently grounded her understanding in cognitive perspectives of memory retention, both in university and placement (see 4.2.2.1 Affective experience but cognitive interpretation; 5.1.1.2 Cognitive interpretation of experiential approaches). Notably, Liston et al (2022) used Brookfield's (1998) lenses to scaffold student teacher reflection; they found that the lenses supported student teachers to unearth unexamined assumptions, but that reflections often lacked critical consideration of moral and political contexts. As Liston et al (2022) propose, a lack of critical engagement risks the process of reflection serving only to reinforce existing beliefs and values, rather than *transforming perspectives* or supporting student teachers to gain more than a *partial view* of the world (Freire, 1970; Mezirow, 2000). These findings suggest that, even when student teachers are directly prompted to situate their experiences within theory and research, critical reflection is rare, aligning with the findings of this study and others (e.g., Kember et al., 2008; Liakopoulou, 2012).

The origins and purposes of the models also differ. Brookfield's four lenses were constructed over several years through synthesis of theory and his own practice as an educator (e.g., Brookfield, 1995, 1998; Brookfield et al., 2019), whereas the Overlapping Lens model was iteratively developed through Reflexive Thematic Analysis (Braun & Clarke, 2022). While there is undoubtedly a more established research base for

Brookfield's lenses, the Overlapping Lens model is distinct, as it is developed from interpretation of student teachers' reflective accounts, rather than the educator's interpretation of their interactions with students (Brookfield et al., 2019). In this sense, the present study foregrounds the voices of student teachers and their conceptualisations of knowledge and learning. Moreover, the purpose of Brookfield's (1998, 2017) lenses is to support teachers to surface hidden assumptions and commonsense beliefs that might go unexamined. In contrast, the purpose of the Overlapping Lens model is to represent the nature of student teacher reflection, learning and knowledge within this case study. With further research, the Overlapping Lens model might be adapted to provide a scaffold for reflection or else support student teachers to become metacognitively aware of their stance for reflection (see 6.5. Implications for ITE practice).

Finally, perhaps the most distinct difference between the two models is that the present study highlights the overlapping and fluid nature of student teacher reflection, learning and knowledge. Whereas Brookfield (1998, 2017) emphasises the distinction between each lens, the Overlapping Lens model highlights how stances for reflection may be multiple and dynamic. Furthermore, Brookfield (2017) argues that purposeful reflection is critical, implying that ITE curricula should prioritise teaching the skills of critical reflection. In contrast, the present study's findings suggest that, even when a breadth model (Rolfe et al., 2001) is implemented to scaffold reflection, student teacher reflection still occurs at different levels, sometimes moving between levels within the same reflective account. These findings align more with Tiainen et al's (2024) study, which suggests that non-prescriptive, self-guided approaches are effective in supporting

deeper reflection on practice experiences, where learning is related to the student teachers' individual needs and motivations. In this sense, the Overlapping Lens model might be used as a formative assessment tool for teacher educators to assess the current learning needs and concerns of student teachers and consider ways in which to support deeper understandings (see 6.5. Implications for ITE practice).

6.2.7. Summary

The above discussion illustrates how the Overlapping Lens model aligns with existing frameworks to describe student teachers' reflections relation to learning to teach the primary foundation subjects. Like Liakopoulou's (2012) framework, the Overlapping Lens model considers student teacher reflections in terms of content and depth. Similar to Toom's (2019) model of teacher competence, the Overlapping Lens model illustrates the varying concerns of student teachers, such as practical or theoretical challenges, and the types of knowledge they may use to address these concerns. Aligned with Fives and Buehl's (2010) framework of beliefs about teacher knowledge, the Overlapping Lens model suggests that student teachers are concerned with aspects of domain knowledge, their sources of knowledge, and domain qualities and skills.

The discussion also establishes important aspects of the Overlapping Lens model. Although the teacher lens reflections tended to be at surface level (Larrivee, 2008), Liakopoulou's (2012) findings suggests that critical reflection is possible when reflecting on professional responsibilities and instrumental aspects of teaching. Likewise, although the teacher lens in this study was characterised by early levels of reflection and tended to be limited to the process-product paradigm, consideration of Shulman and Shulman's (2004) work highlights that teacher lens reflections are perhaps most likely to

lead to the development of performance attributes. Discussion of Korthagen's (2004a) onion model implies that the teacher lens aligns with the outer layers of the onion model, and the learner and person lenses represent a shift towards the middle and inner layers respectively. This could mean that learner and person lens reflections are more likely to bring about lasting change to student teachers' practice (Korthagen, 2016). Finally, Brookfield's (1998) model of four lenses offer further theoretical grounding to the Overlapping Lens model. Moreover, Brookfield's theoretical lens highlights the nuanced role of theory in the student teachers' reflections. At pedagogical and critical levels of reflection, theory tends to be used to ground interpretations of lived experience, aligning with the realistic approach to teacher education (Korthagen & Lagerwerf, 2001). However, for surface level reflections, theory and research appears to reinforce unexamined beliefs, similar to the findings of Liston et al (2022).

6.3 Original contribution to knowledge

Having established its theoretical grounding, this section presents the Overlapping Lens model as the thesis' original contribution to knowledge. Notably, the existing frameworks tend to situate teacher learning and reflection in practice, excepting Toom (2019) who recognises theoretical as well as practical challenges, and Fives and Buehl (2010) who note the role of formal teacher preparation. Therefore, the Overlapping Lens model foregrounds student teacher voices across both university and school-based reflections, offering a fuller perspective on student teacher reflection and learning,

In another distinction to existing frameworks, the Overlapping Lens model emphasises the multiplicity of reflective stances student teachers may inhabit, either fluidly moving between lenses within one account, or reflecting through multiple lenses at the same

time. This is in contrast to Brookfield's (1998) four lens model, which emphasises the distinction between the lenses. Similarly, the Overlapping Lens model extends Toom's (2019) framework through the development of the person lens, which suggests student teachers are concerned with moral and existential challenges, which they address using personal and cultural knowledge. Likewise, the Overlapping Lens model extends Fives and Buehl's (2019) framework, highlighting the student teachers' understanding of the affective dimensions of learning through the leaner lens, and broadening the conception of *knowledge of self and others* and *sources of knowledge* through the person lens. The extension of these existing frameworks mean that student teacher knowledge and reflections can be understood in more complex ways, for example, through lens fluidity or multiple overlapping lenses.

Unlike existing frameworks, the Overlapping Lens model suggests that student teacher reflections may occur at varying depths within a single account, termed *depth fluidity*. Rather than be characterised by one depth level, student teacher reflections might be characterised by multiple descriptions of depth levels (see 4.1.3.4 Depth of reflection for preparing children for future health, wellbeing and citizenship). Similarly, there might be variation within one depth level, for example, where some accounts held emerging indications of pedagogical reflection, whereas others strong examples of pedagogical reflection (see, e.g., 5.3.2 Depth of reflection through the person-teacher lens). Existing depth models (e.g., Kember et al., 2008; Larrivee, 2008) do not account for multiple depths within one account, nor do they consider varying depths within one level descriptor. This difference may be due to the existing models' purposes, where, like Brookfield's lenses, they have been developed to support student teachers to reflect

more deeply. In contrast, the Overlapping Lens model illustrates the "messiness" of reflection that occurs with complex and dynamic contexts, describing how student teacher reflections do not always neatly fit or fully exemplify one set of characteristics.

Furthermore, the existing frameworks all assume that teachers hold consistent paradigmatic conceptualisations of teaching and learning. For example, the onion model (Korthagen, 2004) emphasises that the outer layers may influence the inner layers, and vice versa. However, it does not consider that at the *environment* or *behaviour* layers, the teacher may be working within the process-product paradigm, but at the *mission* layer, they may be closer aligned to the critical-transformative paradigm. Similarly, Shulman and Shulman (2004) highlight the need for ITE and school settings to be environments that 'support, sustain and 'tune'' to the cognitive, dispositional, motivational, performance and reflective attributes of student teachers (p. 267). However, they assume that these attributes will be based on consistent paradigmatic assumptions. In contrast, the Overlapping Lens model implies that the performance attributes may be aligned with the process-product paradigm, and the disposition attributes may be closer to the situated sociocultural paradigm. This is particularly pertinent when considering student teacher reflection, learning and knowledge, as they are arguably less likely to be cognisant of competing paradigms than more experienced teachers.

As such, the thesis' original contribution to knowledge is made through the development of the Overlapping Lens model. This model foregrounds student teacher voice across university-based *and* school-based reflections, offering a fuller understanding of student teacher learning. Overlapping lenses and lens fluidity illustrate that student teacher reflections adopt both single and multiple lenses or may move fluidly between these

lenses. Depth fluidity emphasises that various depth levels of reflection may occur within single accounts, or that there might be variation of depth within the levels themselves. Finally, paradigm fluidity challenges the assumption made by existing models that student teachers hold consistent paradigmatic assumptions throughout their sense making processes. Having established the thesis' original contribution to knowledge, the discussion now considers the study's limitations.

6.4 Limitations

The findings and their interpretation are acknowledged as situated and partial, given the study's constructivist philosophy, single-institution case study methodology, and reflexive, interpretative approach to data analysis. This section discusses the limitations of the study, both in terms of its methodological choices and its scope, and considers how these limitations inform the interpretation of the findings.

The study relied on naturally occurring data: documents that were generated by student teachers engaging in a reflective writing assignment. While several studies use similar data within the field of ITE research (e.g., Bataller-Català, 2025; Kohler et al., 2008; Zhang et al., 2023), the premise of requiring student teachers to produce written reflections for assessment has been critiqued. Biesta (2019) suggests that such tasks lead student teachers to write in 'socially desirable ways', reporting on what they already know about practice, rather than exploring 'shifts in their perceptions and understandings' (p.118). This prevalence of surface reflection in this study and others (Liakopoulou, 2012) supports Biesta's concern, highlighting how the assessed nature of the data sets may have inhibited more open, uncertain or existential reflection. This may explain why the

findings often implied concern for what was already familiar to the student teachers, and why moments of critical reflection or perspective transformation were rarer.

This study's findings and the iteratively developed overlapping lens model are based on reflexive interpretation of these written reflections, drawing on the assumption that reflection can make tacit knowledge explicit (Schön, 1983). However, Eraut (2000) critiques the concept of tacit knowledge as being underdeveloped, questioning whether it refers to knowledge that is unexpressed or inexpressible. This is pertinent here, as some of the knowledge underpinning the student teachers' reflections may never have been communicable in writing. Data Sets 2 and 3, which were academic assignments, may have introduced an additional layer of constraint, as the student teachers' communication was shaped by their academic writing skills, as well as what they knew. Therefore, the overlapping lens model is acknowledged as a partial account of how student teachers made sense of their learning.

The literature review highlighted the enduring role of the apprenticeship of observation shaping student teachers' tacit beliefs, which are often unexamined and resistant to change (Westrick & Morris, 2016). This study defined knowledge broadly enough to encompass beliefs, attitudes and orientations. However, it did not explicitly examine the beliefs that student teachers held about the foundation subjects prior to the FARE module or placement. As such, the findings must be read with caution, particularly the prevalence of adherence perspectives, as they may be underpinned by pre-existing beliefs that remain unarticulated.

Similarly, while the theoretical framework centred situated sociocultural perspectives, the study did not directly investigate the contextual conditions in which learning

occurred. For example, the study did not capture the content of the university workshops, the intended learning outcomes of the teacher educators, the curricula of the placement schools, or the roles played by school-based colleagues. However, the findings suggest that contextual influences were highly significant, particularly in the tension the student teachers experienced between enquiry and adherence. Richer contextual data could clarify the extent to which the overlapping lens model represents student teachers' own processes of meaning making, and how far it is shaped by the influence of university and school contexts.

Mentor support is another example of a contextual factor that may have influenced the findings. The literature consistently highlights mentoring as central to shaping student teachers' reflection and learning (e.g., Liakopoulou, 2012; Whitcomb, 2012). However, the present study did not examine how mentor feedback or support influenced the student teachers' reflections in Data Set 3. The absence of this dimension should be acknowledged, as it makes it harder to fully account for the placement reflections, where student teachers appeared to navigate tensions between adherence and enquiry.

The study's methodological and scope-related limitations qualify the interpretation of its findings. The overlapping lens model provides valuable insights into what and how student teachers learn to teach the foundation subjects, yet they are only partial accounts. The findings are shaped by the assessed nature of the data, the absence of prior belief exploration, and the lack of direct attention to contextual conditions, such as curricula and mentoring. While these limitations constrain the scope of the claims that can be made, they also highlight potential avenues for future research. The next sections therefore discuss the study's implications for future practice, policy and research.

6.5 Implications for ITE practice

The findings of this study have developed a more nuanced understanding of student teacher reflection, knowledge and learning. For university teacher educators, there are several significant implications. Reflection is a prominent aspect of ITE programmes (Korthagen & Nuijten, 2022). Therefore, implementing the Overlapping Lens model as a pedagogical tool, akin to Brookfield's (1998) four lenses, could enable student teachers and teacher educators to have a stronger metacognitive understanding of their reflective processes. Student teachers might use the different lenses as a scaffold to help them inhabit different reflective stances. Likewise, they might recognise how the depth of their reflection might tend to be surface level through one lens, and more critical through another. The three lenses might support teacher educators in their questioning, when prompting student teachers to reflect. If their aim is for student teachers to foster critical levels of reflection, teacher educators might consider how they could encourage reflection through the lens of person. This is a particular challenge for teacher educators, considering the tentative finding that student teachers may resist encountering feelings of discomfort associated with confronting uncomfortable value judgements about their existing worldviews.

Furthermore, the Overlapping Lens model is suggested to support student teachers to develop clusters of attributes that are described as essential for accomplished teaching (Shulman & Shulman, 2004), particularly when reflecting through the learner lens. Notably, in the university reflections, performance attributes were only foregrounded in reflections through the teacher lens but were well represented through the overlapping lenses of the practice reflections. Given that the teacher lens reflections tended to be

characterised by surface level reflections and process-product assumptions, this implies that, in university, student teachers may only gain a narrow, instrumental understanding of performance attributes. University-based ITE may therefore consider developing approaches that mirror the problem-setting nature of practice (Schön, 1983), such as practice-based teacher education approaches that aim to make the complexities of practice visible and learnable for student teachers (Grossman et al., 2009).

In this study, situated learning experiences appear to have been particularly powerful in prompting student teacher reflection. The museum visit, the Gurdwara visit, and the workshops in PE and DT were all experiences that prompted often deeper levels of reflection. This might be considered an additional *source of knowledge* to those identified by Fives and Buehl (2010). Furthermore, the person lens reflections suggest that such immersive experiences support the development of student teachers' domain qualities and skills (Fives & Buehl, 2010). This study therefore recommends that teacher educators implement rich educative experiences and provide scaffolded opportunities for meaningful reflection on these experiences.

The Overlapping Lens model illustrates how student teacher reflections can be interpreted in terms of lens, depth, and the paradigm of teacher learning. Consideration of these different dimensions opens more possibilities for understanding student teachers' meaning making. For example, a student teacher might consider "what might critical reflection look like, through the teacher lens, aligned with the process-product paradigm?". This combination of dimensions did not arise in this study, but Liakopoulou (2012) evidences that this is possible. It might lead a student teacher to critique "what

works" toolkits - the 'panaceas and snake oil' (Menter, 2021a, p. 26) – and notice the political and economic drivers behind technocratic government policies.

The findings suggest that, within each lens, student teacher learning can be described in terms of the onion model (Korthagen, 2004), supporting the notion that student teacher learning is multi-dimensional (Korthagen, 2016). Furthermore, across all lenses, student teachers conceptualised their learning as the experiential development of personal practical knowledge (Connelly & Clandinin, 1985; Dewey, 1938). *Techne* and *phronesis* were foregrounded, whereas *episteme* tended to be used to situate interpretations of experience (Wiliam, 2008). This aligns with the realistic teacher education approach (Korthagen & Lagerwerf, 2001), which proposes that teacher learning involves surfacing subconscious gestalts through reflection, leading to conscious understanding and better organised frameworks of knowledge. In terms of sequencing of learning in ITE, this implies that opportunities to meaningfully engage in reflection might be incorporated into programmes after practice experiences, where student teachers may have 'developed the wish for deeper understanding' (Korthagen, 2017, p. 539). Here, the teacher educator might take the role of the *flexible architect*, supporting student teachers to translate academic theory to their situated experiences on placement (Korthagen, 2017). The findings of this study imply that this might be a fruitful way to enable student teachers to develop *epistemic coherence* across diverse knowledge sources (Hermansen & Mausethagen, 2023).

The Overlapping Lens model suggested paradigm fluidity, where student teachers held contending paradigms simultaneously or moved between them, rarely noticing the tensions that arose through the inconsistencies in the assumptions that underpinned

their reflection. This suggests that the paradigms were not explicitly understood, either in terms of teaching practice or the student teachers' own professional learning. Therefore, teacher educators might incorporate the paradigms of teacher learning (Russ et al., 2016) into the ITE curriculum explicitly. Firstly, this could support student teachers to be more consistent in their reflections on pupil learning to avoid conflicting conceptualisations or, better still, to *knowingly* conceptualise pupil learning in multiple ways. Secondly, student teachers might come to understand different ways they might make sense of their own practice and learning, becoming aware of how their learning of teacher knowledge might extend beyond the acquisition of a set of technical skills. Developing this awareness could be the first steps towards support student teachers to engage in the social and political analysis needed to understand oppressive structures that shape and constrain teacher practice (Zeichner & Liu, 2010). In this sense, incorporating the paradigms of teacher learning into the ITE curriculum might encourage student teachers to understand how their professional development can be described both as *enquiry*, and as *adherence* (Lofthouse et al., 2021).

6.6 Implications for ITE policy

As this study and others show, student teacher reflection often takes place at a surface level, based on process-product assumptions of learning to teach (Liakopoulou, 2012; Mansvelder-Longayroux et al., 2007). Such *action-oriented* reflection is unlikely to contribute to long-term student teacher learning (Korthagen & Nuijten, 2022) and can be seen to encourage *adherence* perceptions of learning to teach (Lofthouse et al., 2021). That said, it is human nature to quickly focus on the solution to a problem, rather than consider the underlying causes, assumptions and broader contexts (Korthagen &

Nuijten, 2022). This tendency may be encouraged by the policy landscape in England, a 'narrow training model' (Mutton & Burn, 2024, p. 227) which frames the teacher as an *expert technician* and promotes research concerning 'teacher-proof' techniques for pupil attainment (Winch et al., 2015, p. 210). Indeed, it is evident that there was a strong conceptualisation of learning to teach as adherence (Lofthouse et al., 2021), given the prominence of the process-product paradigm across the data sets.

Current policy positions reflection as a means of accountability, both in the UK and across the world (Glasswell & Ryan, 2017), which encourages surface, adherence-oriented reflection. While reflection is an essential mechanism by which student teachers' knowledge and practice may be improved (Glasswell & Ryan, 2017), the findings from this study illustrate that pedagogical and critical reflection can be prompted by both university-based and school-based learning experiences. Such reflections enabled student teachers to construct personally resonant knowledge, embedded in the specific teaching context and their professional values. This study therefore recommends that national policy should frame teacher reflection as a professional entitlement, rather than only a means to improving application of predetermined techniques.

If university teacher educators aim for student teachers to become 'epistemic agents' with 'a predisposition to be continually intellectually curious' (UCET, 2020, p. 2), it is necessary to consider how deeper levels of reflection and broader conceptualisations of learning to teach might be fostered. To do so might be considered 'an act of resistance' (Pierlejewski, 2025, p. 323), as the statutory frameworks for ITE in England are underpinned by scientistic research and give less credence to personal or relational

dimensions of teaching (Hordern & Brooks, 2023; Vickers-Hulse et al., 2024). Furthermore, it could be argued that ITE providers have a duty to prepare student teachers for future school contexts, which themselves are likely to be influenced by craft and technical expertise conceptualisations of teaching (Winch et al., 2015). However, the findings of this study emphasise how, even in the current policy landscape, the student teachers' reflections on lived experiences of learning and practice still explored the affective, relational, moral and political dimensions of teaching. Teacher educators might therefore resist grounding their practice in technocratic conceptualisations of learning to teach, as to ignore broader paradigms is to ignore the lived experiences of student teachers. Furthermore, it suggests that policy should recognise and legitimise these broader forms of teacher knowledge, balancing professional judgement alongside technical skill.

In line with previous studies (Sparkes et al., 1990), this study therefore recommends that ITE providers should teach student teachers about the different paradigms of learning. In doing so, student teachers may "notice the water they are swimming in" and be empowered to critique craft or expert technician conceptions of teaching. In terms of policy, the study recommends that the paradigms of student teacher learning are embedded into the ITTECF and other statutory ITE frameworks (Department for Education, 2024b). This would support student teachers, ITE providers and policy makers in coming to understand teaching practice as 'contestable, provisional and contingent' (UCET, 2020, p. 2). With such knowledge, student teachers might be better prepared to navigate future school contexts, new policies, and their own lived experiences.

6.7 Implications for future research

The study raises questions that warrant further research. The findings suggest that *critical* reflection is more likely to occur in university-based contexts, rather than in placements. This raises the question of how student teachers might be better supported to critically reflect in placement; indeed, it raises the question of *if* student teachers should be supported to critically reflect in placement. Current policy contexts may mean that student teachers encounter barriers to undertaking critical reflection in schools or be discouraged from doing so. Future research could investigate specific conditions, mentoring practices, and institutional cultures that enable or constrain critical reflection in placement settings, especially where performative pressures may encourage adherence rather than enquiry perspectives of teacher learning (Lofthouse et al., 2021).

The study found a tentative pattern that university-based reflections tended to be through single lenses, whereas practice-based reflections were often characterised by multiple stances held simultaneously. Exploring this pattern further could prove fertile ground for future research. Comparative studies across different ITE providers and national contexts could explore whether this pattern is consistent or context dependent. Such research could illuminate how school settings, university environments and national policy shape the way student teachers engage with reflection and learning.

As discussed above, the study's findings imply several pedagogical approaches in ITE may be worthy of further research. Immersive experiences, such as the Gurdwara visit, appear to have been particularly effective in prompting critical reflection through the person lens. Further research may investigate the implementation of rich educative

experiences for student teachers and the conditions in which person-lens reflections may be supported.

Furthermore, the study found that, through the teacher lens, student teachers often applied theory to practice instrumentally, without fully interrogating its assumptions. Future research might therefore examine how different pedagogical approaches, such as research-informed practice (Burn & Mutton, 2015) or realistic teacher education (Korthagen et al., 2001), support student teachers' capacity to engage with theory critically and meaningfully. Such research might strengthen the use of the Overlapping Lens model as a pedagogical tool to scaffold student teacher reflection, akin to Brookfield's (1998) four lenses.

Finally, while this study focused on the primary foundation subjects, many reflections concerned broader pedagogical and ethical issues that cut across the ITE curriculum. Future research could apply the Overlapping Lens model to analysing student teachers' reflections in specific subjects, with comparison across these subjects. Further research might explore how primary student teachers manage the demands of requiring a rich knowledge based and practice repertoire across an extended range of subjects simultaneously (Davis & Boerst, 2014; Pope, 2019). Likewise, similar studies could be undertaken to explore how primary teacher educators manage similar demands. Action research might be undertaken, implementing rich educative experiences for student teachers and then scaffolding them to reflect through different lenses and different depths.

6.8 Conclusion

This thesis has explored what and how student teachers learn to teach the primary foundation subjects, advancing an argument that student teacher knowledge, learning and reflection as best understood as dynamic, situated and contested. Building on existing critiques of linear or dichotomous models of teacher learning, the study has developed the Overlapping Lens model, which offers three original insights: lens fluidity, describing how student teachers shift between the stances of teacher, learner and person; depth fluidity, showing how reflections can space surface, pedagogical and critical levels; and paradigm fluidity, capturing how reflections draw variably on process-product, cognitive, situated sociocultural, and critical-transformative paradigms. These contributions support those who argue that conceptualisations of student teacher knowledge must move beyond static dichotomies and instead centralise the complexity and the inherently personal nature of learning to teach (e.g., Anderson, 2023; Biesta, 2007a; Clandinin & Connelly, 1996; Heikkilä & Hermansen, 2024; Hermansen & Mausethagen, 2023; Korthagen, 2016; Loughran, 2014).

The Overlapping Lens model foregrounds the voices of student teachers, suggesting that their experiences of learning to teach the foundation subjects were not only shaped by procedural or technical concerns, but by affective, relational and moral dimensions of teaching. This is notable because current national policy tends to emphasise competence, performance, and technical skill over personal, contextual, or critical aspects of learning to teach (Menter, 2021b; Mutton & Burn, 2024). This finding implies that, while adherence perspectives were prevalent, student teachers also conceptualised learning to teach as enquiry and sense making (Lofthouse et al., 2021).

Therefore, university-based teacher educators may be encouraged to continue to engage in *acts of resistance* (Pierlejewski, 2025) against top-down policy underpinned by scientistic assumptions and causal mechanisms of education (Hordern & Brooks, 2023) and continue to support student teachers to learn not only the techne knowledge needed to teach the foundation subjects, but the practical wisdom of phronesis as well (Wiliam, 2008).

Furthermore, the Overlapping Lens model calls attention to the novice status of student teachers, who are less likely than experienced teachers to understand the paradigms of teacher learning, either implicitly or explicitly. This study as highlighted how paradigm fluidity may exist across reflections in both university and school, through multiple lenses. As such, there were inherent contradictions within the student teachers' reflective accounts as they grappled with enquiry and adherence perspectives of learning to teach. This finding offers an extension to existing models of teacher learning and reflection, which tend to conceptualise teacher perspectives as a consistent set of assumptions, rather than potentially multiple or contradictory.

The findings of this study make the case that teacher education is ultimately a moral, democratic and personal undertaking. This study shows that student teachers reflect on their identity, values and purpose in relation to the foundation subjects, but do so within an inconsistent set of paradigmatic assumptions. Therefore, this thesis argues that ITE must create conditions for learning that both cultivate the qualities, dispositions and motivations necessary to teach the foundation subjects, alongside the technical skills and the conceptual understanding of paradigms of teacher learning. Through this, ITE

may encourage student teachers to see themselves as curriculum makers, epistemic agents, and skilled, knowing professionals.

I hope the contribution of this work will be twofold: first, to offer teacher educators a pedagogic tool – the Overlapping Lens model – that helps navigate the "messiness" of student teacher reflection, and second, to strengthen the case for policy and practice that legitimise complexity, uncertainty and meaning making in teacher education. My passion for this research stems from a deep belief that the foundation subjects are uniquely places to nurture curiosity, creativity, and connection, for both pupils and student teachers alike. If teacher education is to prepare future teachers as thoughtful, agentic professionals, then university educators, school mentors, and policymakers must embrace their shared ethical and democratic responsibility to ensure that learning to teach the foundation subjects is not reduced to compliance or craft, but recognised as a relational, affective, moral, and indeed, a profoundly *human* endeavour.

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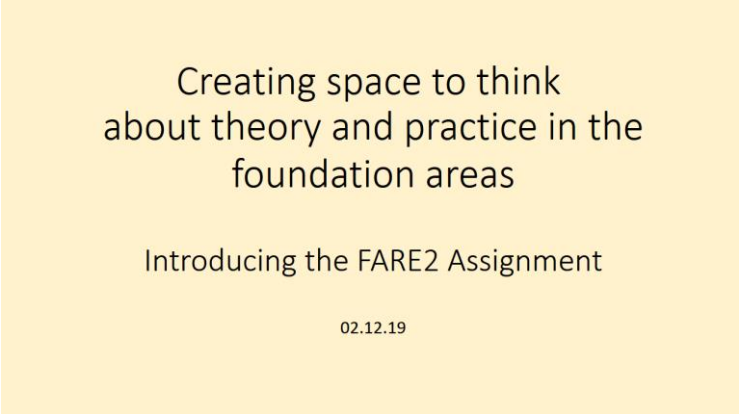
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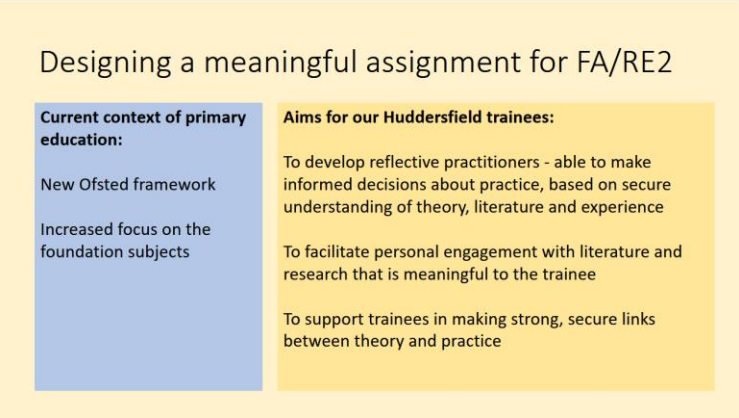
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Appendices

Appendix A – FARE Assignment Briefing - December 2019

This presents a summary of the guidance given to the student teachers to support their recorded and written conversations, as well as introducing the student teachers to the research project to request their consent for participation.





The Foundation Areas and RE 2 Assignment

Time			
Trainee Experience	Trainees taught the FA/RE module (4 weeks). Trainees record generative critical conversations to develop understanding of critical reflection. Trainees write **weekly reflective journal entries** based on their GCCs; these are the first part of their assignment.	School-based placement (8 weeks). Trainees teach in the foundation areas.	Trainees write reflective rationale. This is the final part of their assignment. Trainees have 4 weeks to complete independently. Trainees submit a selection of reflective journals and their reflective rationale.

Assignment briefing – FARE2

- Today we are focusing on the reflective journal entries
- We will look at the critical evaluation before and after SBT2
- What is a generative critical conversation?
- What is Rolfe, Jasper and Freshwater's framework for reflection (2001)?

Reflection allows practitioners to articulate their experiential knowledge – Rolfe et al, 2001

"We learn by doing and realising what came of what we did"

Dewey, 1938

*The **retrospective contemplation** of practice undertaken in order **to uncover the knowledge used** in a particular situation, by analysing and interpreting the information recalled*

Fitzgerald, 1994

Why reflection on learning?

- *"Ultimately, the intent of reflection is to integrate the understanding gained into one's experiences, in order to enable better choices or actions in the future"*
  - Rogers, 2001

McNiff's ultimate critique (2009): Too often teachers' practice is theorised for them, and instead we should be encouraging teachers to learn about and *theorise their own practices for themselves*.

What is a generative, critical conversation?

Blending the self-study approach of ***reflecting on recorded material*** (Bullough and Pinnegar, 2001), with the spirit of sharing lived experiences from ***co-generative dialogue*** described by Roth, Lawless & Tobin (2000), combined with the ***critical questioning*** of McNiff (2009).

What is Rolfe et al's Framework for Reflection?

What? → So what? → Now what?

What? – Descriptive level

'What happened?', 'why is this significant to me?' or 'what was good/bad about the experience?'

So what? – building understanding

'So what does this mean to me?', 'so what other knowledge can I bring to this incident?' or 'so what broader issues or concepts arise from this incident?'

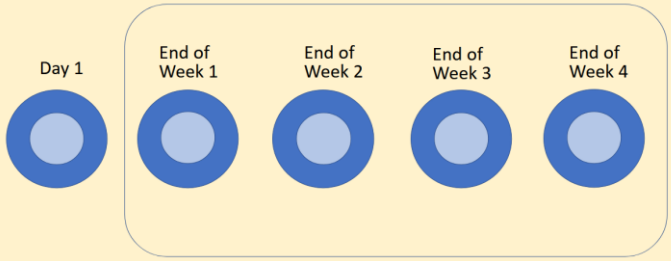
Now what? – action-oriented

'Now what do I need to do in light of this new understanding?' or 'now what is my next step in light of this reframing?

Why generative, critical conversations and written journal entries?

- Timely and developmental representations of learning – they document your developing philosophy at this point in their career
- Flexibility of talk, trusting relationship, conversation creates space to think and explore (Dawes, 2007)
- Facilitate critical reflection at a deeper level (Ryan, 2012)
- Learning becomes consolidated and possibly extended (Moon, 2006)

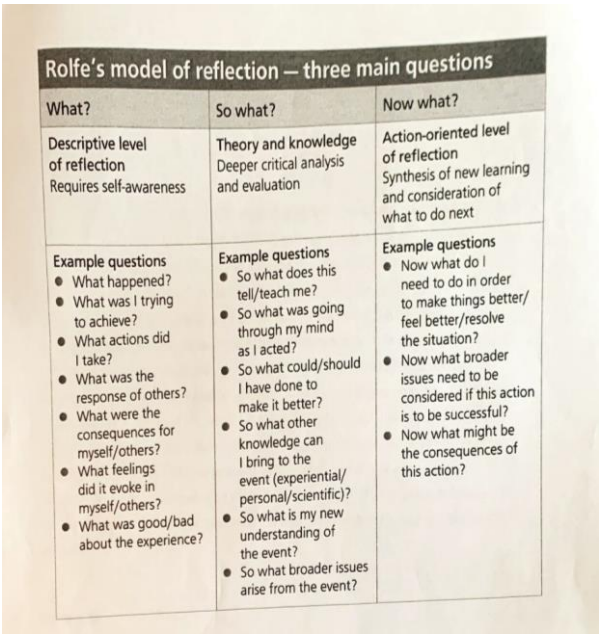
Reflections on conversations –> weekly journal entries



Research and ethics

- No extra work
- Optional to take part
- Marked by team of tutors (impartial)
- All analysis to take place after final marks have been awarded
- Researcher not aware of who has agreed to take part or not until after final marks awarded

This is a handout given to the student teachers during the assignment briefing, providing further prompts for using Rolfe et al's (2001) framework to reflect, to be used either in conversations or when writing the journals.



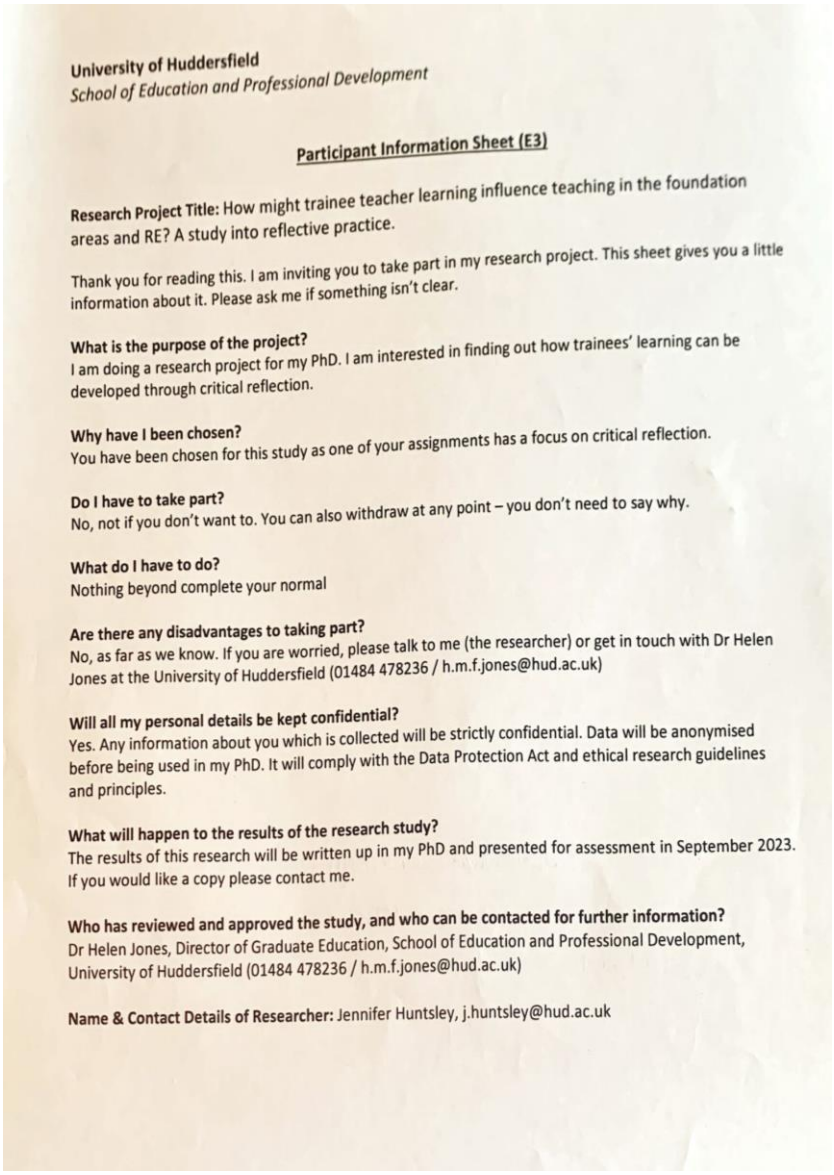
Rolfe's model of reflection – three main questions

What?	So what?	Now what?
Descriptive level of reflection Requires self-awareness	**Theory and knowledge** Deeper critical analysis and evaluation	**Action-oriented level of reflection** Synthesis of new learning and consideration of what to do next
Example questions • What happened? • What was I trying to achieve? • What actions did I take? • What was the response of others? • What were the consequences for myself/others? • What feelings did it evoke in myself/others? • What was good/bad about the experience?	**Example questions** • So what does this tell/teach me? • So what was going through my mind as I acted? • So what could/should I have done to make it better? • So what other knowledge can I bring to the event (experiential/personal/scientific)? • So what is my new understanding of the event? • So what broader issues arise from the event?	**Example questions** • Now what do I need to do in order to make things better/feel better/resolve the situation? • Now what broader issues need to be considered if this action is to be successful? • Now what might be the consequences of this action?

Appendix B – FARE Assessment Rubric

	90+	89-80	79-70	69-60	59-50	49-40	39-30	29 -0
Reading and Research	outstanding breadth and/or suitability of sources; excellent awareness of significance of sources;	excellent breadth and/or suitability of sources; excellent awareness of significance of sources;	very good breadth and/or suitability of sources; very good awareness of significance of sources.	appropriate or good breadth and/or suitability of sources; appropriate or good awareness of significance of sources;	adequate breadth and/or suitability of sources; adequate awareness of significance of sources;	limited breadth and/or suitability of sources; limited awareness of significance of sources;	very limited breadth and/or suitability of sources; very limited awareness of significance of sources;	reading is non-existent or extremely limited;
Understanding and engagement with knowledge	Exceptional and systematic understanding	Extensive and systematic understanding	Well-developed and systematic understanding	Systematic but uneven understanding	Systematic but limited and uneven understanding	Coverage and understanding likely to be uneven or incomplete.	Coverage and understanding will be uneven and incomplete.	Coverage and understanding will be absent.
Organisation and presentation	Well defined argument. Accurate presentation	Clear argument. Accurate presentation	Argument mostly clear; generally accurate presentation	Argument may be broken in places; few errors in presentation	Argument may be broken and unclear; lack of accuracy in presentation	Argument largely absent, flaws and inconsistencies in presentation	Argument absent, structure disjointed. referencing seriously inconsistent; communication unclear; serious errors	Referencing seriously inconsistent or omitted; communication unclear; major errors

Appendix C – Ethics Forms – Participant Information Form and Participant Consent Form



University of Huddersfield
School of Education and Professional Development

Participant Information Sheet (E3)

Research Project Title: How might trainee teacher learning influence teaching in the foundation areas and RE? A study into reflective practice.

Thank you for reading this. I am inviting you to take part in my research project. This sheet gives you a little information about it. Please ask me if something isn't clear.

What is the purpose of the project?
I am doing a research project for my PhD. I am interested in finding out how trainees' learning can be developed through critical reflection.

Why have I been chosen?
You have been chosen for this study as one of your assignments has a focus on critical reflection.

Do I have to take part?
No, not if you don't want to. You can also withdraw at any point – you don't need to say why.

What do I have to do?
Nothing beyond complete your normal

Are there any disadvantages to taking part?
No, as far as we know. If you are worried, please talk to me (the researcher) or get in touch with Dr Helen Jones at the University of Huddersfield (01484 478236 / h.m.f.jones@hud.ac.uk)

Will all my personal details be kept confidential?
Yes. Any information about you which is collected will be strictly confidential. Data will be anonymised before being used in my PhD. It will comply with the Data Protection Act and ethical research guidelines and principles.

What will happen to the results of the research study?
The results of this research will be written up in my PhD and presented for assessment in September 2023. If you would like a copy please contact me.

Who has reviewed and approved the study, and who can be contacted for further information?
Dr Helen Jones, Director of Graduate Education, School of Education and Professional Development, University of Huddersfield (01484 478236 / h.m.f.jones@hud.ac.uk)

Name & Contact Details of Researcher: Jennifer Huntsley, j.huntsley@hud.ac.uk

University of Huddersfield

School of Education and Professional Development

Participant Consent Form (E4)

Title of Research Study: How might trainee teacher learning influence teaching in the foundation areas and RE? A study into reflective practice.

- [x] I confirm that I have read and understood the participant Information sheet related to this research, and have had the opportunity to ask questions.
- [x] I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.
- [x] I understand that all my responses will be anonymised.
- [x] I give permission for members of the teaching team to have access to my anonymised responses.
- [x] I agree to take part in the above study

Name of Participant: .....

Signature of Participant: [redacted]

Date: 2.12.19

Name of Researcher: Jennifer Huntsley

Signature of Researcher: *J Huntsley*

Date: 2.12.19

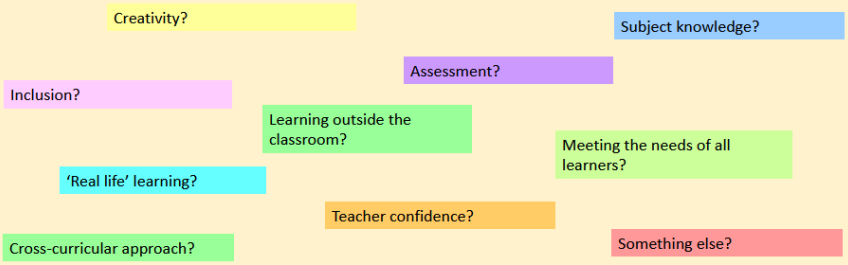
Appendix D - FARE Assignment Briefing, April 2020 – Introducing the post-practice essay

Part 2
FARE 2 Assignment Brief

31.04.2020
Live webinar

Starting points…

- Look at reflective journals – what themes have arisen in your reflections about teaching and learning in the foundation areas?



Starting point…

What did you teach during your placement?

- ✓A foundation subject
- ✓RE
- ✓PSHE
- ✓One of the related areas in EYFS (i.e., Personal, Social and Emotional Development, Physical Development, Understanding the World or Expressive Arts and Design).

Module outcomes

These are the outcomes you need to demonstrate in this assignment:

- Demonstrate an understanding of the statutory and non-statutory requirements of your chosen foundation subject or area from EYFS
- Demonstrate secure subject knowledge in your chosen foundation subject or area from EYFS (you may include a lesson plan/series of lesson plans as an appendix)
- Critically reflect upon the teaching strategies that you used in your chosen foundation subject/area
- Critically evaluate how your teaching strategies met the needs of all learners
- Consider the possible limitations to the effectiveness of your teaching, and how these might be overcome in the future
- Draw upon relevant theory and research to inform reflection

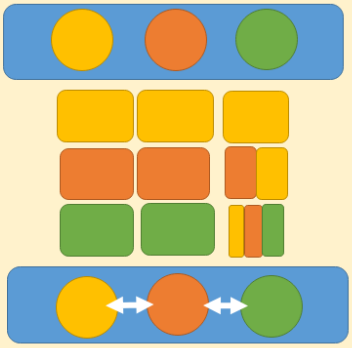
To bear in mind…

APA7th referencing

Reading

Paragraphs

Consistent themes/strands that hold the whole assignment together



Internal paragraph structure

- Topic sentence – **The one thing the paragraph is about**
- Literature --- *McNiff (2009) suggests…*
- Interpretation of the literature – *This implies that…*
- Practice example – *In the classroom, this may be seen in…*
- Summary sentence – **Reinforce what the paragraph was about, maybe link to the next**

- Topic sentence – **The one thing the paragraph is about**
- Practice – a succinct summary– *what you did* ***in relation to the topic***
- Literature that supports --- *McNiff (2009) suggests…*
- Interpretation of the literature – *This implies that…*
- Summary sentence – **Reinforce what the paragraph was about, maybe link to the next**

Support

- Reading list and Advanced Search on Summon (British Educational Index)
- Academic skills tutor
- Library (Referencing)
- Group tutorials – 25th May

Summary

- Submission date: 31st May 2020
- Part 1: Choose two or three of your reflective journal entries
- Part 2: Reflective Rationale
- Reference list at the end of the whole assignment
- Submit as one pdf.
- Total word count for Parts 1 & 2: 3500 words, 10% allowance

Appendix E – Example of initial coding and mapping, July 2021

Raw Data (Rebecca, Post-Practice Essay)	Initial codes	Focused coding	Reflexive note
In this essay I will critically reflect on how I taught a sequence of six Religious Education(RE) lessons during my assessed placement. The school I taught in was a large two form entry school in a deprived area. There were twenty-six children in my year two class and four of them spoke English as an additional language (EAL). There was also a child who had a suspected memory problem and a vulnerable child who was involved with safeguarding in and outside of school. Themes of the essay The themes that underpin the essay are the importance of subject knowledge and storytelling. These themes were highlighted in my weekly journals as pertinent during university lectures before placement began. Key points that are to be discussed within these themes focus on the impact of teacher subject knowledge in the classroom and what effect powerful knowledge has on children. As well as understanding how certain pedagogies in the classroom, such as storytelling and story acting are more effective than others. Why teach RE? The National Curriculum aims to provide all children with a Religious Education to develop awareness of different religions and to build their values and beliefs to inform modern society (DfE, 2010). The non-statutory document highlights the Government's support of RE by stating that it is a factor of the National Curriculum and that all schools adhere to this. However, Webster (2010) suggests that RE is the first subject to be abandoned during the Statutory Assessment Tests (SATs) practise. Similarly, Castelli and Chater (2018) argue that RE specialists feel let down by the government's decision to eliminate key guidance for teachers, which could suggest that there is a stigma around the teaching of RE and therefore possibly diminishing the subject's credibility. Moreover, this stigma could be related to my own experiences of RE and why I speak about RE with a negative intent during my reflective journal. I used the Standing advisory council on religious education's (SACRE) guidance to plan my series of lessons, as this is what the school follow, and I have included an example of my planning in appendix one to highlight this. SACRE ensures that schools are adhering to the RE guidelines by advising and monitoring teaching of RE in line with the National Curriculum (SACRE, 2013). However, the National Association of Teachers of Religious Education(NATRE) has published OFSTED reports from recent inspections of RE in 2019. These reports imply that schools may not be adhering to the guidance by stating that some children are not been offered enough opportunities to explore RE and some children cannot identify RE in the curriculum(NATRE, 2019).Therefore, this could highlight that schools do not take RE seriously in comparison to areas such as the humanities, again possibly suggesting a stigma around RE.	**NR**: Context Subject knowledge – theme 1 Story telling – theme 2 **Curriculum understanding**: RE statutory role **Curriculum understanding:** Aims of RE (non-stat doc) **Linking literature to general practice:** Literature suggests RE not important **Synthesis of literature** **Interpretation of literature**: Gov not supporting RE **Linking literature to own practice:** Connection to own experiences of RE **Curriculum informing planning:** Linking curriculum guidance to planning **Linking literature to general practice:** recognising that curriculum guidance may not be being used in practice **Linking literature to general practice:** Evidence that RE not being taught **Interpretation of literature**: Stigma around RE **Reflection on own uni learning:** Link to uni-	**Linking literature to general practice** **Linking literature to own experience as a pupil** **Reflection on own uni learning** **Linking literature to general practice**	Can't guarantee which FA students teachers will teach – so these broader themes are important

Subject Knowledge After an RE lecture I focused on the lack of subject knowledge I have in RE, which then sparked my curiosity of how much knowledge a teacher needs to teach effectively. Myatt (2018) suggests that secure teacher subject knowledge is crucial to provide children with powerful knowledge, which is something I noticed was a common thread within the literature. This signifies the prominence of Young's(2008) assumption that Knowledge is to be powerful so as children have equal access to a wealth of education. However, White (2018) suggests that a lack of knowledge would not affect children's learning as knowledge is not significant, as opposed to focusing on a skills-based curriculum and allowing them to flourish holistically. He also suggested that a teacher does not have sole responsibility to educate children and provide them with an abundance of knowledge as children have other sources such as families. Therefore, Whites assumption could imply less pressure on teachers as less subject knowledge could be required. The main weakness of Whites assumption could be that some children's parents are not knowledgeable enough to support their children, thus failing to reinforce Young's(2008) argument that powerful knowledge reinforces equality in the classroom. Likewise, Sapungdan and Sapungdan (2014) argue that some children do not receive support at home as some parents do not encourage positive attitudes towards education. Therefore, also weakening Whites ideas. Furthermore, the 199 6Education Act states that parents can exclude their children from RE lessons, which could support the notion that not all children have an equal measure of knowledge, specifically in RE. In view of this, I began to reflect on the negativity I first felt towards RE and how this changed once I experienced a wealth of knowledge, that is highlighted in my reflective journal. This could support Youngs assumption of children needing to experience rich knowledge to be able to promote equality in the classroom and help develop a positive attitude to the subject. It is also clear that knowledge sparked motivation in myself, which influenced my practice as I hoped to replicate this motivation through my subject knowledge during my practice. Moreover, Ryan and Deci (2000) argue that intrinsic motivation is when you are motivated from within and this drives you to achieve and be satisfied. This could support the assumption that subject knowledge could be the driver of intrinsic motivation and therefore pertinent to the curriculum. This was apparent on placement as I taught 'Celebrations' in RE. Appendix one demonstrates my panning in RE and how I had planned for progression throughout the subject. Due to the unduly amount of literature I had read beforehand; I understood the necessity of researching the topic to inform my planning to intrinsically spark motivation from the children. However, I did not research Easter as thoroughly as I had planned and the term celebration. This became the downfall of my first lesson as it was evident, I lacked subject knowledge as I failed to address misconceptions regarding Lent and Advent. This is highlighted in appendix to in an observation of the lesson by my mentor. My mentor had to step in and fill the gaps in my knowledge which saw my confidence	experience – sparked curiosity about SK **Literature about subject knowledge:** Secure subject knowledge crucial for teachers **Literature about subject knowledge:** powerful knowledge **Equality:** equality of access to knowledge **Critique of literature:** Skills based curriculum Holistic approach **Interpretation of literature** **Responsibility of a teacher:** Families should provide knowledge, not just teacher **Equality:** Some families can't provide knowledge Critiquing author assumptions **Equality:** Connects powerful knowledge with equality **Equality** Some families have poor attitudes to ed **Equality** Some families remove chn from RE lessons **Reflection on own uni learning:** Connection to own assumptions about RE **CHANGE** – experiencing wealth of knowledge improved feelings towards the subject Knowledge sparks motivation Motivation influences practice Intrinsic motivation definition Subject knowledge drives intrinsic motivation so pertinent to the curriculum Theoretical understanding of the importance of subject knowledge Recognition of lack of context subject knowledge (Christian celebrations)	**Linking literature to general practice** **Reflection on own uni learning:** **Literature: Teacher subject knowledge: importance** **Literature: Teacher subject knowledge: importance** **Subject knowledge; Equality of access** **Responsibility** **Subject knowledge; Equality of access** **Subject knowledge; Equality of access** **Subject knowledge; Equality of access** **Reflection on own uni learning** **Change in belief** **Reflection on own uni learning** **Subject knowledge: Motivation to learn** **Linking literature to own uni learning**	It's so nice to read these at a distance- without judging myself of how well I've done as a tutor

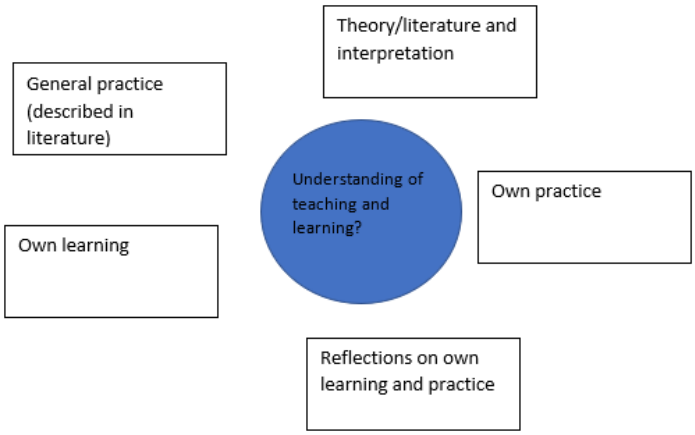
deplete and resulted in the needs of the learners not been met. There was a lack of enthusiasm from the children in the lesson that led to an absence of motivation, and to poor attainment. Here, the literature provided by Young (2008) would suggest that I failed to provide children with knowledge, therefore the needs of the children were not met. Nonetheless, I did not aim for this to take place again thus, I researched the topic again and acquired more knowledge to teach more effectively. It was clear I had confidence this time to address any misconceptions and the children's attainment improved. This is emphasised in appendix three in a second observation by my mentor, demonstrating my secure subject knowledge. This could support Myatt's (2018) link between subject knowledge and Youngs (2008) powerful knowledge, as my secure subject knowledge, provided the children with higher level vocabulary such as humility and sacrifice. Therefore, this resulted in the needs of the children been met as progress had been made by all children. In addition to this, it seems I had underestimated the literature before my first lesson; therefore, I would always aim to feel secure in my subject in any future teaching by thoroughly researching all aspects of the subject beforehand. Additionally, I received positive pupil voice, which could imply that the children were intrinsically motivated to achieve as they were provided with rich knowledge which broke down any negative barriers that may have been pending. This was a great achievement as I aimed to provide the children with a positive experience, so that they did not develop any negative thoughts towards RE, and possibly continue the alleged stigma that is identified in my reflective journal. Although teaching RE was a positive experience, researching 'celebrations' to ensure I had secure subject knowledge became a lengthy process. Therefore, this left me questioning how much research I must endure, how realistic this is and what support is available to do this. Reiss and White (2013) questioned the appropriateness of an abundance of knowledge, suggesting that this can become unsuitable. This helped me to consider my wellbeing throughout teaching and to always acknowledge when I have acquired enough knowledge to teach across the curriculum. Bastide (2007) also suggested that teachers have no time to develop a scheme of work in RE due to pressures from other subjects, therefore could argue that this could weaken the RE curriculum. It seems that this is still relevant as my mentor acknowledged that during her six years of teaching, she has never experienced RE training, thus lacks confidence to teach RE. More recently, Robson (2018) argues that continuous professional development(CPD)in RE has evolved to online discussions, where teachers and subject leaders of RE are using their own time to exchange resources and advice. Whilst Robson argues that this is effective as it is accessible, he also critiques this method by acknowledging that poor knowledge of RE could also be exchanged, which could argue the suitability of	Recognition of own lack of addressing misconceptions Lack of enthusiasm, lack of motivation, lack of attainment from children (effect of low teacher subject knowledge) Links to Young's powerful knowledge (chooses literature) Sense of personal responsibility Taking actions to improve future teaching SK → Confidence to address future teaching → improved attainment Strong synthesis of literature (Myatt & Young) Development of higher level vocabulary Attainment improved, progress improved Recognition of own response to literature 'underestimated' Future resolution Positive pupil voice → intrinsic motivation Rich knowledge → intrinsic motivation for chn Rich knowledge→ breaking down potential negative barriers, preventing RE stigma being perpetuated Questioning practical aspects of developing SK Linking time spent gaining SK to wellbeing Making a professional judgement of 'when to stop' gaining KS Links judgement to literature Lack of time to develop RE curriculum (claims in lit) Linked literature to practice Lack of training in RE Reliance on the 'professional' to discuss RE online in own time – no CPD Accessible discussion online No quality control – poor body of knowledge could be being shared No change in RE CPD coming – difficulties exist currently	**Subject knowledge: importance: theoretical understanding** **Understanding something in theory, but not in practice** **Subject knowledge; lack of; in practice; effects;** depleting teacher confidence, low pupil motivation, poor attainment **Subject knowledge: in practice; responsibility; effects;** confidence, addressed mcs, improved attainment; higher level vocabulary understanding **Linking literature to own practice;** **Understanding something in theory, but not in practice** **Responsibility** **Future action** **Reflection on own practice: feedback from pupils** **Subject knowledge; in practice; motivation** **Reflection on uni learning; moral purpose; responsibility** **Teacher Subject knowledge: Literature**	Really illustrates how can understand something theoretically, but reflection on practice needed to understand in action

online CPD. The literature here could suggest that CPD in RE has displayed no signs of changing, therefore posing the difficulties that teachers face today, when attempting to strengthen their subject knowledge. In view of this, it could be argued that the literature beforehand effected my practice as it provided me with an awareness of the importance of subject knowledge and how this could determine equality in my classroom. However, my understanding of subject knowledge has immensely developed due to my placement as this was the pinnacle moment in my learning as it was clear that having a secure subject knowledge enabled the children to flourish and progress. In the future I will thoroughly research my subject to create positive and equal experiences for the children and break down any obstacles that may be resonating with children around RE. Storytelling and story acting The second theme of my reflective journal was how pedagogy such as storytelling and story acting is effective in the classroom after listening to the story of Sally's life in Victorian England. Literature, such as Willingham (2009) argues that storytelling is vital in the curriculum to secure learning and provide children with positive experiences. This was significant to my practice, as creating a positive experience was one of my aims during placement. Moreover, Paley (as cited in Cremin, Flewitt, Mardell and Swann, 2016, p.33) argues the significance of storytelling and story acting as children gain a clearer understanding whilst developing their language, narrative and cognitive skills. This was highlighted during the educational visit with university, when my own knowledge and understanding of history was vastly developed through Sally's story, as I was able to retain information and use historical language afterwards. However, in contrast to Willingham, Chomskey's argument of Language Acquisition (as cited in Bates, 2019, pp.210-211) would assume that children have innate connections with language from birth and become fluent in language naturally. Similarly, Willingham and Chomskey both assert that language is derived cognitively. However, Chomskey's theory could imply that storytelling, and story acting are not relevant in the classroom as it is not essential for teachers to entice children to develop language, rather than rely on the idea that children will develop language naturally. Although stories have always been a part of my ongoing philosophy, the literature still influenced my practice as it made me aware of how beneficial storytelling and story acting could be to children. This then motivated me to plan for opportunities to use storytelling and story acting in my RE lessons. Subsequently, I decided to use freeze frames in my planning, which is highlighted in my reflective journal as something I would like to try. The outcome was that they were successful and met all the children's needs, as children were able to develop their own narratives when Jesus died on the cross. I felt the learning came alive as the children took ownership of their learning by adapting their own interpretation of the story. This was highlighted as one child in character of a disciple	Theoretical understanding of SK importance Link to equality? Because SK is powerful? School experience was the PINNACLE moment in learning – need for SK for chn to flourish Future action – research SK in order to break down obstacles, create positive and equal learning experiences 2nd theme identified – story telling Linked to own experience of story telling (uni) Importance of story telling (literature link) Link to literature Storytelling develops language, narrative and cognitive skills for chn Links to uni experience – story telling developed own understanding of history knowledge and language Acquire language innately (Chomsky) Language derived cognitively Trying to critique but not accurate Overstatement – chn will develop language naturally, don't need story Recognises own starting point – stories always part of own philosophy Literature deepened understanding of story telling Planned for story telling in lessons Strategies – freeze frames Successful – met all chn's needs	**Reflection on literature: subject knowledge** **Teacher Subject knowledge: Literature** **Teacher Subject Knowledge: Demands** **Teacher Subject Knowledge: Responsibility; wellbeing** **Teacher Subject Knowledge: Demands** **Teacher Subject Knowledge: Demands** **Teacher Subject Knowledge: Demands** **Teacher Subject Knowledge: Demands** **Linking literature to own beliefs** **Equality** **Change; subject knowledge; effects of subject knowledge for learners** **Future actions** **Equality** **Moral purpose** **Reflection on own uni learning;** **Linking literature to own uni learning** **Linking literature; storytelling; effects;** language, narrative, cognitive benefits	

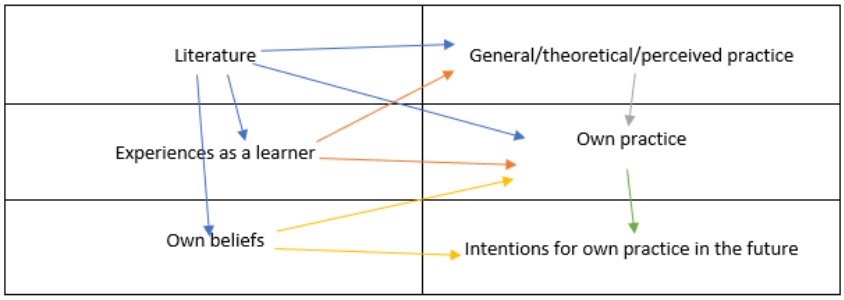
referred to Jesus as his role model. The term role model had not been used beforehand, which emphasised his understanding of the Easter story and his ability to develop his own narrative. Webster (2010)also supports this as she suggests that drama could facilitate children's learning of important skills in RE such as understanding empathy and compassion. In view of this, I would certainly use this method again as the skills the children were displaying were much richer than if they used a textbook. Recent literature by Richmann (2020) suggests a link between RE and empathy. He asserts that critics argue that empathy cannot be taught, as it is a skill that develops over time. However, Richmann argues that role play could encourage learning of empathy discretely in RE and therefore has a place in the RE curriculum. This is highlighted in my practice as the children were demonstrating empathy towards Jesus and his disciples, possibly due to the role play that was taking place. Additionally, after sharing the story of Palm Sunday I then directed the children to act the scene out. During a plenary, the children could retain all the different elements of Palm Sunday including how citizens shouted 'Hosanna', when Palm Sunday is celebrated today and why palm leaves were significant. Willingham (2009) argues that story enables children to find elements of pleasure from thinking, which was evident during my lesson. He also suggests that stories create shifts in memory, and this facilitates children to retain more information as they have pleasurable dramatic concepts to link the facts of Palm Sunday to. This was implied on practice, when the retention was also demonstrated from the child who has memory problems mentioned in the context. She could retell Palm Sunday confidently without the help of a teaching assistant; therefore, it was evident that all the needs of the children were met as all the children demonstrated high levels of attainment, thus highlighting how storytelling and story acting can enhance learning. Moreover, Storytelling and story acting could lend itself to the self-determination theory (Ryan and Deci, 2000) as the children may have being intrinsically motivated to learn, as they found these methods pleasurable and meaningful, similar to subject knowledge also. Myatt (2018) also supports this as she argues that intrinsic motivation has a place within the RE curriculum as it encourages children to talk about RE from a personal level and not just because they have to, which is highlighted in my first reflective journal when discussing my initial negative thoughts of RE. Additionally, this teaching experience has taught me how storytelling and story acting are linked to subject knowledge. Shulman (1986) is an example of highly influential literature in education, as his argument of teacher knowledge is still referred to today. He suggests a similarity between subject knowledge and pedagogy such as storytelling and story acting in that they are both forms of teacher knowledge that weave through the curriculum and underpin lessons.	Chn able to develop own narratives to describe religious story Story telling brought learning to life Chn took ownership of learning as they were required to adapt/interpret the story Development/explorations of new vocabulary/ideas when in character Storytelling/drama developing empathy and compassion Future action – use this method again Evidence of richer skills development than if had used a textbook Links RE and empathy Empathy cannot be taught – needs to develop over time Place of empathy in RE curriculum Links literature to practice – saw empathy developing in practice Strategy – acting out the scene Supported memory retention of key elements of the re story Link to literature – finding elements of pleasure from thinking Saw finding elements of pleasure from thinking in practice Stories create shifts in memory – facilitates chn to retain more info as pleasurable dramatic concepts which to link information (link to literature) Story improved retention for ch with memory difficulties – SEND Story telling and intrinsic motivation Enjoyment of learning Ability to talk about RE on a personal level – link to uni experience Links between the two themes	**Reflection on own uni learning; storytelling; effects; information retention, development of subject knowledge** **Reflects on own prior beliefs** **Linking literature; story telling; deepens prior beliefs; CHANGE** **Storytelling: in practice: effects;** met needs, chn developed narratives in RE, brought learning to life, ownership, adapting, interpreting, exploration of vocabulary, generating new vocabular and understanding, developing empathy and compassion **Linking literature to own practice/observations of own practice** **Future action** **Linking literature to own practice;** **Bigger picture; beyond the curriculum; empathy;** **Storytelling; in practice; effects;** vocabulary retention, concept retention, higher attainment, support ch with SEND **Linking literature to own practice;** **Elements of pleasure from thinking** **Storytellling; in practice; memory retention** (even with SEND/memory difficulties)	Possibly linked to prior experiences. Critique of Rolfe et al – already believes story important, but doesn't necessarily know why

Furthermore, a difference between the two themes is that one could be more pertinent in the classroom than the other. Pollard and Pollard (2019) suggest that knowledge of the pedagogy such as storytelling is more important as it demonstrates a teacher's ability to make the learning understandable to others. However, during my practice I felt it was crucial to acquire subject knowledge first to then develop the suitable pedagogical knowledge. Myatt (2018) supports this, by suggesting that if a lack of deep subject knowledge is apparent, a lesson can be in jeopardy of becoming pretentious with no depth or meaning, regardless of the pedagogy that is displayed. Overall, the literature demonstrates a wealth of information around the themes of subject knowledge and storytelling, which underpin this essay. However, in terms of my own development, it was during my practice where deep learning took place, as this was when I actively learnt how pertinent these themes are in the classroom. Subject Knowledge has been at the forefront of my learning during this placement and it is clear now that before my practice began, I underestimated how significant the literature is regarding the impact of secure subject knowledge. In view of storytelling and story acting, I have found how relevant these areas a form of pedagogy within the RE curriculum as they help the brain attach difficult concepts for children. Both themes lend their selves to motivation which seems to be a common thread within this essay and how both themes could facilitate children to foster an interest in a subject that is possibly becoming devalued across the curriculum (Myatt, 2018).It is evident that both themes are required to teach effectively and to meet all children's needs and provide children with rich opportunities that encourage them to talk about RE as declared by OFSTED(NATRE, 2019).The learning described here will undoubtedly shape my future practice as these themes will remain pertinent in my developing philosophy as a teacher. The themes will also underpin my classroom ethos as RE will remain a priority to encourage a love of learning in the subject rather than a stigma.	Literature – subject and pedagogical knowledge Themes both underpin lessons Understanding pedagogy is more important than subject knowledge – links to literature Understanding subject knowledge more important than pedagogy – links to literature Summary of literature – consistent messages Deep learning took place personally on practice – active learning, deep learning Recognises theoretical understanding, but needed to gain practical understanding of SK importance Story telling relevant pedagogy in RE – support learning difficult concepts Both themes linked to motivation – identifies this as a common thread Both themes could facilitate chn to foster an interest in a subject currently devalued. Both themes provide rich opps for learning Future action – will keep these themes in mind in developing teacher philosophy Change – drive to make sure RE remains a priority, love of learning RE rather than stigma	**Motivation; storytelling** **Pleasure in learning** **Personal aspect of learning** **Linking literature to general practice; linking to own uni learning** **Subject knowledge; pedagogical knowledge; relationship** **Reflection on own practice to inform own future learning** **Linking literature to support reflection** **Reflection on own learning;** **Value of learning through practice** **Subject knowledge; importance of practice** **Storytelling; importance of literature** **Motivation; subject knowledge; storytelling; in practice** **Reflection will shape own practice in future** **Change in belief – drive to encourage love of learning in RE, rather than stigma**	Evident in first recorded conversation

Rebecca's understanding of teaching....



Rebecca– initial thoughts on links made



Appendix F – Initial clustering of codes into themes – August 2023

Clustered Codes	Possible Themes
• Need for factually correct knowledge • Knowledge tied to curriculum content • Learning through practical experiences • Knowledge as fixed and recoverable	Confidence tied to factual knowledge
• Teachers design learning that connects ideas • Experiences sequenced to enable concept formation • Teacher's role seen as curating conditions for retention • Reflection on learning supports future teaching choices	Sequencing experiences helps teaching
• Inclusion as technique • One strategy replaces another • All children must be involved • Equality as equal participation	Using strategies to include all pupils
• Adapting activities for engagement • Selecting right strategy based on learner need • Practical activities support diverse learners • Inclusion connected to pedagogical responsiveness	Adjusting activities to fit learners
• Inclusion involves social bonding and belonging • Focus on equitable participation • Enjoyment and engagement tied to shared learning • Inclusion framed as emotional and moral practice	Belonging and inclusion in learning
• Discomfort with teaching RE • School RE experiences seen as inadequate • Childhood upbringing seen as narrow • Emotionally charged reflections on early exposure	Past experiences shape current feelings
• Curriculum as prescription • Frameworks should provide specific answers • Teaching seen as delivering what's in the document • Difficulty interpreting open-ended curriculum	Following curriculum for guidance
• Positive emotions linked to memorable experiences • Joy and wonder prompt memory retention • Emotional responses reframed as pedagogical success • Emotions seen as tools for engagement, not learning in itself	Emotion to help pupils remember
• Learning as situated and multi-sensory • Storytelling as a memory device • Experience first, then theory	Learning through doing and stories

• Narrative coherence aids understanding • Learning through doing and seeing	
• Learning framed as retention and application • Value of strategies based on how well they 'stick' • Creative strategies valued for memory impact • Conceptualisation of success tied to knowledge recall	Remembering = successful learning
• Gurdwara visit challenges assumptions • Reflection cut short or redirected • Emerging awareness of limited worldview • Hesitation to embrace implications	New experiences shift some thinking
• Attributing problems to system (lack of training) • Speaking in third person to avoid self-implication • Creating stories about other teachers' fears • Avoiding ownership of bias or discomfort	Avoiding discomfort in reflections
• Admission of being 'uneducated' about RE • Noticing gaps in own parenting and exposure • Desire to change personal attitudes • Willingness to confront self-judgement	Owning up to personal limitations
• Experience shifts personal assumptions • Emphasis on equality and respect • Bias named explicitly and linked to social context • Future practice grounded in ethical awareness	Bias and fairness awareness growing
• Teaching to meet external aims • Health and academic attainment as outcomes • Knowledge combats racism • RE to prevent terrorism • Quoting curriculum aims to justify purpose	Teaching to achieve wider goals
• Watching good teachers to learn • Doing the right thing • Learning techniques • Needing strategies that work	Learning from observing others
• Journals allow more vulnerable expression • Writing seen as space for metacognition • Opportunities to revisit and reshape experiences • Caution in conversations due to peer judgement	Journals help deeper thinking?

Appendix G – Reflexive memo example – June 2023

Data Analysis Thoughts - 22nd June 2023

What is happening during the 'theory' part?

1. *The students often strongly connect the strategy with the impact on children's learning*
2. *The students sometimes extend this to a bigger 'why' reason*
3. *The students often use the pedagogical impact on learning as the same as the 'why'*
4. *The students often think about their own prior learning experiences in relation to their university learning*
5. *The students often 'ventriloquise' literature – it might be interesting to consider to what degree does the literature become their voice?*
6. *Is this evidence of episteme developing?*

Revelations of assumptions about the 'theory' part:

7. *We assume that when they are in university, they are being taught 'Theory with a big T'.*
8. *However, when we look at what the students choose to reflect on, it's the experiences that students reflect on. It is the experiences that spark their thought processes.*
9. *They often think about themselves and their past experiences – something about prior learning.*
10. *This tells us something about ITE practices --> experiences designed for student-teachers to act as learners-in-situ*
11. *Is this a bad thing? Should ITE be teaching specific Theory in a way that is more engaging for the student teachers?*
12. *Not necessarily. When student teachers are reflecting, they are making appropriate links to literature, and this appears to be informing their 'why', their philosophy of teaching.*
13. *They also make plans for future practice – they set intentions.*

What happens when student teachers reflect on practice and connect it with theory?

1. *They focus mostly on the teaching strategy and its effect on learning*
2. *Their 'why' is implied, but not explicit (the way it is when they reflect on their learning)*
3. *Could this be linked to postmodernism – input/output?*
4. *There is lots of 'I' in relation to practice and reflection – the site of the knitting together of 'theory' and practice is in the mind of the student teacher*
5. *Which voices are evident? Is there a greater focus on the I? Is there evidence of the literature and 'I' statements merging? Are 'their' voices becoming 'my' voice?*
6. *Is this evidence of phronesis?*
7. *This bit seems less exciting? Maybe because it's been more researched?*

Thoughts about relation to the Rolfe Model

1. *Too simplistic/implies a linear development*
2. *Suggests that Theory is taught rather than 'theory'*
3. *Ignores personal aspect of learning in the Theory part*
4. *Also, implies that theory-practice part is the 'final destination', when in fact it seems that teacher development is best thought of as a spiral of Rolfe mini-cycles (messiness/factors fo development link to Hollingsworth)*

How appropriate is Rolfe's framework of knowledge acquisition?

It isn't.
Korthagen and Lagwerf's model (2001) would more appropriate instead (gestalts, schematizion, and theory-building).

Can elements of Korthagen and Lagerwerf's model be idenitified? Level reduction, etc?

Something about the act of writing the reflection that helps them understand the theory underneath the experience; something about the act of writing that is directly connected with the act of thinking. Thoughts have been sharpened, have a beginning, middle and end. Writing reifies (makes real) the thought – exposes the gaps and gives an order.

Appendix H – Depth levels of reflection

As introduced in Chapter 2, the depth levels of reflection (Kember et al., 2008; Larrivee, 2008) are integrated and summarised below.

Depth level	Characteristics
Pre-reflection	Automatic responses without consideration of alternatives Student teacher does not take ownership of problems Failure to question appropriateness of practices in relation to pupils' needs Does not consider applicability or alternative courses of action Practice is inflexible and unable to deviate from taught procedures
Surface reflection	Searches for meaning, but without personal connection to concepts Limited to technical processes Supports teachers in meeting pre-determined goals Concerned with "what works" rather than the value of goals in themselves
Pedagogical reflection	Theoretical concepts are interpreted in relation to personal experiences Theory is applied to practical situations Concepts become embedded within student teachers' understanding, facilitating insights that go beyond theory Student teacher seeks alignment between their espoused theory and theory-in-use
Critical reflection	Involves self-analysis and self-questioning and self-critique Leads to a change in deep-seated, unconscious beliefs, leading to new belief structures and perspective transformation Produces changes in practice Involves emancipation from existing rationalisations for actions Focuses on the moral and ethical consequences of classroom practices for pupils Embedded within larger social and political realities Seeks emancipatory ideals Involves analysis of socio-political contexts

Depth levels of reflection, adapted from Kember et al., 2008 and Larrivee, 2008

Appendix I – Summary of research paradigms

As introduced in Chapter 2, the research paradigms of teacher learning (Russ et al., 2016) are integrated with perspectives on teacher knowledge and learning, summarised below:

Paradigm	Teaching	Knowledge	Learning
Process-product	Pedagogical actions	Actions and behaviours *(Techne, PCK)*	Acquisition of skills, fine-tuning and implementation with increasing frequency *(Transmissive apprenticeship, cognitive constructivism, situated cognition)*
Cognitive	Pedagogical ways of thinking	Mental structures, including beliefs, attitudes and orientations *(Episteme, CK, phronesis, personal practical knowledge)*	Accommodation and assimilation of new knowledge into existing mental structures *(Cognitive constructivism, situated cognition, realistic teacher education)*
Situated sociocultural	Pedagogical interaction	Identity, use of tools and practices, community norms and participation *(Knowledge of learners, knowledge of contexts, personal practical knowledge, techne, phronesis)*	Identity changes through enculturation and positioning; appropriation of tools; community participation through negotiation and individual attunement. *(Social constructivist, experiential learning, the onion model, narrative inquiry, transformative learning, problem-posing education)*
Critical-transformative	Moral and political transformative action	Moral and political orientations relating to local and broader contexts *(Phronesis, knowledge of educational aims, episteme, personal practical knowledge)*	Reflection on purposes of education and enacting transformation *(Experiential learning, transformative learning, problem-posing education)*

Paradigms of student teacher learning, integrated with perspectives on teacher knowledge and learning (adapted from Russ et al, 2016)