A flexible framework for articulating how student teachers learn teaching, as described by participants in a national review of initial teacher education in England

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Abstract

The aim of this study was to elucidate approaches to teaching student teachers how to learn teaching. It was based on a view of learning to teach as complex but that this should not prevent those in the field of initial teacher education from constructing and articulating their own professional knowledge of how they teach student teachers. Using secondary data, generated for a national review of initial teacher education in England, it drew on multiple perspectives from those in the field, to inform the development of a flexible framework for articulating how student teachers learn teaching.

The study was positioned within the paradigm of post-positivism and aligned to a critical realist philosophy. To this end, it illuminates the social structures of and for professional practice, through qualitative thematic analysis, which took a hybrid approach to theme generation. The themes generated were used to develop the 'Pillars of Interaction and Interconnecting Bridges Framework for Articulating ITE Practice'. Rather than focusing on an aspect of practice, the framework and themes that generated it, took a holistic view of initial teacher education, whilst still representing its complexity.

Central to the framework and a key finding from the study is the importance of viewing student teachers as teachers of their own learning, learning to learn how to teach. Thus, the findings illuminate how to teach future teachers to also be future learners of teaching. The study offers teacher educators, as well as those developing initial teacher education strategy, a flexible framework to articulate, guide and further develop practice. As such, it contributes to initial teacher education discussion and debates informing current and future policy.

Table of Contents

List of Figures and Tables

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Declaration:

This thesis is entirely my own work and has not been offered previously for any other degree or diploma.

Chapter 1: Background and motivation for my study

1.1 Introduction

Within this chapter, I situate the research in relation to two separate but related journeys. The first, relates to the policy trajectory of Initial Teacher Education (ITE) in England over the last seventy years. The second is my career journey within this policy context in order to outline the rationale and motivation for undertaking this research, along with its intended wider purpose. My role as a Director in an Institute of Education in an English university involves implementing ITE policy and thus explicitly linking both journeys. This provides the backdrop for the study and the underpinning research questions.

1.2 The journey of the policy trajectory of Initial Teacher Education in England

In what follows, I outline the policy trajectory of ITE in England, which shows how in recent years it has become a 'politically constructed and ideological policy problem' (Mayer, 2021, p.120). This framing of ITE as a problem that needs to be fixed, has led to policies of regulation and prescription, constraining teacher educators' autonomy and marginalising the role of universities, resulting in what Moon (2016, p.253) describes as a 'fragile, even febrile, position of teacher education within the university'.

The act of teaching 'is an intense, complex and discursive act, which demands considerable expertise' (Edwards, 2001, p.163). As such, creating policy to inform ITE is a challenge (Ball and Forzani, 2011, 2010 and 2009, Grossman et al, 2009). Policy makers continue to grapple with this challenge, which has

seen a gradual shift from theoretical professional knowledge to practical wisdom and centrally determined standards (Beach and Bagley, 2013). This trajectory, in the main, has favoured a focus on what teachers need to know (Grossman et al, 2009), along with a predetermined set of standards to be evidenced, rather than 'theoretical knowledge of, about and for teaching as professional practice' (Beach and Bagley, 2013, p.381).

Between 1950 and 1970, whilst school placements were a feature of ITE, the predominant focus was on educational theory, such as the psychology, history, philosophy and sociology of education (Lawn and Furlong, 2009). The content of ITE was largely determined by the research interests of academics, situated in universities and colleges of education (Crook 2002). The 1970s saw the first 'Committee of Inquiry on Teacher Education and Training', resulting in the James Report (DfES, 1972). The report stated that 'Many courses place too much emphasis on educational theory at the expense of adequate preparation for students' responsibilities in their first professional assignments' (DfES 1972, p.20). Following the election of a Conservative government in 1979, in line with the Conservatives neo-liberal political agenda, recommendations from the report gained momentum and in 1983, the Council for Accreditation of Teacher Education (CATE) was established. Their Circular 3/84, which established criteria that providers of ITE programmes had to adhere to for accreditation (Beach and Bagley, 2013), could be described as the start of a policy direction that reduced university's autonomy in defining the content of ITE.

The 1990s saw a further shift as the expectations outlined by the Government (DfE 1992, 1993) started to increase the responsibility of teacher preparation to

schools. In addition, a National Curriculum for student teachers (STs) (DfEE, 1998) was introduced, which specified the 'content which all trainees must learn in the core subjects of English, mathematics, science, and in the use of Information and Communication Technology in all subject teaching' (p.45). Labour later withdrew this and shifted the focus from content and competencies to a set of standards (DfES/TTA 2002) to be achieved prior to the award of qualified teacher status (Beach and Bagley, 2013).

During the twenty-first century, ITE policy in England experienced a paradigm shift, which started with the government white paper, *The Importance of Teaching* (DfE, 2010). The paper stated that 'too little teacher training takes place on the job' (p.19) and emphasised an approach that centred on learning by observing 'expert' teachers. This approach saw the 'strongest schools' (p.19), rather than universities, taking the lead and STs developing their skills through learning from the 'best teachers' (p. 23). This was followed up with the DfE's *Training our Next Generation of Outstanding Teachers* (DfE, 2011a) consultation document which set out the government's proposals for reforming ITE, which was shortly followed by the *Training our Next Generation of Outstanding Teachers: Implementation Plan* (DfE, 2011b). The focus was to introduce a school-led model of ITE, called 'School Direct', which positioned schools as increasingly taking responsibility for ITE with support from universities (DfE, 2011a).

In 2014, forty-two years on from the James Report (1972), the then Secretary of State for Education tasked Sir Andrew Carter to undertake an independent review of ITE in England. The resulting report, known as 'The Carter Review'

(Carter, 2015), set out 'to define effective ITT practice' (p.5) in England and make recommendations for improvements. In their critical examination of the review, Mutton et al (2017) argue that the resultant recommendations conceptualised effective ITE in relation to course content without due consideration of how teachers learn. Such a conceptualisation could be further endorsed through the main outcome of the review, namely the development of the 'Framework of core content for initial teacher training (ITT)' (Munday, 2016). The framework 'specifically focused on content and not on how it should be delivered' (p.5). The status of the framework was ambiguous as it recommended rather than mandated that 'Ofsted should have due regard to the framework of core content as part of its ITE inspection' (p.10). The framework was revised in 2019 (DfE, 2019) and its status clarified through a new ITE Ofsted inspection handbook, which states that Ofsted will check STs 'receive their minimum entitlement' (Ofsted, 2020) set out in the Core Content Framework (CCF), with a potential inspection outcome of 'Inadequate' for non-compliance. Cochran-Smith (2005) suggest that frameworks such as this are an obvious choice for policy makers, as prescribed content is easier to regulate than making recommendations about practice which 'facilitates effective processes of professional learning' (Mutton et al, 2017, p.27).

The most recent review of ITE in England, namely the 'ITT Market Review' (DfE, 2021e), has resulted in a requirement for all new and existing providers of ITE to undertake a 'rigorous accreditation process' (DfE, 2021d, p.16) to evidence compliance with a set of pre-defined quality requirements, focusing on the providers' ITE curriculum and the quality of mentoring in school. Providers,

who are unsuccessful, will no longer be able to deliver ITE from September 2024. At the time of writing, I am leading my institute through this process, within a restricted timeframe, following adapting curricula to meet the mandatory CCF (DfE, 2019) requirements, whilst maintaining quality provision and teacher supply during a global pandemic and preparing for an Ofsted inspection. This most recent policy development sees tighter regulation with further compromise of academic freedoms, with a view to achieving 'a more efficient and effective market' (DfE, 2021e, p.3).

The assumptions within this ITE policy journey have shaped the focus of my study in the following ways. Firstly, the shift to school-led ITE is rooted in the assumption that 'Teaching is a craft and it is best learnt as an apprentice observing a master craftsman or woman' (Gove, 2010). This view does not appear to recognise learning to teach as a complex process. The knowledge, skills and expertise of teacher education or in other words, knowledge of teaching teachers (Loughran, 2006) appears to go unrecognised and undervalued by policy makers (Murray et al, 2011). Secondly, the gradual policy shift focusing on the content of ITE and what teachers need to know, rather than how teachers learn, suggests that guidance in relation to the latter may not be necessary, is too difficult to provide or too challenging to regulate.

Within the current policy context, the content of ITE in England and the standards required for the award of QTS, are mandated through policy and measured through high stakes Ofsted inspections. The 'how' teacher educators prepare new teachers could be viewed as the only aspect of ITE in which teacher educators have maintained autonomy. My study does not aim to negate

this autonomy by suggesting the 'how' should be imposed on teacher educators. Instead, in order to analyse their collective experience and expertise, I aim to draw on effective approaches as articulated by a range of stakeholders who contribute to ITE in England. I intend to use my analysis to develop a framework to explore, describe and share this collective professional knowledge in order to; support new teacher educators, aid STs' understanding of how their learning may be facilitated and to contribute to further discussion and development of ITE policy and practice. Lingard and Renshaw (2010) warn us that a potential consequence of the absence of opportunities for those who contribute to ITE to construct their own professional knowledge, is that it will continue to be dominated by political policy, with the potential to further marginalise the role of university teacher educators. The timing of my study within this policy context is particularly apposite, as recent ITE policy in England has undermined the view of teaching as complex, increasingly redefining it as a 'technical operation' which runs the risk of diluting, 'teacher agency, teacher identity and teacher professionalism, individually and collectively' (Biesta et al, 2020, p.460).

1.3   Personal journey as a rationale and motivation for the study

Alongside this boarder context, in this section, I describe the rationale for my study in relation to my personal journey and how this, in addition to the policy journey above, has provided the motivation for it. I start with sharing personal experiences as a new teacher and how this has driven my desire to nurture the teachers of the future. I follow this with a description of the work I undertook as a consultant for the National Strategies (DfE, 2011). Finally, I share my

personal experiences of transitioning into ITE as a teacher educator. How, after twenty-years in ITE, this has led to my current role as a Director of an Institute of Education in a university in England, with responsibility for the strategic overview of the quality of range of teacher education courses. A common thread throughout this journey is a personal motivation to learn in order to help others to learn.

After leaving compulsory schooling, I set out on a career path to become a primary school teacher. I viewed this important role as an opportunity to help young children to learn. In order to gain Qualified Teacher Status (QTS) in 1993, I studied to become a teacher, over four-years, in a college of education, completing a combined honours degree in English and Education with QTS. I started my career as a newly qualified teacher (NQT), in a two-teacher village primary school, in September of the same year. I had a mixed age class of 4–7-year-old children. Like many, I vividly remember the first day of my teaching career. As a group of children took their place sitting on the carpet in front of their new teacher, it all became very real. It was at this point, I started to recognise that I was under-prepared. Some of what I viewed to be the fundamentals of my ITE were absent. An important example being that I did not know how to teach children how to read. I had been taught that learning to read is complex and that there are many different views and opinions about it but I had not been given any starting points, in the form of practical strategies and skills to draw on, in order to develop my practice. Fortunately, my niece had just started school. Through her teacher, I was introduced to a 'systematic synthetic' phonics programme 'Jolly Phonics'. This took the complex activity of learning

how to read and broke it down into its component parts, which encompassed skills and a body of knowledge. Whilst all the component parts worked together, breaking them down in order to understand how to teach them, along with adapting approaches where needed, provided a starting point on which to build my practice. This experience of feeling underprepared as a new teacher provided my motivation to support the teachers of the future. I did not want other new teachers to feel underprepared, without a base from which to develop their practice.

This desire to support the professional development of other teachers led me to securing a role as a Literacy Consultant, employed by the Local Authority to support the delivery of the National Strategies (DfE, 2011) professional development locally. All consultants across the country were provided with professional development to deliver 'packages' of teacher professional development, which were then adapted by consultants, like myself, for the local contexts. This work involved providing courses for teachers, as well as working with teachers within their own settings. In most cases, I would significantly change the suggested content of the 'packages' and the delivery, as well as adding examples from my own and others' experiences. It was, however, helpful to have a starting point and the opportunity to discuss and develop approaches with other consultants across the country was beneficial. This meant that I did not have to work out how to support and develop the professional practice of teachers alone and without any guidance.

Following this, I secured a position as a Senior Lecturer in Primary English at a college of education. As a primary school teacher who transitioned into teacher

education, even with the experience of consultancy, I can relate to the words of Murray and Male (2005, p.136) who observe:

> The need to acquire the new and extended pedagogical skills of teacher education, together with individual and institutional assumptions that new teacher educators already possess pedagogical expertise, creates the unique position of *expert become novice* for teacher educators as an academic group.

Once again, in my career in education, I was entrusted with an important role feeling underprepared. I had content to teach and a set of standards that students were working towards and assessed against but I did not know *how* to best teach new teachers the practice of teaching. As a teacher, it was assumed that I would know. Like other novice teacher educators (Ritter, 2011, Pinnegar, 1995), working in isolation and with limited resource, I was left to 'figure out' how best to prepare new teachers for the practice of teaching. In light of my experience as an NQT, one of the areas I specialised in was teaching new teachers how to teach children how to read. During the early stages of my career in ITE, I undertook a Master's degree in Education with Applied Linguistics. The motivation for this study was to help STs to learn how to teach children how to read. According to the Newly Qualified Teacher Survey in 2007 (TES, 2012), just 38% of primary NQTs nationally, rated their ITE in preparing them to teach children how to read as good or very good. I was tasked with developing this aspect of ITE across the primary programmes within my institution. To this end, working with teachers and teacher educators across out partnership schools, I led on the development of a programme of study that

deconstructed the complex process of teaching children how to read. The programme focused on six key principles of the effective teaching of reading, which were developed collaboratively and broke the complex process of teaching children how to read into its component parts, each underpinned with theory. The programme explicitly integrated learning in taught sessions with school-based learning. What STs were to be taught as well as how they would be taught was shared with them. The NQT survey completed in 2013 showed that 83% of the STs in my institution rated this aspect of their ITE as good or very good which was above the sector.

After twenty-years in teacher education, I have progressed into roles with increasing responsibility, from leading an ITE programme to a suite of teacher education programmes to my current role as Director of an Institute of Education, in a university, with responsibility for a range of ITE and continuing professional development programmes for teachers and leaders in education. Whilst I continue to develop my own practice through teaching STs, a key aspect of my role is to ensure that colleagues contributing to ITE programmes are well equipped and confident to do so, in order for STs to be well equipped and confident to start their careers as teachers.

My personal journey outlined above has contributed to the rationale and motivation for my study on two levels. Firstly, drawing on my own experiences as a NQT, my study aims to contribute to the discussion of how STs learn how to teach. Here, sharing and discussing the resulting framework for articulating ITE practice with STs, has the potential to help them to develop and understand

their own learning. Thus, helping them to understand not only how to teach but how to learn about teaching.

Secondly, drawing on my experience as a new teacher educator, the study will add to the discussion and understanding of how teacher educators 'go about' the complex practice of teaching STs how to teach and how to learn about teaching. Similar to the reading programme I led on, the intention here is to explicate the complexity and consider the component parts of ITE in order to contribute to discussion of ITE practice and to provide some 'starting points' for new teacher educators to build on.

Ball and Forzani (2009, p.503) propose that the lack of guidance relating to ITE practice, is down to the 'dominant contemporary view of teaching as highly improvisational and wholly context dependent'. Yet Lampert and Graziani (2009) argue that complex practice can be named, taught and learned. This study recognises that learning to teach is a complex process but is based on the view that this should not deter those who contribute to ITE from constructing their own professional knowledge and guidance for teacher educators and the students they teach.

1.4   Research intent and questions

The aim of my study is to attempt to explicate the approaches to teaching STs the complex practice of teaching, through a qualitative thematic analysis of data generated for a national review of ITE in England.

The associated research questions are:

1. How do student teachers learn how to teach and how is this facilitated, as described by the participants of a national review of Initial Teacher Education in England?

2. What are the tensions and competing participant voices of those who provided evidence for the review, pertaining to ITE policy and practice?

3. How can the professional practice, as described by the participants, be used to inform the development of a flexible framework for how student teachers' learning may be facilitated in ITE?

1.5   Summary of the content of the thesis

The literature review (chapter two) situates my study within both the ITE policy context, through my critical discussion of national and international reviews of ITE and of literature from the field, pertaining to models and frameworks for effective ITE practice. In addition, I outline some of the challenges of articulating ITE as complex practice. I conclude this chapter with the suggestion that there is a gap in the literature, in that I was unable to find a model or framework that aimed to illustrate all aspects of ITE practice across the different contexts through which this takes place. It is this gap my study aims to fill.

Chapter three explains how my philosophical worldview provided a rationale for the research design, identifying my study within the field of critical qualitative research and explaining why taking a critical realist approach was appropriate for the aims of my study. Due attention is given to positionality and reflexivity and I provide a justification for and evaluation of the secondary data used for

my study. Arguments are presented for employing Braun and Clarke's (2006) six phases for thematic analysis and how this fits within a critical realist approach. Within this chapter, the hybrid approach to theme generation, between theoretical and inductive, is elucidated through explaining and exemplifying how codes were categorised and developed into themes.

Through an introduction to my 'Pillars of Interaction and Interconnecting Bridges' framework, I present a postulation of my hypothesis in chapter four. This chapter provides a response to my third research question (1.4). Aligned to the hybrid approach I took to theme generation (3.8.1), I present an overview of themes generated and present my framework in chapter four, prior to my discussion of them in relation to pertinent literature from the field in chapter five. As explained in section 4.1, I viewed the themes generated through my analysis as 'key characters' in the story of ITE practice. Therefore, in chapter four I introduce the 'key characters' and then, in chapter five, I substantiate the role they play in telling the story of ITE practice through the discussion of my findings.

As indicated above, throughout chapter five, I examine the generated findings, by providing an insightful and critical discussion of each theme, along with relevant literature to demonstrate how my framework may be used to articulate ITE practice. This discussion attends to my first and second research questions (1.4).

In the final chapter, I summarise my key findings and share my reflections on the research process, as well as suggesting potential future research. I

complete this chapter by reflecting on implications for my practice and role as a

Director of an Institute of Education in an English university.

Chapter 2: Literature Review

2.1 Introduction

In order to provide the context for my study, in this chapter, I discuss key themes and debates in relation to how to best prepare new teachers for the practice of teaching. Building on prior research, my study is placed within the context of what 'others in the field are thinking and doing' (Wheeler, 2005, p.95). Importantly, I start by framing this chapter within the perceived challenges of articulating the practice of teaching new teachers how to teach. As my study aims to draw on effective practice, as described by those in the field of teacher education, understanding these potential challenges is significant. As my study makes use of data generated by a review of ITE in England, I follow this with an exploration of reviews of ITE over the last decade both in the UK and across the world, all of which aimed to improve ITE. However, I suggest there are notable differences in their implementation, which reveal potential tensions relating to different ideologies underpinning the practice of ITE. This links to research question 2 of my study, through which I aim to explore tensions and competing voices in the data. I make use of the reviews to identify recommended models and explore effective practice described, as well as potential challenges. This provides a context for my research question 1, which focuses on how STs learn how to teach. As outlined in section (1.2), in England, at the time of writing, this discussion is particularly apposite, as the Department for Education recently embarked on another review of ITE, namely the 'ITT Market Review' (DfE, 2021e) which published its recommendations in July 2021. Following a short consultation process, the

government in England published its response to the recommendations in the review (DfE, 2021d), which outlines a set of mandatory quality requirements needing evidenced, through a process of accreditation/re-accreditation, in order for ITE providers to continue to offer ITE.

Next, I make use of relevant literature to interrogate how different models of ITE are articulated and presented. I start by discussing the clinical practice model, endorsed by the majority of the ITE reviews both in the UK and beyond. This discussion is expanded through a section on Darling-Hammond's (2014) 'cornerstones of clinical practice'. Using Crowe and Berry's (2007) five principles of practice, designed to enable STs to 'think like a teacher', I continue to discuss different models identified in the literature, this time with a focus on how STs learn in relation to working with 'more experienced others'. This is followed by a discussion of Korthagen's (2011) 'realistic' model for teacher learning, along with his five guiding principles, which places students' experience of practice at its centre. Finally, I draw on Grossman et al's (2009) framework, considering the teaching of practice in the university context. Throughout the discussion, where possible, I attempt to draw on my own 'experiential data' (Strauss, 1987), whilst recognising this is from a university teacher educator perspective, to further understand the models and effective practice described. To an extent, this will help me to consider their usefulness in articulating practice, alongside appreciating how others have carried out research into how STs learn. Furthermore, how others present their models will inform the third research question for my study, which aims to draw on

professional practice, as described by those in the field, to develop a flexible framework for articulating how learning can be facilitated in ITE.

2.1.1 Identifying search paths

The aim of my literature search was to return the most relevant literature that 'fit' with the topic of my study, rather than every relevant publication available (Savin-Baden and Major, 2013). To this end, in addition to my prior knowledge of key authors such as, Linda Darling-Hammond, Pam Grossman, John Loughran, Tom Russell, Fred Korthagen and Jean Murray, I made use of key words such as: 'learning how to teach', 'learning to teach', 'learning teaching', 'teacher education practice' and 'models of teacher education' in literature search engines. I also reviewed the tables of contents in key journals such as 'Journal of teacher Education', 'The Teacher Educator' and 'Teacher Education Quarterly', over the past decade. I took a case-by-case approach to considering whether literature merited inclusion, using a criterion of the extent in which it addressed how new teachers learn to teach. In essence, I focused on process rather than content, how new teachers might learn or be taught, rather than what they should know.

2.1.2 Defining the terms

Initial Teacher Education or Initial Teacher Training

For many years, there has been an ongoing debate surrounding the terms Initial Teacher Education (ITE) and Initial Teacher Training (ITT). Nearly eighty years ago Rivlin (1943 cited in O'Neill 1986, p.262) proposed that,

Teacher education refers to a *whole* range of activities that constitute

preparation for, and improvement of, the teaching profession… whereas

teacher training suggests the development of a rather *narrow* proficiency

in the skills or methods of classroom teaching, teacher education

connotes the *broad* professional preparation needed for the highly

complex task of teaching in the modern world (Italics authors)

The two terms reflect philosophical differences in relation to the process of

teacher preparation and the kinds of professional knowledge needed. In recent

years in England, there has been a shift towards the use of ITT over ITE. In

2010, the Minister of Education in England, Michael Gove advocated an

ideology in which teaching is viewed as a craft, stating that,

Teaching is a craft and it is best learned as an apprentice observing a

master craftsman or woman. Watching others, and being rigorously

observed yourself as you develop, is the best route to acquiring mastery

in the classroom (Gove, 2010)

Notwithstanding the question of who judges which teachers are 'master

craftsmen or women', this view is more aligned to a teacher training ideology,

viewing the teacher as a technician, focusing on the practical application of

routines and formulas learned through observing others. Whilst this, in my view,

can effectively contribute to teacher preparation, it does not reflect the complex

practice of learning how to teach (2.4). The term ITE views the teacher as a

professional who understands the uncertain, problematic nature of teaching and

goes beyond 'trained approaches to 'doing'' (Loughran, 2009, p.200),

recognising teaching as complex practice. Indeed, Loughran (2009) calls for teaching to be considered as a discipline, with students of teaching rather than student or trainee teachers. I agree with Shulman's (1986, p.13) view of the professional teacher 'as not only a master of procedure but also of content and rationale and capable of explaining why something is done'.

Whilst I have chosen to use the term ITE in my study, I do not necessarily see ITE and ITT as polarised. In my view, training is a necessary subset of teacher education but it is not sufficient in itself. Thinking back to my own teacher preparation (1.2), I was well versed in theories of teaching and learning but I was lacking in practical approaches and strategies as starting points to 'survive' in the classroom. Korthagen (2010, p.420) describes this as a 'theory first, practice later' approach, with the alternative being 'practice first, theory later'. He offers an alternative, which he calls a 'realistic approach' discussed later in this chapter. Similarly, Forgasz et al (2018, p.34) describe 'the dialectical positioning of university-based learning about teaching as abstracted theory in opposition to situated, school-based learning about teaching through practice', neither of which addresses the integration of theory and practice. However, Allen (2011, p.742) sees theory as 'embedded in and inseparable from practice'. Recognising these debates relating to theory and practice (Vick, 2006), perhaps the term Initial Teacher Education and Training (ITET) would be more appropriate, viewing theory and practice as having a reciprocal relationship.

Practice and Pedagogy

When framing my study, I considered whether to use the term pedagogy or practice as its focus. There are multiple definitions of the term pedagogy (Grimmitt, 2000, James and Pollard, 2011, Husband, 2010), with some (Salas and Cannon-Bowers, 2001) arguing that the term is not suitable to describe teaching and learning. Alexander (2008, p.7-8) offers a definition as 'learning, teaching, curriculum and culture'. He draws a distinction between the terms practice and pedagogy, describing practice as 'a practical and observable act' with pedagogy encompassing 'that act together with the purposes, values, ideas, assumptions, theories and beliefs that inform, shape and seek to justify it' (Alexander, 2008, p.75). My study aims to explore and describe professional practice associated with teaching new teachers the complex practice of teaching. With this in mind, drawing on Alexander's (2008) definitions, I felt that practice was a more appropriate term for my study. Whilst recognising that practice forms part of pedagogy, using the term practice helps to narrow the scope of my study, which focuses on interactions within a particular structure or what Mattson et al (2011) describe as 'practice architectures'.

Teacher Educator

The term teacher educator encompasses a diverse group of professionals, including university lecturers and professors and experienced teachers and mentors. My study makes use of data generated for the Carter Review (2015), which aimed to draw on the views of this diverse group. Therefore, when referring to teacher educators, I make use of the broad definition articulated by

the European Commission (2013, p.8) as 'all those who actively facilitate the (formal) learning of STs and teachers' with my focus being on the former.

2.2 The challenge of articulating the complex practice of teaching new teachers the complex practice of teaching.

It is well documented that, due to the complex nature of the practice of teaching, policy relating to ITE can be problematic (Ball and Forzani, 2011, 2010 and 2009, Grossman et al, 2009). This is further compounded by the fact that 'teaching just looks easy' (Loughran and Russell, 2007, p.218). This may partially explain why the erudite work of teacher education is often 'viewed simplistically' (Loughran and Menter, 2019, p.216) with a policy focus on content and competence standards, which are easier to regulate (Cochran-Smith, 2005), than the 'often difficult to describe', 'complex and messy terrain' of teacher education (Berry, 2007, p.31). Moreover, Berry (2007, p.20) suggests that teacher educators find representing their practice in, 'a way that honours the realities of practice in its messy complexity, and yet, is sufficiently meaningful and useful for a range of other readers' as a major challenge. It is this challenge that I attend to in my study, which attempts to develop a flexible framework that presents practice through drawing on descriptions from those in the field.

The challenge of articulating practice for teacher educators may be due to the 'complex dual role' they have, which necessitates 'supporting student teachers' learning about teaching, but in so doing, through their own teaching, model the role of the teacher' (Korthagen, Loughran and Lunenberg, 2005, p.111). Added

to this, STs are 'both learners and teachers simultaneously' (Caena, 2014, p.1) as they are 'learning to teach while learning to learn and develop as a teacher' (Bronkhorst et al, 2011, p.1128). Furthermore, there is a 'dominant contemporary view of teaching as highly improvisational and wholly context dependent' (Ball and Forzani, 2009, p.503). These challenges present a problem for ITE. If, as Delandshere and Petrosky (2004, p.6) propose, 'policies prescribe the meaning of teaching' and those in the field, who are best placed to inform it, find it difficult to articulate and present their own complex practice, ITE is at risk of continuing to be dominated by political policy (Lingard and Renshaw, 2010).

My study recognises that learning to teach is complex practice but I hold the view that this should not deter teacher educators from attempting to articulate it. As such, I share the views of Macdonald et al (2013, p.381) who argue that it,

> is not that one needs to develop a lock step prescription for how to prepare teachers to enact core practices, but rather that as a field we would benefit from a simple framework, applicable across contexts, that would allow us to learn with and from one another. Our hope is that this framework would also enable us to build tools and resources that teacher educators (broadly defined) could access to make decisions about how best to teach the candidates or teachers in their contexts.

In essence what Macdonald et al (2013) describe above links directly to the aims for my study. Similarly, Grossman and Macdonald (2008, p.186) point out that 'the search for greater precision in our language for describing teaching will

contribute to stronger connections across research communities'. Developing a shared language enhances opportunities for teacher educators to collaboratively evaluate, challenge and develop models of ITE. In turn, this would empower teacher educators across the sector to collectively evaluate and challenge national models of ITE, dictated through policy. This is particularly apposite within the current context in England, where learning to teach can take place in a range of contexts and increasingly undertaken by a variety of practitioners (Philpott, 2014). Within this context, Philpott (2014, p5) proposes it is 'more important than ever that the how of teacher education is given attention beyond the where it takes place or who carries it out'. Focusing on the 'how', he suggests, challenges the view underpinning the government in England's 'grow your own teachers' (Gove, 2010) approach, which suggests that STs' learning is 'local' and for a particular school or group of schools. Interestingly, increased attention to the articulation of practice has been given by Ofsted (2020, p.24), the ITE regulator in England, in their recently launched new inspection framework and handbook. Inspections requires leaders of ITE to 'to explain the organisation and structure of the ITE curriculum', discuss how it is 'ambitious in scope and rigorous in content choice' and ensure it is 'coherent and well sequenced and leads to cumulatively sufficient knowledge and skills'. Therefore, the ability to articulate how STs learn the practice of teaching carries high stakes accountability. It is the 'how' of teacher education that I turn to in the next section, where I discuss national reviews of ITE from across the UK and what they tell us about how STs learn.

2.3 National reviews of ITE from across the UK

Over the last decade, there has been a proliferation of reviews into ITE across the UK. In this section I discuss the content of these, in relation to 'how' new teacher learn the practice of teaching. This discussion orientates around the notable differences in the reviews, models recommended and description of how STs learn, along with potential challenges and barriers. For each review, table 1 provides a summary pertaining to the aims, the professional background of the chair and panel, whether an ITE or ITT perspective is taken (see 2.1.2), evidence drawn upon, models recommended and effective practices described. It is important to note that the data generated for the *Carter Review of Initial Teacher Training* (Carter, 2015) in England is the secondary data that I use for my study.

Table 2.1 My summary of National Reviews into ITE across the UK

	Scotland: *Teaching Scotland's Future: Report of a review of teacher education in Scotland* (Donaldson, 2010)	Northern Ireland: *Aspiring to Excellence, Final Report of the International Review Panel on the Structure of Initial Teacher Education in Northern Ireland* (Sahlberg, 2014)	Wales: *Review of initial teacher training: teaching tomorrow's teachers* (Furlong, 2015)	(A) England: *Carter Review of Initial Teacher Training* (Carter, 2015)	(B) England: *Initial teacher training (ITT) market review report* (Bauckham, 2021)
Aims of the review	'To **consider the best arrangements** for the full continuum of teacher education in	To '**examine the case for** the reform of teacher education provision in	To explain 'the main challenges' for the ITE sector and 'to **set out a range of different options**…	To '**define effective ITT practice**, assess the extent to which the system currently delivers	To '**enable the provision of consistently high-quality training**, in line with the CCF (Core Content

	primary and secondary schools in Scotland' (p.106).	Northern Ireland' (p.63).	to raise the quality of provision' (p.1).	effective ITT, recommend where and how improvements could be made and recommend ways to improve choice in the ITT system by improving the transparency of course content and method' (p.5)	Framework), in a **more efficient and effective market**' (p.4).
The professional backgrounds of the review team	**Chair:** Honorary Professor, School of Education, Glasgow **2 Panel members:** 1. Head of the school of education at Aberdeen University 2. HM Chief Inspector of Education and Chief Education Advisor to Scottish Ministers	**Chair:** Visiting Professor of Practice, Harvard University **4 Panel members:** 1. Professor, University of Bristol 2. Emeritus Professor of Education, National University of Ireland 3. Emeritus Professor of Education, University of Oxford 4. Emeritus Professor of Education, The University of Edinburgh;	**Chair:** Emeritus Professor, University of Oxford **Panel members**: none stated	**Chair:** Chief Executive Officer (CEO) of South Farnham Educational Trust **5 Members Advisory group:** 1. Professor and Director of the Sheffield Institute for Education at Sheffield Hallam University 2. CEO of the Harris Federation 3. Director of Undergraduate Studies and Acting Associate Dean, School of Mathematics at the University of Manchester	**Chair:** Chair of the Office of Qualifications and Examinations Regulation. Chief Executive Officer (CEO) and Director of Tenax Schools Trust **4 Members Advisory group:** 1. Head of Public Affairs and Engagement and former Curriculum Research and Design Lead, Ark education charity/trust 2. Chair of the Teaching Schools Council, CEO of the Arthur Terry Learning Partnership

		Universities' Council for the Education of Teachers.		4. Executive Principal of Melland High School and Director of Education at Bright Futures Educational Trust 5. Research and development manager at ARK	3. Executive Director of Programme Development, Teach First 4. Professor and Director of Sheffield Institute of Education, Sheffield Hallam University
ITE/student teacher or ITT/trainee teacher perspective	• ITE/student teacher	• ITE/student teacher	• ITE/student teacher	• ITT/trainee teacher	• ITT/trainee teacher
Evidence drawn upon	• Visits to each university providing teacher education in Scotland, as well as a selection of local authorities and schools. • Meetings with interested bodies and individuals • Around 100 responses to a call for evidence • Nearly 2500 responses to a questionnaire completed by serving teachers	• Papers from each ITE provider and stakeholders describing their 'vision of the structures necessary to create a world-class system of initial teacher education' (p.63) • Interviews with the ITE providers and relevant stakeholders. • 111 responses to a call for evidence • Analysis of current	• Discussions with leaders in all the ITE centres, 'regional Consortia', schools and national body representatives. • Discussions with Graham Donaldson about his review in Scotland (2010). • National and international evidence of effective ITE	• 11 themed roundtable discussions with sector experts • 24 meetings and discussions with experts and stakeholders • 31 visits to ITT providers and schools involved in ITT • A call for evidence that received 148 responses • 165 survey responses from students and applicants on	• DfE analysts and the expert group 'reviewed a range of national and international evidence on good practice in ITT; this included evidence on curriculum, course structure, sequencing, and delivery (including partnership working, mentoring and school placements)' (p.4).

	• Commissioned literature review on teacher education worldwide	strategic and policy frameworks • Review of international trends in teacher education		their opinions about ITT course information • A review of the existing evidence base including international evidence, Ofsted evidence and findings from the Newly Qualified Teacher (NQT) survey • A review of course materials from 150 programmes. (p.17).	
ITE Model/models recommended	• No particular model recommended	• Clinical practice model	• Clinical practice model	• Clinical practice model	• Proposed future model of ITT (p.31). No named model but outlines the key features below.
Effective Practice/ Practices described	• Benefit is seen in students engaging in 'other disciplines outside education' (p.40) as part of their personal development	• Formal lectures, supplemented by small group sessions such as seminars, tutorials, workgroups, paired-learning,	• Five core features from the British Educational Research Association and Royal Society of Arts review of the international research	• Emphasis is given to learning from outstanding teachers, predominantly through observing their practice • Peer group learning and	• Emphasis is given to the 'design of the training curriculum' to ensure it is 'carefully sequenced' subject and phase specific and shows

	• Personalised learning facilitated through 'online profiling' (p.51) is recommended. • Results from a student survey show that they perceive placements, taught seminars and working with peers as most useful.	micro-teaching and problem-solving groups' (p.10) • The need for students 'to "re-learn" what they think they know about teaching and learning from their own very particular school experience' (p.13) • Recognises the difficulties students have in learning to "see" how effective teachers actually teach (what often looks simply like common sense) (p.13) • States the 'importance of experimenting firstly within a safe environment' (p.13)	evidence on high quality teacher education (2014) are referenced. These focus on what providers need to do rather than how to do it.	peer observation, lesson study, team teaching and using subject association resources • Draw on expertise 'outside university departments of education' (p.9)	'how, where and by whom' it will be 'delivered'(p,4) • Aligning experience in school with the 'training curriculum'. • Intensive school experiences, 'to embed pivotal curriculum content through a blend of input, observation and practice' (p.5). • Developing mentors 'deep knowledge of the training curriculum, the evidence behind it, and support for trainees' progress through it' (p.5) • An assessment framework 'based closely on the training curriculum' (p.5)

2.3.1 Notable differences in the reviews

All of the reviews in the table above, set out to improve ITE but there are notable differences between the aims and approaches of the first three and reviews (A) and (B) carried out in England. The aims of the first three in the table appear to recognise the uncertain nature of ITE through the use of language such as, 'consider the best arrangements', 'examine the case for' and 'set out a range of different options'. Whereas the language in the aims of the review (A) in England suggests a level of certainty, through its intention to 'define effective ITT practice'. Review (B) in England appears to build on this, assuming that effective ITE practice is defined and aims to enable its consistent implementation. However, with a requirement of all providers to undertake accreditation or re-accreditation, as a mandatory requirement within review (B) in England, mandate, rather than enable may be a more appropriate choice of word. Unlike the other reviews, which were chaired by university academics within the field of ITE, both reviews in England were chaired by Chief Executive Officers of a 'multi-academy trust', which in England is an alliance of several state funded schools. Both trusts also deliver school centred initial teacher training, which, in England, can recommend for the award of qualified teacher status (QTS), without the involvement of a university partner. Interestingly, review (A) in England expresses some concern about the perceived status of the academic award stating that,

> We are concerned that there may be a misconception among trainees
> that perceive the gaining of a PGCE as more important than gaining

QTS when, of course, it is the status of QTS that qualifies the teacher (Carter, 2015, p.13).

This is in stark contrast to the view expressed in the NI review which states provision should be 'infused with the intellectual power which university involvement in teacher education makes possible' (Sahlberg, 2014, p.38). Furthermore, unlike the other panels (where these were stated), the panels for both review (A) and (B) in England is dominated by chief executives of multi-academy trusts. These variances, along with the use of the term ITT rather than ITE and trainee teacher rather than student teacher (used in all of the other reviews) reflects a philosophical difference in relation to the perceived process of preparing new teachers discussed in 2.1.2.

2.3.2 Models of ITE and how student teachers learn

The recommended models of ITE and discussion of how STs learn were drawn from a relatively common base of evidence, with all, apart from review (B) in England, combining evidence from reviews of literature related to effective ITE, along with submissions of evidence and focused discussions. Review (B) in England took a slightly different approach, like the others, it drew on national and international evidence relating to effective ITE, however, consultation on the proposals took place after the report was published, rather than being integral to it. As discussed in the previous section, this suggests that effective ITE is defined and the consultation relates to the implementation of it, rather than contributing to the definition of it. Most reviews cite a clinical practice model (see section 2.5.1) as effective, although the explanation of it differs

slightly across them. Three of the five reviews, the first one being the exception, refer to the importance of ITE being 'underpinned by a clear understanding of evidence about how STs learn to teach' (Furlong, 2015, p.8). However, review (B) in England takes more of a prescriptive approach stating that 'training' should be 'based on evidence, including relevant aspects of cognitive science, or the science of learning' (DfE, 2021d, p.12).

Despite two of the five reviews stressing the importance of a wide range of approaches to student learning, description of effective practice in four of the five reviews is limited, at best. The exception is review (B) in England, which appears to suggest that effective practice centres around an ITE curriculum. Stating that the curriculum should specify 'a range of methods, carefully and intentionally orchestrated across the curriculum, including training undertaken with a range of experts, training undertaken with peers and supported independent study' (p.41) but does not describe how STs' learning may be facilitated through these 'methods'. In the other reviews, there are many statements about what providers of ITE should do but not how to do it. For example, 'developing close relationships between theory and practice, in a way that helps students to understand and explore the interconnectedness of educational theories and classroom practices' (Sahlberg, 2014, p.8). The first two reviews place some emphasis on lectures and seminars but there is no discussion about how STs learn through these or reference to research evidence, such as Grossman et al's (2009) framework, discussed in section 2.5.5. Peer and paired learning also feature in four of the reviews. Across four of the five, review (B) in England being the exception, the strategies of online

profiling, micro-teaching, problem solving groups, lesson study and team teaching are mentioned. Two of the five endorse STs engaging in disciplines outside education and there is reference to the use of subject association resources. Perhaps the limited discussion of how STs learn, along with a basic list of approaches is indicative of the challenges teacher educators face in articulating the complex practice of teaching new teachers the complex practice of teaching (see section 2.2).

2.3.3 Challenges/barriers in relation to models of ITE and effective practices described

Some of the challenges relating to how STs learn are mentioned in the reviews. Review (A) carried out in England places emphasis on students learning through observing outstanding teachers but recognises 'effective observation is challenging and is an area where further research would be helpful' (Carter, 2015, p.39). Similarly, the Northern Ireland (NI) review identifies the difficulties in 'seeing' effective practice through observation and the need for students to 're-learn' what they think they know from their own experiences of education. In addition, the NI review outlines the importance of students being able to experiment with and practice their teaching in a safe environment. Whilst the review in Wales states barriers to effective ITE being, the voluntary nature of the role of schools, seen as an 'add on to schools normal work' (Furlong, 2015, p.17). As well as the narrow set of standards which only assess 'the extent to which providers are able to prepare STs for the practical, day to day realities of the classroom' (p.13) and the 'lack of a robust research culture within teacher education' (p.17). Review (B) in England dedicates a section of the report to

ITE challenges, which in the main focuses on the implementation of the 'training curriculum', the quality of mentoring, as well as the supply and quality of placements (DfE, 2021d, p.9-10).

What appears to be overlooked in all the reviews discussed is how STs learn how to learn about teaching through the approaches cited. For example, how can peer learning or micro-teaching help STs learn how to teach? Only the reviews in England seemed to recognise the complexity of learning how to teach, stating that this 'cannot be overestimated' (Carter Review 2015, p.21) and that 'ITT is a complex activity in both design and execution' (DfE, 2021d, p.9). The others described; teaching as complex, education as complex, children's learning as complex but not learning how to teach as complex, perhaps this was merely assumed. Whilst the complexity of learning to teach is recognised in two of the five reviews, the complexity of how to facilitate STs' learning does not appear to feature in any of them. In other words, how to teach STs how to learn how to teach and as such, in my view, they do not attend to the question of how teachers learn how to teach adequately. The 'practical advice' and 'evidence informed strategies' that are viewed as essential for new teachers in preparation for the complex practice of teaching, does not appear to be important, or even needed, for those preparing teachers. As these reviews were intended to inform policy on ITE, there is an inherent risk that policy is predicated on these assumptions. This echoes the view from Murray and Kosnik (2011, p.243) that,

> teacher education should be the subject of such sustained attention from
> policy makers and researchers without accompanying consideration of

teacher educators, as the profession with direct responsibility for designing, teaching and evaluating the programmes, seems then not a little curious

How this complex practice is described, by those involved in ITE, forms the basis for my research question 1, which aims to further understand how STs' learning is facilitated as described by those in the field. However, describing such complexity can present teacher educators with challenges, such as those discussed in section 2.2.

2.4 National Reviews of ITE outside the UK

Reviews of ITE over the last decade are not unique to the UK. Indeed, during this time, similar reviews have been undertaken globally. As in table 2.1 earlier, table 2.2 below summarises the features identified in national reviews of ITE in Singapore, the US, Ireland and Australia. This section discusses notable differences across these reviews as well as to the reviews in the UK.

Table 2.2. My summary of National Reviews of ITE outside the UK

	A Teacher Education Model for the 21st Century (TE21) A Report by the National Institute of Education (NIE), Singapore (NIE, 2010)	Transforming Teacher Education through Clinical Practice: A National Strategy to Prepare Effective Teachers (NCATE, 2010) US	The Structure of Initial Teacher Education Provision in Ireland (Sahlberg, 2012)	Australia - Action Now: Classroom Ready Teachers (Craven et al. 2015)
Aims of the review	To **build 'on existing strengths** to bring teacher education onto	To **turn the education of teachers in the US 'upside down'** by shifting 'away from a norm which	**'To identify possible new structures** which will recognise and	**Provide advice** on 'how teacher education programmes could be improved to better prepare

	a higher plane of excellence' (p.1)	emphasizes academic preparation and course work loosely linked to school-based experiences' to 'programs that are fully grounded in clinical practice and interwoven with academic content and professional courses' (p.ii)	address weaker areas in the system of teacher education; leverage the current strengths in the system; and envision innovative strategies so that Ireland can provide a teacher education regime that is comparable with the best in the world' (p.11)	new teachers with the practical skills needed for the classroom' (p.78)
The professional backgrounds of the review team/advisory group	Not stated	**Co-Chairs**: Chancellor. State University, New York and Commissioner of Education, State of Colorado **26 Panel Members:** 1 Vice Chancellor 9 Presidents of Education Organisations 4 Deans of Education 3 Professors of Education 2 Superintendents 1 Assistant to Provost 1 Programme Director 2 Teachers 1 School Board Member 1 Chancellor	**Chair**: Professor and Director General of the Centre for International Mobility, Helsinki, Adjunct Professor at Helsinki and Oulu Universities. **2 Panel Members:** 2 Professors of Education	**Chair**: Vice-Chancellor of the Australian Catholic University and member of the Board of Directors of Universities Australia **7 Group members:** 1 Professor in Mathematics Education 2 School Chief Executives 1 School Principal 1 School Deputy Principal 1 Deputy Vice-Chancellor 1 Dean of Education

		1 Executive Director of a Teacher Education programme		
ITE/student teacher or ITT/trainee teacher perspective	Teacher Education/Student Teachers	Teacher Training and Teacher Education Programmes/Prospective Teachers	ITE/Student Teachers	ITE/ITE students and pre-service teachers
Evidence drawn upon as stated in the review	• extensive literature review • understanding of existing and emerging trends • local profile • changing landscape in policies and initiatives • research data	Evidence was through perspectives from the panel	• A background paper • Submissions from Higher Education Institutions (HEIs) that provide ITE, outlining 'their future role in teacher education' (p.10) • Meetings with: - the author of the background paper, the Department for Education and Skills, the Higher Education Academy and the Teaching Council - representatives of the 19 HEIs - a representative of Hibernia College of teacher education	• Over 170 submissions of evidence • Meetings with - ITE providers - professional organisations - teacher employers
Model/models	Reference is made to:	Clinically based model	Reference is made to ITE being situated in	Models across states - residency, internship and clinical practice models

	• 'strong grounding in clinical practice' (p.1) • 'the adoption of the university-based model' which 'demonstrates teaching is a profession' (p.1) • 'enhanced partnership model' (p.2)	Recognises that 'there is not a large research base on what makes clinical preparation effective' (p.iv) Talks about 'new models of clinical preparation' (p.v) in the plural	Universities with 'systematic links to clinical practice in field schools' (p.24) with the notion of school placements being replaced with 'clinical learning in special teacher training schools' (p.14).	Models of assessment for 'classroom readiness' (p.38) – 'Authentic Teacher Assessment Model' and the 'integrated assessment model' (p.37)
Effective Practice/ Practices described	• Framework for pedagogies (see table 2.3)	• Modelling and recorded demonstrations • School embedded learning • Case studies and case conferencing • Peer, micro-teaching and co-teaching • Community mapping • Specific protocols • 'Instructional rounds', adapted from medical education • 'The defence of learning approach' (p.11) – students defend a presentation evidencing their impact • Observing videos of themselves teaching • 'Embedded signature assessments' e.g. 'child case studies, analysis of student learning, and curriculum/teaching analysis' (p.15)	• 'Critical reflection on practice takes place in higher education as well as in school classrooms, thereby creating a 'virtuous circle' of reflective practice' (p.20). • Interaction with other subject departments in the university was seen as important in enhancing student learning	• 'immersion in theory … in contexts where these can be applied' (p.26) • 'internships, observations, supervised practicum or community placements, … apply acquired knowledge to real-life teaching situations' (p.27) • a wide range of school-based tasks (p.27) • Professional experience 'carefully interwoven with course work'. (p.30) • Technological approaches; remotely observe teachers, online discussion forums, videos of effective practice and associated resources, accessing programmes to enable students to 'share, critically

		• 'pedagogically designed approximations of practices such as case studies and simulations' to 'observe practice and test their skills in controlled situations' (p.27)			analyse and reflect on the lessons of other teachers' (p.49) • Focused on effective practice in relation to student teachers evidencing their progress e.g. e-portfolios, peer and self-assessment, electronic media and collaborative assessment (p.37)

Table 2.3 'Mapping the Pedagogical Repertoire' (Singapore, National Institute of Education, 2010, p.7)

Values³   Skills   Knowledge   (V³SK)

Values – anchored, Deep Knowledge and Rich Pedagogical Skills

EXAMPLES OF —	CORE PEDAGOGICAL APPROACHES						
	Didactics Demonstration Modelling	Inquiry	Reflection	Simulation Authentic	Experiential Clinical Practicum	Self-Directed	Collaborative
GESL*			•		•	•	•
Microteaching	•		•	•			
School-based Practicum		•	•		•		
		•				•	•
Problem-based Learning		•	•				•
Case studies			•			•	
	•	•	•	•			
E-portfolio	•		•	•	•		

Graduand   Teacher   Competencies   (GTCs)

* Group Endeavours in Service Learning (GESL)

2.4.1 Notable differences within the reviews and to those in the UK

Like the reviews in the UK, whilst those further afield all have improving ITE as their aim, there are differences in their approaches. Rather than reviewing the extent ITE is effective, the Singapore review takes a strength-based approach, discussing ways to strengthen existing effective approaches, such as extending the strong relationship between the National Institute of Education, the Ministry of Education and schools, to the full continuum of teacher development. The latter two reviews, similar to the majority in the UK, appear to recognise the uncertain nature of ITE and as such, aim to provide advice and possibilities to be considered. Whereas, the US review takes a more radical approach, aiming to turn teacher education 'upside down'. The US review makes use of the term teacher training but also uses teacher education interchangeably. This may be indicative of the aims, which emphasise shifting the focus of ITE from university-based provision linked to schools to schools based linked to university, and as such, turning ITE 'upside down'. Interestingly, with such a focus on practice and explicitly stating that STs 'learn by doing' (2010, p.ii), the US review only has two occurrences of the words practice or practically. The reviews in Singapore and Ireland have zero and one respectively and the Australian review has twenty occurrences. This may not be surprising, since the aims of the review in Australia focuses on equipping new teachers with practical skills. This emphasis is underpinned further by the fifty-five occurrences of the words strategy or strategies. Providing STs with strategies is emphasised, albeit to a lesser extent, in all of the reviews, bar the one from Singapore. All the reviews, where stated, were chaired by senior academics, with a strong

representation of university panel members. As the report from Singapore was carried out by the National Institute of Education, it is likely to have been authored by academics. As the only reviews of ITE not to be chaired by senior academics, the reviews in England appears to be outliers. However, the panels for the reviews in the US and Australia had representation from both schools and universities.

2.4.2 Models of ITE and how student teachers learn

A similar range of evidence to those in the UK were used to inform the reviews. Although, the review in the US took a slightly different approach, in that the evidence was drawn from the extensive panel. Like the majority of the reviews in the UK, all emphasise a clinical practice model (discussed in section 2.5.1) as effective, although there does not appear to be consensus about what this might look like. Indeed the review in the US refers to 'models of clinical preparation' (NCATE, 2010, p.v). The use of plural here seems to imply that there are different models. Unlike the reviews in the UK, three of the four reviews from further afield (Ireland being the exception) included a wide range of specific examples of practices or strategies to support STs with learning how to teach. Reference was made to microteaching, case studies, modelling and simulations, along with the use of e-portfolios. The use of technology to access resources, support students observing videos of themselves and others teaching, as well as learning through evidencing progress such as the 'defence of learning' approach, discussed in the US review, were all described as effective practice.

All the reviews recognise the importance of embedding STs' learning in school experiences and suggest a number of different approaches to this. From 'instructional rounds' (NCATE, 2010, p.11), in the US review, where school mentors, university tutors and the students, reflect on learning and teaching at key points, to the 'virtual circle of reflective practice', described by Sahlberg (2012, p. 20) in the review in Ireland, through which reflection takes place both in school and in university. The review in Australia appears to take more of an application of theory to practice approach, emphasising the importance of applying 'acquired knowledge to real life teaching situations' (Craven et al, 2015, p.27). However, there is little reference to research that underpins these approaches in any of the reviews, and explanations of how they support STs' learning is limited.

2.4.2 Challenges/barriers in relation to models of ITE and effective practices described

Both reviews in the US and Australia, indicate some of the challenges in relation to effective ITE. Funding models, cost, availability, length and timing of placements, as well as restructuring staffing across schools and universities were described as challenges but ones that could be overcome. The US (NCATE, 2020, p. iv) review describes the approach as 'difficult but doable'. Linked to the observation earlier about the lack of consensus relating to clinical practice, the US review states one of the challenges is that 'clinical preparation is poorly defined and inadequately supported' (p.4) and propose ten design principles, along with what they define as strategies for clinical practice. With a focus on accreditation and quality assurance of ITE, the Australia (Craven et al,

2015) review cites a lack of research into the effectiveness of ITE, as a challenge. Interestingly, this is referring to evaluating ITE based on the impact teachers go on to have in relation to pupils' outcomes, rather than research into effective ITE practice per se.

Sahlberg (2012, p.4), in his review from Ireland, states that 'understanding any element of it (teacher education) is a complex task' but does not explain why or how. Similarly, the review from Australia (Craven et al. 2015), stresses the importance of understanding the complexities of ITE but in the context of the framework of standards, the operational context of ITE and the teaching workforce, rather than the process of learning how to teach. Whereas the review in the US (NCATE, 2010) acknowledges that the complexities introduced by its recommendations places significant demands on policymakers. The complexity of learning to teach is not mentioned in the review from Singapore (NIE, 2010). Like the majority of the reviews in the UK, articulating the complexity of learning how to teach is implicit, at best. This suggests that viewing the practice of learning how to teach as complex is not fully understood or recognised in reviews of ITE, which are intended to inform policy within and outside the UK. As with the reviews in the UK, the complexity of teaching STs how to teach and how to learn how to teach does not appear to be recognised. My study aims to draw on the voices of those in the field of ITE to unpack and articulate ITE practice, which I recognise is a complex undertaking. In the section that follows, I explore the potential challenges this may present.

2.5 Models and frameworks for ITE

In this section, I discuss a number of models and frameworks from the literature. As well as using these to further understand the ways people have researched how STs learn, I consider their usefulness in relation to articulating practice. In addition, how they have presented their work will inform my thinking about the presentation and structure of my own intended flexible framework. McDonald et al (2013, p.381) suggest that the structure of many ITE programmes align with 'acquisition models of learning' through which 'teacher educators deliver information about teaching' to STs who are expected to 'carry that learning with them as they enter the field'. They suggest that whilst teacher educators attempt to 'interrupt this model of learning', the absence of guidance relating to how STs learn is a barrier. I start by discussing a clinical practice model, which featured in the majority of reviews of ITE within and beyond the UK. This discussion is developed further through exploring Burn and Mutton's (2015) 'research-informed clinical practice' approach. Following this, I explore Crowe and Berry's (2007) principles for supporting STs to 'think like a teacher'. Korthagen's (2011) realistic model, designed to further our understanding of teacher learning is discussed next and finally I discuss Grossman et al's (2009) framework for thinking about the teaching of practice in the university context.

2.5.1 Clinical practice: model or metaphor

Despite supporting a clinical practice model of ITE, in his review of ITE in England, Carter (2015, p.21) appears to endorse an acquisition model approach, described above, in the statement below,

To become effective teachers, trainees need to develop a wide range of knowledge, understanding and skills and the ability (by the time they become an NQT) to apply these effectively to a range of contexts.

It can be seen from the reviews of ITE across the UK, discussed earlier, that a clinical practice model of ITE, is viewed as preferable but how it is defined varies in emphasis and guidance on its implementation are absent. In his Scotland review, Donaldson (2010) does not explicitly mention a clinical practice model. However reference is made to how the medical profession 'has addressed the need for all aspects of professionalism to be developed through practice' (p.42). Donaldson (2010, p.42) recommends that the,

exploration of theory through practice should be central to all placement experiences – emphasising effective professional practice, reflection, critical analysis and evidence-based decision making

In the Welsh review, Furlong (2015, p.17), emphasises the leading role schools play in 'mentoring with a staged development of students' teaching experiences' but also the importance of opportunities for students to link this experience 'with other forms of professional knowledge - with research, with theory and with knowledge of practice in other contexts'. The description from Sahlberg's (2014, p.11) NI review is almost identical to the one above but with an additional emphasis on STs using professional 'knowledge and the insights it provides to challenge, to question, to reflect on, and to improve their own teaching'. While Carter's (2015) review in England uses Sahlberg's (2014) definition, the emphasis is on students having 'access to the practical wisdom

of experts' to 'engage in a process of enquiry' (Carter, 2015, p21). Importance is given to 'making explicit the reasoning and underlying assumptions of experienced teachers' to encourage students to 'develop and extend their own decision-making capacities or professional judgments' (p21). The Welsh (Furlong, 2015) and NI (Sahlberg, 2014) reviews appear to show more concern for the interplay between theory and practice, whereas the reviews in Scotland (Donaldson, 2010) and England (Carter, 2015), appear to tentatively recognise the role of theory, and seem to favour practice.

The variety visible in the descriptions of clinical practice above, reflect Burn and Mutton's (2015) view that there is ambiguity in the concept of clinical practice, which some have perceived as increasing time STs spend in classrooms. Thus implying a 'rejection of research-based knowledge, rather than concerns to integrate such knowledge more effectively with that developed in schools' (p.3). In an attempt to address this, they offer the term 'research-informed clinical practice', which is intended to develop a deep relationship between school and university contexts and the knowledge generated within them. Within this concept, practice is developed both through research about teaching to inform the practice of STs and research into how STs learn the practice of teaching. McLean Davies et al (2015) propose the appropriation of the word medical as a metaphor rather than a model. The benefits of this relate to the need to translate and interpret a metaphor for a particular context, whereas a model implies an uncomplicated 'lift' from one field to another. They draw on the words of Kriewaldt and Turnidge (2013, p.106 in McLean Davies et al, 2015, p.517), to make the point that 'clinical practice is not a wholesale approach; rather, it is a

change in perspective that has the capacity to create a change in thinking about learning and teaching'. To support our thinking, Darling-Hammond (2014) offers us what she describes as three essential cornerstones of clinical practice, discussed next.

2.5.2 Cornerstones of clinical practice

To help change our thinking about how new teachers learn through clinical practice, Darling-Hammond (2014, p.549) offers three essential 'cornerstones'. The first is 'coherence and integration; through 'reiterating core ideas' across courses and between coursework and school placement, founded on the theory of learning to teach, with an 'integration of roles' to create an 'almost seamless experience' (p.550). The second is 'explicit links between theory and practice' through; 'extensive and intensely supervised clinical work—tightly integrated with coursework', running concurrently to enable students to 'learn from expert practice in schools', by theorising practice and 'making formal learning practical' (p.551). Approaches 'such as close analyses of learning and teaching, case methods, performance assessments, and action research' are viewed as ways to facilitate this, 'followed by systematic reflection … and opportunities to retry and continue to improve', allowing STs to 'grow "roots" on their practice' (p.551).

The final one, which notably the other two are dependent, is developing 'new relationships with schools' which see teams of university and school educators working together on 'curriculum development, school reform, and action research' (p.553). Each contributes to the professional development of the

other, which enhances the learning experience of STs and that of pupils in the school. In addition, university educators may teach children and school educators teach STs as part of their ITE programme. Darling-Hammond (2014) argues that such practice is critical to quality ITE but she also recognises it is difficult to achieve. However, she does not go on to explore the potential barriers to achieving this, such as those highlighted by Furlong's (2015) Welsh review discussed earlier, most notably the challenge of ITE being viewed by schools as an 'add on' which they may or may not choose to engage with.

The discussion of a 'research-informed clinical practice' perspective of teaching and learning above, informed my thinking about research question three of my study, which intends to consider the development of a flexible framework for how student teacher learning may be facilitated. The framework will draw on descriptions of participants in the field of ITE located in schools and universities. It will be particularly useful to consider how and if one describes the others' contribution and how a 'research-informed clinical practice' perspective of teaching and learning plays out in participant descriptions. This links well to question two of my study, which aims to illuminate tensions and competing participant voices. Furthermore, consideration will be given to whether this perspective of student learning may be articulated through a framework and the potential challenges it presents. However, whilst a 'clinical practice model' is the favoured approach as evidenced in the reviews of ITE across the UK, it is not the only one presented in literature from the field. It is these alternative approaches that I turn to in the next section, along with their potential to inform thinking about my study.

2.5.3 Thinking like a teacher: principles of practice

Crowe and Berry (2007, p.31) suggest that teacher educators can support the development of new teachers through making explicit the 'principles of practice that guide their work', both to themselves and the teacher educator community so that they can be 'discussed, challenged and developed as a powerful form of knowledge of practice'. Crowe and Berry (2007), both experienced teacher educators located in different institutions and countries, used a collaborative self-study approach to investigate how each of them supported students to learn to 'think like a teacher'. Their concept of 'thinking like a teacher' is based on a view that STs need more than tips for teaching, in the form of ideas and techniques, which they call the 'show and tell' (p.31) approach. Thinking like a teacher, as the title suggest, requires thinking on the part of the student, to understand 'why they do what they do' (p.31), which represents a more dynamic view of the relationship between their teaching and the impact on pupils' learning. Crowe and Berry (2007, p.32) view their role as teacher educators as supporting students to 'transition from thinking like a student', which they suggest may involve viewing teaching as straightforward, without the need to see beyond their own perspectives developed through their prior experiences, to thinking like a teacher (as described above). Furthermore, they explicitly state that their concept of thinking like a teacher is based on a view of student teacher learning as teacher education, rather than teacher training (see discussion in section 2.1.2). Crowe and Berry's (2007) view of student teacher learning is important to their concept of thinking like a teacher, as they feel it

necessary to explicitly state it. The view of learning as 'transmission' that underpins a teacher training (see 2.1.2) perspective of student teacher learning, illustrated in the English government policy of 'grow your own teachers' (Gove, 2010), in my view, could see Crowe and Berry's (2007) concept modified to 'thinking like your teacher'.

In an attempt to further understand their practice, Crowe and Berry (2007), over time (the length of which is not stated), shared their experiences of how they supported students to 'think like a teacher'. The culmination of which was a set of five guiding principles, which they viewed as informing their practice. This alignment of principles and practice helped to make them explicit to the teacher educators. In addition, creating such a framework enabled them to be shared with STs. Crowe and Berry (2007) refer to the work of Loughran (2006, p.84 in Crowe and Berry, 2007, p.33), who stressed the importance of sharing such a framework with students 'if we expect our practice to influence our students' developing views of, and actions in, their own teaching'. They used an extended vignette, intended to draw our attention to some of the ways they have come to know what they know about teacher education and to illustrate each of the principles. I found this approach helpful in developing my understanding of them and how they may relate to my own practice. Such an approach may aid my thinking, in relation to how a set of guiding principles could be developed through my findings and how I may illustrate them to support understanding. The 'complex dual role' of the teacher educator is evidenced effectively in the vignette, which considers how STs experience the teacher educator's teaching and their learning, to enable them to see sessions

as more than 'simply doing the task' (Crowe and Berry, 2007, p.36). In the next section, I briefly discuss each of the principles and how they are intended to support students' learning.

Principle One: Thinking like a teacher involves learning to see teaching from the viewpoint of the learner. Experiencing the role of learner is an important means of developing an understanding of the learner's perspective.

In my view, this principle can be summarised using the words of Gilber Highet (1996, p.280), who stated that teachers need to 'think not what you know, but what they know; not what you find hard, but what they will find hard'. However, as others have pointed out (Jackson, 1986 and Murray and Fallon, 1989), viewing learning from the perspective of others does not come naturally. Crowe and Berry (2007) propose that such learning may be facilitated by putting students in the role of the learner. This involves a split screen approach, providing experiences through which they can explicitly explore how it feels to be the learner and to analyse the different perspectives and feelings they have, reflecting learner diversity.

Principle Two: Prospective teachers need opportunities to see into the thinking like a teacher of experienced others.

This second principle discusses how STs may gain insights into the thought processes allied to teaching, in order to develop their understanding of teaching as decision making, rather than a set of routines. The approach suggested by Crowe and Berry (2007) is that of the 'think aloud', through which the more experienced other make their pedagogical reasoning explicit. However, this

involves more than simply telling students everything the more experienced other is thinking, it involves careful selection of relevant aspects of this thinking, which are pertinent to the students' learning at the time.

Principle Three: Prospective teachers need opportunities to try out thinking like a teacher in order to develop their thinking like a teacher.

Within this principle, Crowe and Berry (2007) suggest that STs should have opportunities to share their thoughts and feelings in relation to their experiences, either in the preparation of, during or after teaching. They suggest that STs require skilful prompting (see principle four) in relation to what they did, are doing or plan to do, along with how and why, linked to their development as STs, in order to guide their thinking like a teacher. There are some similarities here with Korthagen's (2011) concept of personal practical theory (discussed in the next section). I would add that through this, students are able to make their learning visible, which in turn enables the more experienced other to support them further. For this to be effective, Crowe and Berry (2007) emphasise the necessary relationship of openness and trust between the student and more experienced other (discussed in principle five) and highlight the challenges this may present if the more experienced other is also assessing the student teacher's progress.

Principle Four: Prospective teachers need scaffolding (guidelines, questions, structures) to support them in the process as they begin thinking like a teacher.

Whilst there are different forms of scaffolding described by Crowe and Berry (2007), the use of questions being used in their vignette, they are clear that

they are intended to enable STs to understand the value of their engagement in their own learning. They also warn against providing too much structure, which may constrain student independence. Getting the balance right, requires teacher educators to be responsive to the needs of individual STs.

Principle Five: Developing responsive relationships is at the heart of learning to think like a teacher and at the heart of supporting our students (relationship support)

This principle is viewed as central and underpins the others. For example, 'thinking aloud' about your thinking to another, whether that be a student to a more experienced other or the other way around, requires relationships of confidence and trust. I concur with Crowe and Berry's (2007) view of the challenge this may present, which may go beyond the classroom, as relationships of trust can result in students sharing information that requires signposting to other sources of support, such as counselling. In my experience, this can sometimes be the case, following sessions focusing on issues such as safeguarding.

It would appear that the five principles outlined above relate to how STs learn in relation to a more experienced other. The more experienced other could be a university or school-based teacher educator but what is clear is the need for the investment of time and the skills required by the more experienced other to support student learning effectively. Crowe and Berry (2007, p.33) recognise that how their five principles are enacted are likely to be 'context-and individual-specific' but state that they are attempting to 'represent a big-picture view of

what matters' in 'teaching about teaching' in order to provide an 'explanatory pathway into a complex set of interconnected ideas'. This chimes with the aim of my study, which attempts to draw on practice, as articulated by those in the field of ITE, into an over-arching but flexible framework. However, where it differs is that I present 'how' new teachers learn the practice of teaching, whereas Crowe and Berry's (2007) five principles, seem to frame their approach. In my view, this suggests that the principles describe how they go about the practice, rather than focusing on the practice itself or in other words, how they go about the how. The principles, helpfully present a set of interconnected, ways of working, which are brought to life using an extended vignette and are carefully cross referenced throughout. The principles are underpinned by a view of student learning, which is aligned to ITE rather than ITT (see 2.1.2). This led me to question to what extent a framework would be applicable to both views of student teacher learning and whether developing a set of guiding principles could or should be developed for the prosed framework in my study. This question will be given consideration in the discussion of my findings. Indeed, the 'realistic approach' proposed by Korthagen (2011), discussed next, comprises of a framework, along with a set of guiding principles.

2.5.4 A 'realistic approach'

Korthagen (2011) makes use of five guiding principles for what he terms a 'realistic approach' to teacher education, which is underpinned by a model designed to further our understanding of teacher learning. The model (figure 2.5.4) was developed by Korthagen and Lagerwerf (2001) and is structured

across three levels, the foundations of which can be found in a three-level model created by Van Hiele (1973 and 1976 cited in Korthagen, 2010). Van Hiele's model draws from Piaget's age stages of cognitive development but without the age dependent aspect, as Van Hiele did not view the stages as age specific (Korthagen, 2010). He retained Piaget's theory that 'reflection on the concepts and relationships within one's mental structure at one level, promotes the transition to the next level' (p.413). Korthagen and Lagerwerf's (2001) model builds on Van Hiele's, with a focus on teacher learning. Their model takes a 'bottom up' approach, which invites teacher educators to,

> Make the program follow the learning (not vice versa)
>
> (Donaldson and Marnik, 1995 cited in Korthagen 2001, p.69)

This model for teacher learning along with the five guiding principles (Korthagen, 2011) underpinning the 'realistic approach', create a framework which is intended to further develop our understanding of a common challenge for ITE, namely the perceived gap between theory and practice. Darling-Hammond and Snyder (2000) found that the concept of transferring knowledge from theory to enactment in practice, which some call the theory to practice approach (Carlson, 1999), is problematic for teacher education. Over the last decade, the radical shift of ITE in England to a school led approach (see 1.2), places an increased emphasis on practical teaching in school, which may be viewed as a solution to this. However, Korthagen (2017) suggests this creates a new problem for ITE, that of connecting the practice in school to theory.

Korthagen (2011, p.31) warns us that without due consideration of professional

learning, an emphasis on school-based teacher education may be

'counterproductive'. Korthagen and Lagerwerf's (2001) model for professional

learning is based on three underlying principles; professional learning is more

effective when 'directed by an internal need in the learner', 'rooted in the

learner's own experiences' and when 'the learner reflects in detail on his or her

experiences' (Korthagen, 2001, p.71).

Figure 2.5.4

| Experiences with concrete examples | Gestalt formation | Gestalt (holistic) | Schematization

Reflection | Schema (network of elements and relations) | Theory formation

Reflection | Theory (a logical ordering of the relations in the schema) |

Level reduction
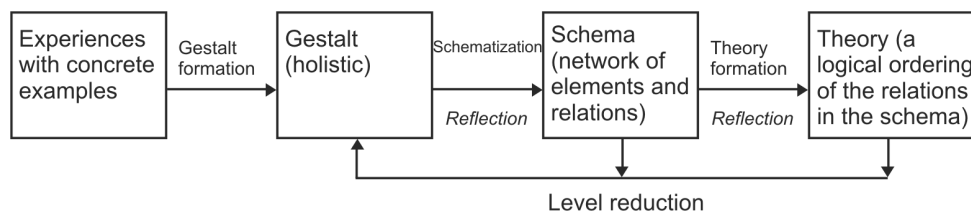
The model is organised across three levels, the gestalt level, the schema level

and the theory level, each of which I summarise below. The foundations of the

'gestalt level' is the learner's experiences. A gestalt often takes place

subconsciously and results in a particular teacher behaviour or reaction to an

experience, which encompasses the 'whole of a teacher's perception of the

here-and-now situation' (Korthagen, 2011, p.35). However, if a teacher

attempts to reflect on the gestalt, to explain or understand it, or what Korthagen

and Lagerwerf (2001) call *schematizing,* a schema is generated. A schema is

described as a 'conscious network of concepts, characteristics, principles, and

so on' (Korthagen, 2011, p.36). At the schema level, the teacher is able to describe the gestalt in a more generalised and detailed way, thus developing a *personal practical theory* (p.37). Korthagen (2011) suggests that generally teachers do not move beyond the schema level, due to a focus on 'taking action in a particular situation' (p.37). Furthermore, it is suggested that such transition is not always possible or indeed desirable, as the two levels prior are usually adequate in day-to-day situations (Korthagen and Lagerwerf, 2001). This level may only be initiated where the learner feels that they need a more profound understanding of the complexity of a schema (Korthagen, 2010). Moving to the theory level requires a 'deep and generalised understanding of a variety of similar situations', making connections to develop a 'coherent theory' (Korthagen, 2011 p.37). Korthagen and Lagerwerf (2001, p.192) use the response to the question 'what is learning?' to illustrate each level. An example from personal experience might be given as a response at the gestalt level, key features of learning at the schema level, with a definition being provided at the theory level.

Transitioning between the levels requires reflection, which, in this case, facilitates structuring and restructuring experiences and, or existing knowledge (Korthagen and Lagerwerf, 2001). The 'realistic approach' uses Korthagen's (1985 cited in Korthagen and Lagerwerf, 2001, p.39) five phase, spiral model for reflection named the ALACT model which facilitates moving back and forth between action and reflection,

Action

Looking back on the action

Awareness of essential aspects

Creating alternative methods of action

Trial

The final phase is the start of the next cycle creating a spiral approach. Reflection is also an important feature of the one-to-one, discussed next. Korthagen (2011) specifically suggests that the first experiences in school for students should take the form of hour long, one-to-one lessons, where a student teacher works with an individual pupil, once a week for eight weeks. These are either video or audio recorded, four of which are shared and discussed by students in pairs and four by the student and the teacher educator. This allows the student teacher to reflect on or question their gestalts in order to 'develop a personal practical theory that is meaningful to them' (p.41). Following which they are provided with access to theoretical knowledge, to move towards the theory level. Thus, 'theory is built onto the experiences and insights the students themselves have already developed' (p.41). The one-to-one avoids STs taking on the teaching of full classes too quickly, suggesting that such experiences result in 'gestalts and concerns relating to survival' (Korthagen, 2011, p.40). As well as reflection, another key concept in the model of professional learning proposed by Korthagen and Lagerwerf (2001) is that of 'level reduction'. This is where a schema or theory, derived from a gestalt or gestalts, become integrated into teacher behaviour and thus function as gestalts, almost taking place automatically (Korthagen, 2010).

The 'realistic approach' to teacher education uses the model described above, along with the five guiding principles below.

1. The approach starts from concrete practical problems and the concerns of student teachers in real contexts.
2. It aims at the promotion of systematic reflection by student teachers on their own and their pupils' wanting, feeling, thinking and acting, on the role of context, and on the relationships between those aspects.
3. It builds on the personal interaction between the teacher educator and the student teachers and on the interaction amongst the student teachers themselves.
4. It takes the three-level model of professional learning into account, as well as the consequences of the three-level model for the kind of theory that is offered.
5. A realistic programme has a strongly integrated character. Two types of integration are involved: integration of theory and practice and the integration of several academic disciplines.

(Korthagen and Lagerwerf, 2001 in Korthagen, 2011)

One of the challenges for ITE in adopting the 'realistic approach' is that it is not compatible with a commonly used modular programme structure. As the guiding principles above suggest, teacher learning is structured around the gestalts of the individual. Furthermore, the gestalts are from experiences in real contexts, requiring careful consideration of 'fruitful practical experiences' that 'form the type of gestalts the teacher educator wishes to develop' (Korthagen, 2010, p.103) rather than those of survival, discussed earlier. Therefore, the 'realistic approach' requires the teacher educator to 'skip the theory for a while, to first create suitable learning experiences, and to promote reflection on these experiences' (p.104). However, the 'realistic approach' should not be interpreted as a 'practice first approach', shifting the balance from theory to practical experiences (Korthagen, 2011). Instead, a framework is proposed

which offers a potential solution to the knotty challenge of the integration of theory and practice. As described above, the framework draws on a three-level model of professional learning, which is based on three key principles. The application of the model is informed by five guiding principles along with the inclusion of key features such as the one-to-one approach. I found this structure that Korthagen and Lagerwerf (2001) wrapped around student teacher learning helpful in capturing the complexities associated with it and some of the challenges that this presents. However, this framework could be viewed as a framework for learning in the school context. It does not appear to consider how carefully constructed experiences in a university context can offer 'unique learning opportunities' (Grossman et al, 2009, p.2092) for STs, in an unthreatening way and thus avoid the potential for gestalts triggered by survival. I attend to learning the practice of teaching in a university context, through Grossman et al's (2009) framework next.

2.5.5 A framework for thinking about the teaching of practice in the university context

The framework proposed by Grossman et al (2009), like Korthagen and Lagerwerf (2001) centres around students' experience of practice. Where it differs, is their framework is intended to support student learning in a university rather than a school context. They argue that the university context provides opportunities for students to learn in ways that a school context does not. Suggesting that preparing students for professions which encompass complex practice, such as teaching, in unpredictable and uncertain contexts, such as the classroom, benefits from the 'safety and structure' (p.2058), a university setting

can provide. Grossman et al's (2009, p2060) study further developed my thinking in relation to one of the challenges for ITE which they pose as 'what novices might learn in college or university settings that they could not better learn in the actual contexts of practice?' However, my study shifts this emphasis to how, rather than what might STs learn in both the university and school contexts? This question is particularly apposite within the current policy context in England outlined in section 1.2.

Grossman et al (2009) adopt a comparative case study approach to take a cross-professional perspective, focusing on the teaching of practice in the clergy, clinical psychology and teaching, in eight professional education programmes, two of which were teacher education. Using qualitative case studies for each programme, generated through interviews, observations of classes, field work and focus groups, Grossman et al (2009) propose a framework comprising of three over-arching concepts, used to support preparation for professional practice; representation, decomposition and approximation of practice. Next, I will provide a brief explanation of each concept, how it is proposed they support student learning with exemplification from my own practice as a university-based teacher educator.

Representations of practice

The concept of representation is referred to as the different ways practice is represented and importantly, what is made visible to students as a result. Multiple ways through which practice may be represented are identified in their study, such as; observations of teachers in the classroom, case studies of practice,

videos of professionals demonstrating particular aspects of practice, demonstration lessons in which students take the role of pupils, lesson plans and narratives of practice intended for problem-based learning. Grossman et al (2009) make connections between the type of representation and the facets of practice, and thus opportunities for learning about practice, they make visible. For example, observing a video of a teacher working with children in a classroom can reveal pupils-teacher interactions but is not able to make visible the professional decision making underpinning them. Whereas narratives of practice may make the latter visible but not the former.

An example from my own practice would be the use of demonstration lessons, where STs are in role as pupils. This enables students to have access to thinking underpinning my actions and activities but they are not able to visualise how the lesson might play out with four-year olds. Furthermore, it is not possible to make visible the many challenges the teacher may face and how these are addressed throughout the lesson, as my students are able to access the intended learning for my lesson with ease, whereas this is not likely to be the case with young children. If I were to make use of a video of myself teaching the lesson in school with pupils, this practice may be made more visible to students. When we use representations of practice to support student learning, Grossman et al (2009) encourage us to ask questions such as; what facets of practice do they and do they not make visible? What opportunities do they afford to investigate aspects of practice? What might students learn that go beyond our intentions? Furthermore, they suggest that professional education programmes may usefully analyse the variety of representations of practice STs experience across their

ITE programme, in order to consider what aspects of practice are given emphasis and whether others are absent. I would add to the concept of representation that when working with STs, teacher educators are often representing practice, through their 'complex dual role', discussed earlier. As through their own teaching, they are also modelling the practice of teaching.

Decomposition of practice

The second concept in their framework, decomposition, is intended to reduce the complexity of practice for students, by breaking it down into constituent parts. This, Grossman et al (2009) suggest, enables students to see and name components of practice, thus allowing them to focus on understanding and enacting them in a more manageable way. However, this is dependent on having a language to describe practice in the first place, which Grossman et al (2009) point out is not as well established in teaching as in other professions. An example from my own practice can be drawn from supporting STs when learning to teach children how to read. In England the preferred 'method' for teaching children how to read is using systematic synthetic phonics (SSP), which, in basic terms, involves decoding words using letters and their associated sounds. There is generally a suggested format for a SSP lesson, with an underpinning rationale for how it supports pupils' learning. Naming each part of the lesson, to support with the structure of their teaching, along with the shared language of teaching SSP, such as the skills of 'segmenting' (breaking words down into their constituent sounds) and 'blending' (synthesising sounds in order to read words), along with the body of knowledge, known as the 'alphabetic code' (the different combinations of letters used to represent sounds in the English language), helps

students to develop a 'disciplined perception' (Grossman et al, 2009, p.2069) of the complex practice of teaching children how to read. Each component is given careful attention, however, Grossman et al (2009, p.2076) point out that due consideration needs to be given to 'recomposition', allowing students opportunities to integrate the component parts. Drawing on the example from my practice, one of the opportunities for 'recomposition' is through 'approximations of practice'. Approximation is the third concept in the framework devised by Grossman et al (2009) and that to which I attend to next, along with the continuation of the example from my practice in this section.

Approximations of practice

Despite attempts often made by teacher educators to set up university rooms as school classrooms, it goes without saying that a university context differs greatly from that of a school, most notably the absence of pupils. This has fuelled discussion, particularly in England, as to whether ITE should be based solely in schools. However, Grossman et al (2009, p.2076) argue that school-based ITE offers 'only a partial and sometimes problematic solution' as it fails to recognise the contested nature of education by often reinforcing the 'status quo' and may even be counterproductive to student learning, as they illustrate below.

> If you're learning to paddle, you wouldn't practice kayaking down the rapids. You would paddle on a smooth lake to learn your strokes — Professor of clinical psychology

> (Grossman et al, 2009, p.2076)

74

The smooth lake, they suggest can be provided in a university context using the third concept in their framework, approximations of practice. The approximations enable students to engage in practices in university sessions 'that are more or less proximal' (p.2056) to the practices of the profession, through simulation activities such as role-play. Continuing with the metaphor above, they suggest, this approach provides opportunities for students to pilot 'the waters under easier conditions' (p.2076). Following on from the example of using decomposition in my practice earlier, I use approximations of practice as opportunities for recomposition, requiring STs to bring the components of their learning together. This involves micro-teaching, where the students plan and teach a SSP lesson in role as the teacher, while their peers are in role as the pupils they are teaching. I observe their lesson, following which I have a discussion with them about it and provide feedback. This is usually the first time the students have planned and taught a SSP lesson. Through discussing any misconceptions or errors, which may be as simple as using capitals instead of lowercase or demonstrating to children the formation of a letter while facing them (resulting in a mirror image), students feel better prepared and importantly, more confident, to 'navigate the rapids of real practice' (p.2077). This example is illustrative of what Grossman et al (2009) describe as 'more authentic' approximations of practice, requiring integration of students' learning, involving full participation by the student and without stopping and starting. At the 'less authentic' end of the continuum, fewer components of practice may be expected, with less participation by the student and more opportunities for rehearsal.

Approximations can also focus on what are described as, 'preactive, interactive or reflective' (p.2094), aspects of practice. Findings from Grossman et al's (2009) study suggest that teacher education tends to focus on the first, with attention being given to simulated planning for practice. Approximations of interactive practice were rarely used in coursework, which they propose could help students to address challenges relating to 'interactive dimensions of practice' (p.2095) by for example, explaining how and why they would use a range of questions with pupils to facilitate discussion. When planning for the use of approximations of practice, they suggest, consideration should be given to; what aspect or aspects of practice is the focus, the degree to which it approximates actual practice and what role the teacher educator plays. It is the 'inauthenticity' of approximations of practice that help teacher educators to 'see' students' thinking and learning in ways that are more difficult to do in a busy school environment (Grossman et al, 2009). I would add to this, that a university context is dedicated to student learning, whilst a school context serves the learning of pupils, primarily.

As a university-based teacher educator, I found the concepts in the framework devised by Grossman et al (2009) useful in articulating and further understanding my own practice, in relation to teaching STs how to teach children the complex practice of learning to read. Interestingly, the role of theory is not made explicit in the framework. Throughout the examples from my own teaching, I would refer to theory to; underpin my thinking and actions in the representation of practice, discuss the theory behind the aspects of practice explored through decomposition and to foreground the discussion of their

lesson, as an /approximation of practice. Perhaps because the framework

focuses on professional learning in universities, this was assumed.

2.6 Concluding thoughts

The frameworks and models discussed above mainly emphasise approaches to

STs' learning, either in university or in a school context. Each describing the

advantages afforded to STs' learning within this context, appearing to favour

one at the expense of the other. Grossman et al's (2019) framework and Crowe

and Berry's (2007) 'thinking like a teacher approach' describe approaches to

STs' learning in a university context. Whereas Korthagen's (2011) 'realistic

approach' places emphasis on STs' learning in the school context. What

appears to be missing from the above approaches is the notion of a partnership

model for STs' learning, which Ten Dam and Blom (2006, p.48) refer to as

'collaborative school-based teacher education', necessitating collaboration

between university based and school-based teacher educators. Here, rather

than adopting a theory into practice or a practice into theory model, a partnering

approach provides the possibility for synthesis of theory and practice (Szplit,

2017).

A clinical practice approach, supported by Darling-Hammond's (2014)

cornerstones of clinical practice, proposes a framework that stretches across

sites for STs' learning and is indicative of a partnering approach. Burn and

Mutton's (2015) build on this through their 'research-informed clinical practice'

model. However, there appears to be aspects of the complex practice of ITE

missing within these models, relating to the 'bigger picture' of how STs learn.

Such as the role teacher identity plays in STs' learning about themselves as teachers (Beijaard, 2019) and how STs are taught how to learn how to teach across and within different contexts for learning and as such, I suggest, do not fully represent the complex practice of learning teaching.

Through my review of literature above, attending to models and frameworks for ITE practice, I was unable to find a model or framework that aimed to represent all aspects of STs' learning and the practices intended to facilitate it. Within the wider context of ITE in England, subjected to tighter regulation and prescription that undermines the complexity of learning how to teach (1.2), my study aims to fill this gap by surfacing the structures underpinning all aspects of ITE practice as described by those in the field. Taking a 'bird's eye' view in order to further and more fully understand and articulate how STs' learning may be facilitated through such structures, while maintaining a view of ITE as complex practice.

Chapter 3 Research Design and Methods

3.1 Introduction

Whilst Vogt (2008, p.24) states simply that 'a research design is a plan for collecting evidence that will be used to answer the research question'. I concur with Savin-Baden and Major (2013, p.23), that researchers are faced with 'the challenge of countless choices' associated with making decisions about their approach. Having an awareness of choice and how each decision affects subsequent ones, they suggest, enables approaching the research with a level of intentionality, rather than adopting a 'just setting off and hoping' approach (p.24). In guiding my decision making process, I found Creswell and Creswell's (2018) framework for research helpful. Due consideration to their suggested 'three components' of 'philosophical worldview', 'research design' and 'research methods' (p.5) and the interrelationship between them, provided a framework for the decision making process which informed an interconnected and flexible framework for the research. In this respect, I took what Maxwell (2004, p.4) describes as an 'interactive' approach, which recognises that the different components 'form an integrated and interacting whole', allowing the different components to be revisited throughout the research process in order to consider how they are working.

In this chapter, I outline and provide the rationale for the research design of my study and how it is informed by my philosophical assumptions and personal stance. I start by describing how my philosophical worldview guides the research. I explain how this sits within the paradigm of post-positivism and is

aligned to a critical realist approach. I follow this with a detailed discussion of

my positionality in relation to the subject and participants of the study and the

research process, which leads to consideration of the role reflexivity plays. This

discussion provides the guiding principles for what follows, in which I describe

the research design and method for my study. This includes how I accessed

and evaluated secondary data, along with the rationale for its use and ethical

considerations. Finally, I provide a rationale for applying a thematic analysis

method and describe how I applied this approach from a critical realist

perspective and followed Braun and Clarke's (2006) six phases for thematic

analysis.

3.2 Philosophical Worldview

The term 'worldview', according to Guba (1990, p17), can be described as 'a

basic set of beliefs that guide action'. Identifying, defining and developing an

understanding of my personal 'philosophical worldview' (Creswell and Creswell,

2018), provided a set of guiding principles and perspectives that informed

choices and engendered a philosophical coherence for the research. In other

words, how I view the world shaped how I researched it (Crotty, 1998). As

outlined in the introduction, the principle aim of my study was to attempt to

explicate the approaches to teaching STs the complex practice of teaching, with

the intention of creating a flexible framework to support new teacher-educators

and STs in developing their understanding of this practice. The rationale and

motivation for this is based on my personal experiences and the lack of national

guidance generated through the collective experience and expertise from the

field of ITE. This aim and personal rationale, reflects the philosophical

worldview that is aligned to 'critical qualitative' research (Braun and Clarke, 2013), as it is underpinned by an interest in how 'language gives shape to certain social realities', with a focus on the 'research object' of professional practice for ITE (p.25). Tilley (2019, p.155), argues that there is a 'need for educational researchers to conduct critical qualitative research to explore the complex issues that educators face' and she goes on to suggest that critical qualitative research achieves this in a way that is informed by participants' experiences and local knowledge. My study aims to draw on the collective experiences and local knowledge of participants in the field of ITE to explore how to teach STs the complex practice of teaching.

3.2.1 Post-positivism and critical realism

Within the field of critical qualitative research, the study sits within the paradigm of post-positivism, in that it aims to 'pursue true belief as a regulative ideal' (Swan, 2001, p.110) whilst recognising the fallibility of knowledge. As such, it sits between the ontological assumptions of relativism and realism and is aligned to a critical realism approach, which suggests that there is a reality but our understanding of it will always be incomplete. Critical realism was developed by Bhaskar (1989) and is based on the idea that research 'can be both critical and not shy away from the notion of objectivity' (Savin-Baden and Major, 2013, p.21). Critical realism is described by Archer, (1995, p.11) as combining 'ontological realism, epistemological relativism and judgemental rationality' or what Bhaskar et al (2010) propose as the 'holy trinity' of critical realism, all of which are related.

Assuming a realist ontology, critical realism asserts that the world is intransitive and reality exists independently of our perception and knowing (Archer, 2016). In this sense, reality is autonomous of the knower (Gosj, 2019). However, epistemic relativism enables the critical realist to be critical about our ability to comprehend this reality with certainty, recognising that we can only partially access (Braun and Clarke, 2013) reality as it is only ever 'imperfectly apprehendible' (Guba and Lincoln, 1994). A critical realist approach accepts that human knowledge is transitive, recognising that 'knowledge is dependent on the knower, is created by the knower and thus changes from knower to knower' (Gosj, 2019). Willig (2012, p. 13) states that a critical realist approach:

> does not assume that the data directly reflect reality (like a mirror image); rather, the data need to be interpreted to provide access to the underlying structures that generate the manifestations that constitute the data.

Therefore, a critical realism approach recognises an 'inherent subjectivity in the production of knowledge' (Madill et al, 2000, p. 3) in that 'the way we perceive facts, particularly in the social realm, depends partly upon our beliefs and expectations' (Bunge, 1993, p.231). However, this does not prevent the critical realist from attempting to make a rational judgement. Indeed, critical realism creates the possibility for 'judgemental rationality'. Taking an ontological realism approach, critical realism views the world as intransitive and as such provides the basis of judgemental rationality. Adopting an epistemic relativism approach, viewing knowledge as transitive, allows for openness and respect for different views of the same reality (Gosj, 2019). However, Bhaskar (1991) warns us

about conflating this relationship between ontology and epistemology, creating what he terms 'epistemic fallacy', which could be described as reducing reality into our knowledge of it, which is a position commonly held by constructivists. Critical realism views epistemology and ontology as separate, distinguishing between the transitive and intransitive dimensions. By employing a critical realism approach, I recognise the limitations of the study. The findings of which are opened up to 'judgemental reality'. Here, I am reminded by Willig (2012) about the need to carefully consider the eminence of my findings and the claims I make based on them.

As stated in the introduction, the purpose of my study is to create a flexible framework through analysis of descriptions of professional practice from those in the field of ITE. To this end, it attempts to illuminate the social structures of and for professional practice. Taking a critical realism approach offers an alternative to other epistemological approaches, discussed below, that may render the structure of professional practice of ITE as fractured and incomprehensible, in terms of understanding how it works as a whole. Through 'restricting relativism to human knowing and keeping it from characterising reality itself' the critical realist is able to view knowledge as judgement to be made and evaluated, rather than viewing knowledge as facts from a naive realist perspective or opinion from a radical relativist view (Gosj, 2019). Fleetwood (2014, p212) proposes that,

> critical realism makes clear, every action requires the pre-existence of
>
> independently existing, and irreducible structures which agents draw

upon in order to initiate that action. Without social structures, agents would, quite simply, be unable to act.

From a critical realist perspective, 'social structures' can refer to 'configurations of causal mechanisms, rules, resources, relations, powers, positions and practices' (Fleetwood, 2005, p. 201). This concern of the critical realist for relationships between people and structures (Archer, 2010), aligns well with the aim of the study which will draw on the 'collective agency' (Archer, 2000) of professionals in the field to shape the creation of my framework, which will be opened up to 'judgemental rationality'. Ackroyd and Karlsson (2014, p. 37) state that critical realists,

> tend not to write prescriptions for change, nor do they propose recipes for producing good social outcomes. Too much is unknown and contingent for this. Instead, they provide practitioners with knowledge of structures, their mechanisms and tendencies that practitioners can apply to their specific contexts.

3.3 Positionality and reflexivity

In this section, I give due consideration to my position within the study. I start by explaining my positionality in relation to the subject of the study, namely the professional practice of ITE. I follow this by outlining my positionality in relation to the participants who generated the data for the study and the context for the research. I conclude by describing my position within the process of the research itself (Savin-Baden and Major, 2013) and how this understanding of positionality was used to support a reflexive approach.

3.3.1 Positionality in relation to the subject of the study

As outlined in the introduction, my position in relation to the subject of the study provides a personal rationale and motivation for undertaking it. Having worked in the ITE sector for twenty years I have developed my own professional knowledge. When I started as a teacher-educator, I was underprepared for the role and was left to 'work out' for myself how to educate new teachers in the practice of teaching. Now, as a Director of an Institute of Education in an English university, with substantial responsibility for the quality of ITE provision, the driver for my study is to further develop an understanding of *how* professionals in the field of ITE teach new teachers. Whilst I recognise that the *how*, *what* and *why* of ITE are linked, it is the *how* that was given my attention in the study. With twenty years of ITE experience, I have developed my own approaches to ITE. Whilst this aided interpretation of 'what was going on' as described by the participants, it was also important to be aware of the potential to shape the data analysis through what I viewed as effective practice.

3.3.2 Positionality in relation to the participants of the study

Drawing on secondary data for the study provided an opportunity to investigate the understanding, practice and experience of professionals in the field, without the potential of influencing responses through the researchers own data collection methods (Braun and Clarke, 2013). In essence, I had removed myself from participating in the data collection stage of the research. The data were generated by a range of participants, such as head teachers, university and school-based teacher-educators, members of subject associations and

teaching unions. As a university-based teacher-educator, I was aware that I may more readily relate to data generated by other university based teacher-educators more than that generated by other participants. This was an important consideration during the data analysis stage, discussed in section 3.4.

3.3.3 Positionality in relation to the research process

Acknowledging 'the impossibility of remaining outside one's subject matter' (Willig, 2001, p.10) enabled consideration of the potential influence I had on the research. In other words, how my positionality shaped the research but also how the research had an impact on me as a researcher (Savin-Baden and Major, 2013). Drawing on my own experience to interpret the data in order to explore approaches to ITE was viewed as a 'research tool' (Braun and Clarke, 2013), rather than a weakness. I adopted the opinion outlined by Glesne and Peshkin (1992, p.104) that 'my subjectivity is the basis for the story I am able to tell. It is a strength from which I build'. Strauss (1987) invites us to 'mine' our experience, referring to a researcher's technical knowledge, professional background and personal experience as 'experiential data'. This approach was particularly beneficial during the analysis of the data, as described below. The initial approach I took to coding the data could be described as 'mechanistic validation' (Saldana, 2016), in that I was grouping data into codes. In other words, the process was one way, being led by the codes rather than 'codes and data shaping each other' (p.9). Following this, I took a step back and started again, this time following the advice of Corbin and Strauss (2015, p.219) that 'the best approach to coding is to relax and let your mind and intuition work for

86

you', I drew on my 'experiential data' to explore how STs' learning was described by participants and developed codes on this basis.

3.4 Reflexivity

The above descriptions of positionality are intended to 'bring the researcher into the research' (Braun and Clarke, 2013, p.37). This visibility enabled me to consider my role within the study and to critically reflect on how this may shape my findings. Moreover, explicitly positioning myself in the research, paved the way for the intended audiences to critique and evaluate the findings. To support this, I noted my thoughts, ideas and feelings in a research journal, in order to record how they shaped the aim of the research and research questions, the research design and my interpretations of the data, along with the associated findings. During the data analysis stage, these took the form of 'analytic memos' (Saldana, 2013), which Clarke (2005, p.202) describes as 'sites of conversation with ourselves about our data'. The analytic memos helped me to think critically about the process by challenging my assumptions and considering the extent to which they shaped the research and my interpretation of the data (Mason, 2002).

3.5 Research design and methods

Critical realism 'does not prescribe which methods are suitable for investigating which problems' (Vincent and O'Mahoney, 2019, p.14). As can be seen in the book 'Studying Organizations using Critical Realism' (Edwards, et al, 2014), a critical realist perspective can be applied to a wide range of approaches. The methodological choices for my study were based on the subject of the study

and what I wanted to learn about it (Sayer, 2000) but they were also informed by a critical realist ontology and epistemology. Ackroyd and Karlsson (2014, p.21) suggest that from a critical realist perspective 'the role of a research method is essentially to connect the inner world of ideas to the outer world of observable events as seamlessly as possible'. As outlined earlier, the subject of my study is the professional practice of teaching new teachers how to teach. I am interested in 'how' this is described by professionals in the field, in order make the practice of ITE visible and to create a flexible framework that attempts to develop further understanding of the social structures involved.

A critical realist perspective emphasises social structures and the relationship between people and structures (Archer, 2010). Furthermore, social structures are not only comprised of humans but of material entities too (Gorski, 2013). Decisions relating to the sample for the research in terms of both size and demographics were informed by this view of social structures. I attend to this in the next section.

3.5.1 Sample and data

There are a range of professionals who contribute in multiple ways to the professional practice of ITE, such as, head teachers, university and school-based teacher-educators, members of subject associations and teaching unions. Each group has the potential to generate valuable but partial, knowledge and experiences of the practice of ITE. From a critical realist perspective social structures can be conceptualised from the multiple perspectives from which they emerge (Gorski, 2013). Therefore, it was

important for my study to draw on as many perspectives as possible from which to further understand the professional practice of ITE, within the constraints of researcher time and resources. Collecting data that were representative of the multiple groups involved, within a limited timescale, in addition to working in a full-time role, appeared to be unachievable. This led me to consider the use of secondary data that already exists (Tight, 2019).

Secondary data could be described as data that have been collected by someone other than the researcher and usually for a different purpose. As such, it is unlikely the original purpose of the collection of the data will be an exact fit with your research questions (Tight, 2019). However, as Tight (2019, p.96), recommends 'if secondary data exists that is relevant to your research interests… it makes sense to use it if possible'. The largest secondary data set, representative of the variety of groups who contribute to ITE, intended to explore the professional practice of ITE in England, in recent times, is the information collected for the *Carter Review of Initial Teacher Training* (Carter, 2015). I considered the evidence collected to have generated useful data for my study. I deemed it to be particularly relevant to the focus of my study as it was generated by a large number of those in the field of ITE from across England. The next step was to access the data, through a freedom of information request, in order to evaluate its usefulness.

3.5.2 Accessing data through the Freedom of Information Act

I accessed the data through the Freedom of Information Act (FOI), which came into force in England in 2000 and provides the general right of access to

information held by public authorities. FOI requests allow a single researcher to access large amounts of data, beyond which they would have the time and resources to collect for themselves. Despite this, FOI requests as a source of data is often undervalued (Savage and Hyde, 2014) and overlooked (Walby and Larsen, 2011) in social research. Whilst some social researchers have made use of this approach, the focus has generally been on negative impacts rather than considering their potentially positive contribution (Savage and Hyde, 2014). Walby and Larsen (2011, p.39) propose that FOI requests 'provide partial entrance into a little known realm of texts that are crucial to understand how government organizations operate'.

Accessing the data was not straight forward, resulting in a time consuming process, involving numerous e-mail and telephone conversations with government policy advisors. I concur with Walby and Larsen (2011, p.32) who suggest the process requires 'a commitment to rapport building and negotiation with government' officials. In addition, I realised how important it is to be specific about the data you are requesting, why you are requesting it and how it will be used. However, the time spent gaining access to the data was minimal compared to that which I would have needed to negotiate access, gain ethical approval and carry out data collection to generate a similar data set myself. Data accessed through FOI have been seen as useful for research on government agencies. Walby and Larsen (2011, p.33), suggest different types of texts that have been used, rules and regulations that 'govern the work of government employees', texts that 'govern subject populations' and 'unofficial texts… such as notes and internal memos'. As far as I am aware, my study is

the first to make use of data accessed through a FOI, which was generated through a national review into education practice, to inform a study intended to further develop our understanding of it. Therefore, my study makes an original contribution to the field of ITE.

3.6 Ethical considerations

Information acquired through a FOI request is publicly available but only on the researchers' request. In this sense, from an ethics perspective, it could be viewed as similar to other approaches through which the data is generated on request of the researcher, such as surveys (Savage and Hyde, 2014). However, an important difference is that the data is cleansed prior to release to the researcher to ensure that individuals cannot be identified. Walby and Luscombe (2018) state that FOI requests do not need to be submitted to university ethical review boards for a number of reasons. They suggest that a system is already in place to mitigate risks at government level and information is considered to be in the public domain, once it is released. In fact to do so, they consider would be doubling up on the work for the researcher. Furthermore, they suggest that to deny the use of information obtained through a FOI request, could 'infringe upon citizenship rights' (p.3). I considered gaining ethical approval for the wider ethical issues raised by my research design. For example, the selection, analysis, and reporting of my results from the data set, however the literature (Walby and Luscombe, 2018) also suggest this is not necessary. Nonetheless, I considered such ethical issues throughout the research process, to ensure I adhered to the BERA ethical guidelines (BERA, 2018).

3.7 Evaluating the quality of the secondary data

The report from the review explicitly states that it was 'not intended to be a research project' (Carter, 2015, p. 16) and as such, the methodology included in it is very brief. Whilst it states the evidence that was used for the report and briefly how it was 'gathered', it does not refer anywhere to how the evidence was used to generate the recommendations. To inform my evaluation of the secondary data generated through the review, I drew on the six questions for evaluating secondary information posed by Stewart and Kamins (1993), in their book 'Evaluating Secondary Sources'. Each of which will be explored next in relation to the information that was collected for the Carter Review (2015) and that of which I received through the FOI request.

1. What was the purpose of the study?

As explained in the introduction, the Carter Review (Carter, 2015) was commissioned as an independent review of the quality and effectiveness of ITE courses by the then Secretary of State for Education in England. It has been influential in steering ITE policy, namely the 'Framework of core content for initial teacher training (ITT)' (DfE, 2019). The review aimed to; 'define effective ITT practice, assess the extent to which the system currently delivers effective ITT, recommend where and how improvements could be made and recommend ways to improve choice in the ITT system by improving the transparency of course content and method' (p.5). As such, most of the aims of the review align well to the research interest of my study. In order to 'define effective practice', participants of the review would need to describe it, which links directly to my

main research question, How do student teachers learn how to teach and how is this facilitated, as described by the participants of a national review of Initial Teacher Education in England?

2. Who collected the information?

The review was chaired by Sir Andrew Carter, an experienced former head teacher and former director of a 'multi-academy trust', which in England is an alliance of several state funded schools. Working with Carter was an advisory group of five others, two of whom have experience and expertise in universities led ITE and three who have experience and expertise in school led ITE. With the balance of the advisory group and the chair in favour of experience and expertise of school led ITE, there is potential for bias. To help reduce this, the participants of the review were representative of the different groups contributing to ITE in England. However, it was also important to be aware of the potential for the Hawthorne effect, in that participants may modify their responses and discussion, because of the dominance of those in favour of school-led ITE forming the advisory group facilitating discussions.

3. How was the information obtained?

Whilst it is not clear in the methodology for the review how participants were selected and I was unable to locate this information elsewhere, the information suggests the sample was representative of the different groups who contribute to ITE in England.

A range of evidence and views were gathered through,

• 11 themed roundtable discussions with sector experts

• 24 meetings and discussions with experts and stakeholders

• 31 visits to ITT providers and schools involved in ITT, involving meetings with trainers, mentors, head teachers as well as current and former trainees

• A call for evidence that received 148 responses from a range of individuals and institutions, including universities, professional bodies, schools, teachers and trainees (the breakdown of which was not available)

• A survey of trainee and applicant opinions about ITT course information (receiving 165 responses)

• A review of the existing evidence base including international evidence, Ofsted evidence and findings from the Newly Qualified Teacher (NQT) survey

• A review of course materials from ~150 programmes. These were reviewed by ITT experts and helped us build a picture of ITT course content across the system, including the areas of ITT content most and least commonly covered (Carter, 2015, p.17).

Somewhat naively, I requested access to all of the information above through the FOI request. Not surprisingly, I was asked to narrow the focus down to the evidence I was most interested in accessing from the collection. The rationale

for this was to comply without exceeding cost thresholds or applying exemptions. I revised my request to the first four sources of information as I felt that these were more likely to include descriptions of ITE practice as articulated by key stakeholders. Furthermore, this information was generated specifically to address the aims of the review, whereas the information in the last two sources were not. I viewed the trainee survey information to relate more to the aim of 'improving choice in the ITT system' rather than exploring ITE practice, therefore, I did not request this information. The process from the initial request to the release of data took nearly three months.

4. What information was actually collected?

The data that I received consisted of 50,675 words comprising of:

- 21 submissions of evidence via a consultation response template comprising of 5 teaching unions, 10 subject associations, 6 education providers
- 24 sets of notes comprising of 8 themed roundtable discussions (average 10 participants at each), 4 meetings with Carter and an individual, 2 advisory group meetings, 10 group discussions (average 10 participants at each).

The sets of notes and submissions of evidence that I was provided with were organised under questions that were posed to participants. The table below provides examples of questions participants were asked that were pertinent to the research questions for my study. In addition, the table illustrates the wide range of participants that generated the data I received. I would not have been able to draw on such a wide range of participants, if I were to collect this data myself.

Table 3.1 Examples of pertinent questions posed to participants and range of participants from the Carter Review (2015)

My research questions	Examples of pertinent questions asked of participants in the Carter Review (2015)	Range of participants from the Carter Review (2015)
1. How do student teachers learn how to teach and how is this facilitated, as described by the participants of a national review of Initial Teacher Education in England?	• What elements of ITT provision have you found the most helpful in preparing you for the classroom? • What is the most effective way of integrating theoretical and practical training? • How will you structure an ITT course, what is the optimum journey? • What makes effective ITT? • What aspects of ITT delivery are most important in providing trainees with the experience to become outstanding teachers? • What areas are critically important in the content and delivery of ITT? • Is there an ideal model for delivering ITT? • What does good ITT look like? • What does bad ITT look like? • What is effective initial teacher education (ITE)? • What practical strategies, models and practices do ITT providers and schools deploy to equip trainees with the skills and knowledge to become outstanding teachers? • What are the characteristics of effective ITT partnerships?	• Student teachers • University based teacher educators • School based teacher educators • Headteachers of Primary Schools, Secondary Schools, Special School and Pupil Referral Units • CEOs of multi-academy trusts • University Education Research Centre Directors • Education charities such as The Communication Trust, The Dyslexia-SpLD Trust and Achievement for All. • Professors of Education • Politicians • National College for Teaching and Leadership Fellows • Education Consultants • Members of: − The National Foundation of Educational research − The British Education Research Association − The Education Endowment Foundation − The Teaching Schools Council − Subject associations − The Independent Schools Council − The National Association of Headteachers − The National Association of School Based Teacher Training − The Teacher Education Advisory Group − The Universities Council for the Education of Teachers − Cathedrals' Group Universities − MillionPlus Universities − The National Association of Schoolmasters/Union of Women Teachers − The Association of School and College Leaders − The Association of Teachers and Lecturers − The University and College Union − The National Association of Headteachers
2. What are the tensions and competing participant voices of those who provided evidence for the review, pertaining to ITE policy and practice?	• What threatens the effectiveness of ITT? • What elements of ITT are most in need of improvement? • Should every good/better teacher have a trainee? • Should there be a national curriculum for ITT? • How much does the current system deliver effective ITE?	

As outlined in table 3.2 below, in line with a critical realist approach, drawing on such a wide range of participants' views enabled themes to be generated from multiple perspectives with differing likely investments and interests.

Table 3.2 Subset of participants perspectives, likely investments and interests.

Subset of participants	Perspective/likely investments/interests
Student teachers	Learner perspective. How do I learn how to teach?
University and school-based teacher educators	Teacher educator perspective. How do student teachers learn in different contexts and how is their learning facilitated?
School leaders	Employer perspective. How have my employees been taught how to teach and how effective has it been?
Education researchers	Research evidence-based and researcher perspective. How is research evidence used to inform how student teachers learn how to teach? What role does research play in student teachers learning how to learn how to teach?
Professional associations	Members perspective. May represent all the sub-groups above but representative on a larger scale.
Subject associations	Subject specific perspective. How do student teachers learn how to learn how to teach a specific subject? What role do subject associations play?
Third sector organisations	Perspectives relating to a specific aspect of teaching, for example dyslexia How do student teachers learn how to learn how to teach in relation to specific aspects of teaching? What role do third sector organisations play?
Politicians	Policy perspective How to create policy to support/prescribe how student teachers learn how to teach?

Where it was possible to identify individuals, information had been redacted prior to release. Whilst this made it difficult to ascertain the role in ITE all participants played, it did not, in the main, infringe on the legibility of the information provided.

There were more participants than those in table 3.1 but it was not possible to identify these, as the information had been redacted. However, the groups of participants identified include the four categories of key stakeholders (subjects,

practitioners, evaluators, and policy-makers) important for evaluation, as indicated by Pawson and Tilley (2014). They suggest that each group 'will know *some* of the story' (p.164). This is in line with a critical realist perspective, which views social structures as being conceptualised from multiple perspectives (Gorski, 2013). I would also add that each group of participants and indeed each participant may have their own and at times competing perspectives. My study allows for an exploration of this through the research question aimed at exploring the *tensions and competing participant voices.*

5. When was the information collected?

The Carter Review (2015) was launched in April 2014 and the report was published in January 2015. I recognise that there is a time lag of around 6 years between the data collection and the writing up of my study. However, this is still the most recent, significant, large-scale review of ITE in England that draws on participants' views, and as such, it has the potential to provide valuable insights relevant to the aim of my study. I intend for the findings of my study to be strengthened further by those who contribute to ITE, enabling them to further shape, update and develop it over time, in order to inform and support the development of ITE practice in their contexts. It is helpful to be aware that the Carter Review (2015) was launched shortly after the DfE (2011b) published its implementation plan for the *Training our next generation of outstanding teachers* (DfE, 2011a) strategy. The strategy set out to reform ITE, through the introduction of School Direct and the expansion of School Centred Initial Teacher Training (SCITT) provision meant that ITE was predominantly led by schools and in the case of School Direct with the support of a university partner.

This led to an increasingly uncertain future for university ITE and amplified competition between universities and between universities and schools, as they competed for school direct partners to work with, and for students. Such tensions still exist at the time of writing, although it has become a more broadly accepted way of working. The context here is important to make explicit, particularly in relation to my research question exploring the *tensions and competing participant voices.*

6. How consistent is the information with other sources?

Whilst my study does not make use of the original information collected for reviews of ITE carried out in other parts of the United Kingdom and other countries, the discussion of my findings draws on their reports to explore and discuss differences and similarities between my findings and those presented. The main reports I refer to are; the Tabberer (2013) *Review of Initial Teacher Training in Wal*es, the Welsh Furlong (2015) *Review of initial teacher training: teaching tomorrow's teachers,* Donaldson's (2010) *Teaching Scotland's Future*, Sahlberg's (2012) *Report of the International Review Panel on the Structure of Initial Teacher Education Provision in Ireland* and Sahlberg's (2019) *The Structure of Teacher Education in Ireland: Review of Progress in Implementing Reform* and Sahlberg's (2014) *Aspiring to Excellence: Final Report of the International Review Panel on the Structure of Initial Teacher Education in Northern Ireland.*

After evaluating the information received through the FOI request, drawing on the six questions posed by Stewart and Kamins (1993), I felt that the data had

the potential to address the aim and research questions of my study (Doolan and Froelicher, 2009, Garmon Bibb, 2007). The aims of the review aligned well to my study and the participants were a representative sample of groups involved in ITE. Acknowledgement will be given to the potential for the Hawthorne effect (as discussed above) in relation to the professional background of the Chair of the review, the ITE context in which the data were generated and the potential for exploring the resulting tensions and competing voices of participants.

3.8 Rationale for using a thematic analysis approach

Adopting a critical realism approach provided a helpful philosophical framework, whilst allowing a degree of flexibility when making decisions on the approach to data analysis. Although some (Oliver, 2012 and Redman-MacLaren and Mills, 2015) advocate grounded theory for critical realist researchers, critical realism is not associated with a particular method (Fletcher, 2017). After considering a range of methods such as grounded theory, interpretative phenomenological analysis (IPA) and pattern based discourse analysis; I decided that thematic analysis was the most appropriate for my study. This was because, as Braun and Clarke (2006, p.86) describe, thematic analysis involves 'searching *across* a data set - be that a number of interviews or focus groups, or a range of texts - to find repeated patterns of meaning'.

As my study did not focus on developing rich descriptions of each participant's subjective experience, IPA, which usually draws on a small sample and makes use of 'verbatim accounts' (Braun and Clarke, 2013, p.181), was considered

unsuitable. With a focus on understanding social contexts through the content and use of language (Braun and Clarke, 2013), I did not feel that pattern based discourse analysis was apt in relation to the secondary data that I had received, which did not include detailed transcription that would facilitate this approach. Within a small-scale project, a 'full' grounded theory approach was deemed unrealistic (Braun and Clarke, 2013). Furthermore, grounded theory does not allow for the flexibility afforded to thematic analysis, which unlike grounded theory is not constrained by 'hard and fast rules of analysis', recognises an 'intuitive level' (Savin-Baden and Major, 2013, p.440) of analysis and the active role played by the researcher (Clarke and Braun, 2017). In addition, thematic analysis is liberated from any specific epistemological and ontological base and as such can be described as a method rather than a methodology. However, such liberation does not mean it is atheoretical. Instead, it requires the researcher to make their chosen theoretical approach explicit (Terry et al, 2017). In the section that follows, I describe how adopting a critical realist stance, guided my approach to thematic analysis.

3.8.1 A critical realist approach to thematic analysis

In line with a flexible approach, the 'form and product' of thematic analysis varies. As a result, researchers need to make a number of deliberate decisions before and during analysis and these should be made explicit (Braun and Clarke, 2006). Attride-Stirling (2001) recommend qualitative researchers not only include what they did and why but how they did their analysis in their reports. As outlined earlier, my study adopted a critical realist approach. This, along with the aim and research questions, informed a number of decisions in

relation to choices available to me when applying the method of thematic analysis.

The first was to decide whether the aim and questions for my study were best served through a rich thematic description of the full data set to generate predominant or important themes or to attempt a more detailed explanation of one particular aspect (Braun and Clarke, 2006). The aim of my study was to attempt to explicate the approaches to teaching STs the complex practice of teaching. The emphasis here is on 'how' new teachers learn and retaining this focus throughout the analysis meant that I could explore this specific area in detail. This was particularly helpful when I found data relating to content of ITE in relation to the 'what' rather than the 'how'. In instances such as these, I allocated the code no code (NC) and returned to these later in the analysis.

The next decision was in relation to which of the two approaches, inductive or theoretical, would be most appropriate for theme generation (Braun and Clarke, 2006). As described above the analysis was driven by a particular analytic interest, which is indicative of a theoretical approach. However, taking a critical realist stance implies that 'reality is 'out there' but access to it is always mediated by sociocultural meanings, and, in the case of qualitative analysis, the participants' and the researcher's interpretative resources' (Terry et al, 2017, p.21). Therefore, I would describe the approach I took as a hybrid between theoretical and inductive. Theoretical in that I had a particular analytic focus and prior knowledge that sensitised me to more subtle features of the data (Tuckett, 2005) and inductive as themes within this focus were predominantly driven by

the data rather than prior engagement with literature (Terry et al, 2017), which I undertook after data analysis.

Related to the above decision is the importance of defining what counts as a theme within the context of my study. The multiplicity of approaches to identifying themes and how the concept is interpreted and applied in data analysis makes this particularly significant and should not be left to the reader to try to work out for themselves (DeSantis and Ugarriza, 2000). Clarke and Braun (2018, p.108) suggest that themes can be 'thought of as key characters in the story we are telling about the data (rather than collection pots into which we place everything that was said about a particular data domain)'. This description was helpful in the identification of themes, which, for the purpose of my study, I define as being abstract entities that capture something important in relation to the study and underpin and unite experiences.

In my study, themes were generated through active engagement and interpretation on the part of the researcher. I found asking myself the questions 'what is this telling me about how student-teachers learn?' helped to tell a story from the data. It was also helpful to remind myself that a theme was not simply a summary of participant responses (Clarke and Braun, 2018). There is no requirement for a particular proportion of the data to evidence a theme for it to be considered a theme and as such, a theme is independent of quantifiable measures (Braun and Clarke, 2006). As themes were generated through interpretation of the data, which looked beyond the surface level of what had been written, to examine implicit meaning and concepts in relation to the

professional practice of ITE, they were identified at a latent rather than a semantic level (Braun and Clarke, 2006).

Clarke and Braun (2017) state that the approach taken to thematic analysis should align to the philosophical framework adopted by the researcher. They suggest that generally, realists use inductive and semantic approaches and relativists take more of a theoretical and latent analysis approach. However, there are no 'hard and fast rules… and different combinations are possible' (Braun and Clarke, 2006, p. 86). Critical realism is situated between the ontological assumptions of relativism and realism, which informed my approach being hybrid between theoretical and inductive. In addition, critical realists recognise data needs to be interpreted to explore underlying meaning and structures (Willig, 2012). Capturing 'ideas or concepts embedded within, or underpinning, the explicit content' (Clarke and Braun, 2017, p.26) aligns more to a latent level of analysis.

3.8.2 The six phases for thematic analysis

The approach I took to analysing the data followed the six phases (below) outlined by Braun and Clarke (2006). Whilst the phases are presented as linear, the process is iterative requiring the researcher to revisit phases, the full data set, the coded data and the ongoing analysis throughout. Writing was an integral part of the analysis (Braun and Clarke, 2006) and throughout all of the phases, I used 'analytic memos' which are described by Saldana (2016, p.44) as 'a place to "dump your brain" about the participants, phenomenon, or

process under investigation by thinking and thus writing and thus thinking even more about them'.

1. Familiarisation with the data

Once I received the data through the FOI request, I read through it a number of times. This enabled an evaluation of the quality of the data, as discussed earlier (3.7) but also allowed me to note initial analytic observations in a research journal.

2. Generating initial codes

Initially, I rushed into generating codes, grouping datum under surface level headings using what Saldana (2016, p.9) describes as 'mechanistic validation'. Following this I took Saldana's (2016, p.42) advice that 'the best approach to coding is to relax and let your mind and intuition work for you'. As a result, I started this phase again using a latent level of analysis Braun and Clarke, 2006). This time, after reading a section of data, I stopped to ask myself the question 'what is this telling me about how new teachers learn?' and noted my responses beside the section of data it related to. Where the data did not appear to be relevant to the aim or research questions, I wrote 'no-code' beside it so I could return to it later in the analysis. Table 3.3 below illustrates my approach to the initial coding stage.

Table 3.3 Initial coding stage

Raw data	What is this telling me about how STs learn? Initial codes
106 The group agreed that subject knowledge can be a challenging issue. ITT entrants come into ITT with very different experiences at degree level and very different degrees. Good ITT should audit subject knowledge and provide opportunities for wider learning and research within their subject area.	106 Audit/testing subject knowledge
107 The group agreed that it is important to interview rigorously so that providers are aware of gaps at the start of the course. Training on subject knowledge should be personalised to address gaps and based on individual targets.-	107 Personalised – individual targets
108 The group agreed that teaching and testing subject knowledge should be a priority for ITT. The group felt that university-based courses should make more of links with academic subject departments to teach subject knowledge.	108 Teaching and testing – subject knowledge Learning from more experienced others/subject specialists
109 The group felt it was important that students come out of ITT with a holistic view of their subject (rather than a modularised view). Students should understand the definition of the subject and how it contributes to wider life.	109 Holistic not modularised
110 The group agreed that the best ITT recognises the importance of "subject knowledge for teaching" - understanding the subject in the national curriculum and what the subject means within the school setting. The group agreed that subject knowledge should be emphasised throughout the course. Subject-specific mentors should play an important role in this. The group agreed that mentoring was an important part of personalised training and that subject specific content can be delivered through the mentor. The group also agreed that the best providers will look for common areas of deficit and run sessions on these. The group also argued that subject knowledge doesn't have to be taught in isolation. For example, a session on a more general pedagogic issue (e.g. question) can be delivered with a focus on a particular subject knowledge area i.e. teaching questioning using content about the industrial revolution	110 Weaving learning throughout the course as well as through the school mentor e.g. subject knowledge Plugging common gaps
111 The group again agreed that university subject departments can have a lot to offer. Experts from subject departments can deliver 45 minute lectures on most recent research on different areas.	111 Learning from more experienced others/subject specialists

3. Searching for themes

When searching for themes, I numbered each code along with its associated

section of data so that I could match codes back to the data from which it was

generated. I concur with Saldana (2016) that manipulating data on paper gives

the researcher as sense of control and ownership, therefore, I printed and cut

out all of the codes so I could physically group them (table 3.4). When grouping

codes, I referred back to my definition of a theme and looked for central or

unifying features that were relevant to the focus of my study. Throughout this

phase, I checked in with the full data set to help link the code to the context of

the data and shape my thinking. This phase resulted in an initial set of

candidate and sub-themes.

Table 3.4 Physically grouping codes
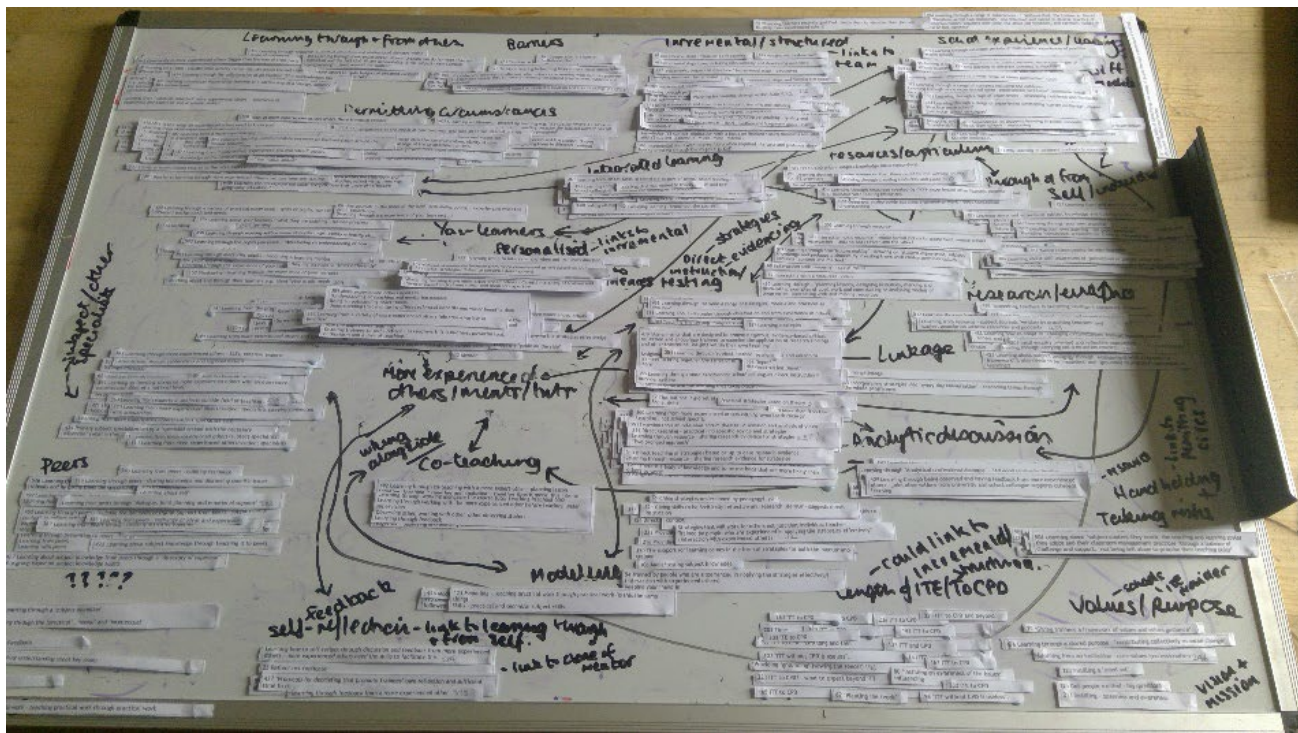
4. Reviewing themes

During this phase, all codes in each candidate and sub-theme were revisited.

As a result, some themes were collapsed and others were re-named. Analytic

memos were used to consider how to define the themes and the relationships

between them. For example, table 3.5 below shows the analysis of the sub-theme of structured/incremental learning that became the curriculum bridge.

Table 3.5 Example analysis of initial sub-theme of structured/incremental learning
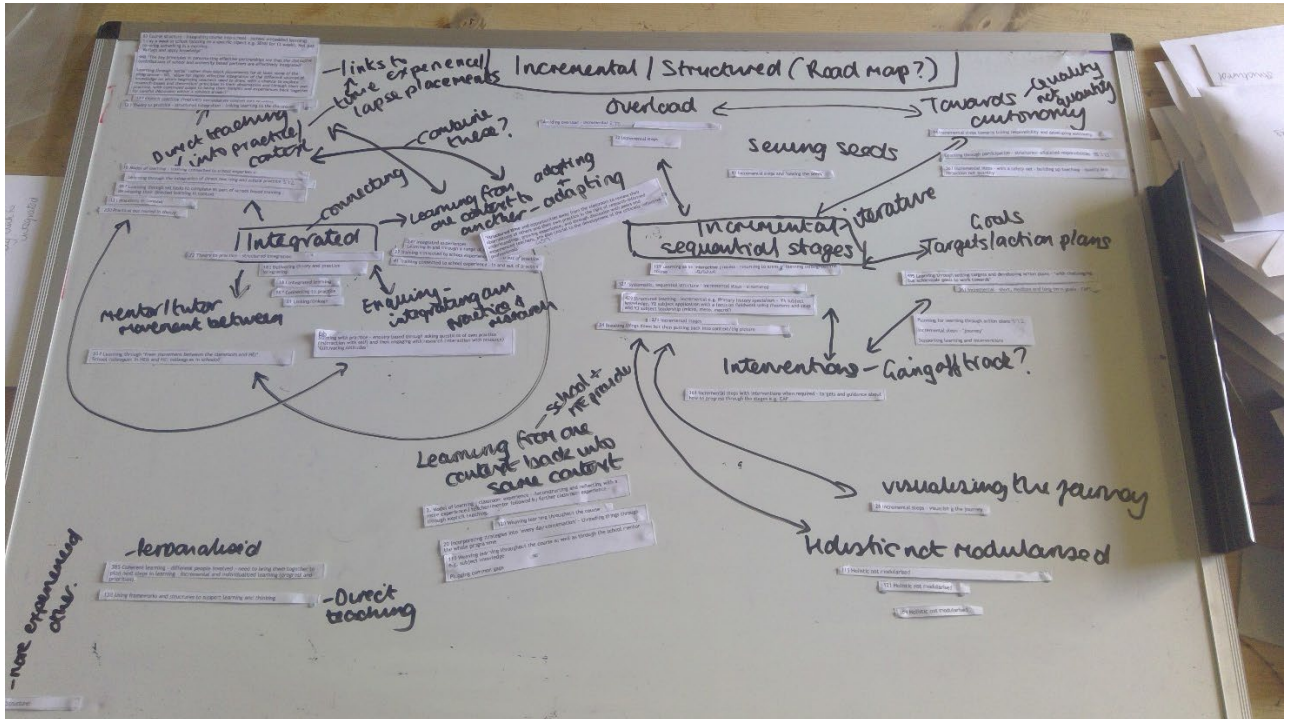
The above thematic map generated the below main codes and sub-codes (table 3.6), which eventually generated the Curriculum Bridge theme.

Table 3.6 Code numbers grouped under each main and sub-code

Main code and numbers	Sub codes	Code numbers
	Avoiding overload	278, 22
	Towards autonomy – quality not quantity	44, 375, 363
	Holistic not modularised	115, 121, 109

Incremental/iterative/sequential stages 129, 127, 429, 276, 34	Visualising the journey	26
	Sowing seeds	91
	Integration of more experienced other – mentor/tutor	334
	Integrating learning from context back into the same context	2,(possibly somewhere else) 120, 20, 110
Integrated 72, 182, 183, 187, 21	Enquiry – integrating practice and research	66
	Integrating learning from one context to another - adopting and adapting (incorporating direct teaching into practice) – links to time lapse and school experience	247, 27, 41, 437, 230, 131, 367, 372, 18, 132, 139, 448, 83

Following this an initial thematic map was produced which included three candidate themes and five sub-themes that cut across them (see table 3.7).

Table 3.7 Initial thematic map
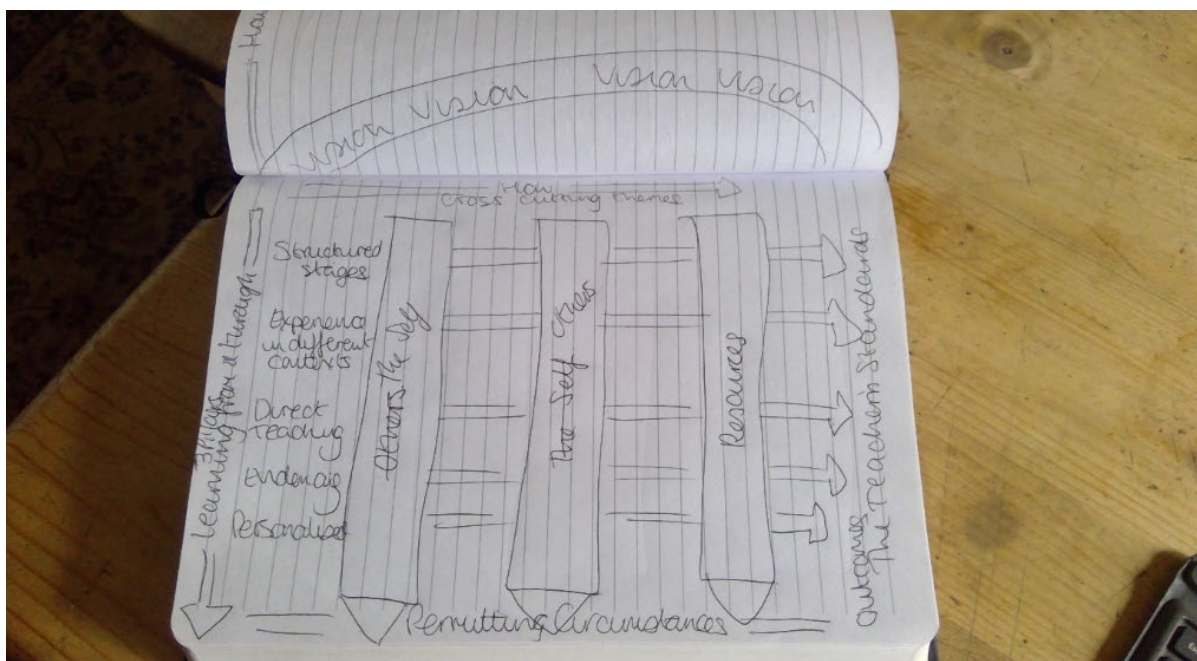
5. Defining and naming themes

This was a continuation of phase four, during which I wrote the 'story' for the analysis. This helped to further refine the themes, their names and definitions (Braun and Clarke, 2006).

6. Producing the report

This phase involved telling a coherent story relevant to the aim and research questions for my study and literature. An account of the analysis within and across themes supported the construction of a draft flexible framework illustrating how learning may be facilitated in ITE. Vivid participant extracts were used to illuminate the essence of the themes.

3.9 Concluding thoughts

As explained in section 1.3, 2.1 and 3.2, my study espoused a qualitative thematic analysis approach of secondary data, generated for a national review of ITE in England. The aim of which was to explicate how to teach STs the complex practice of teaching, as described by those in the field of ITE, in order to develop a flexible framework for articulating ITE practice, which I introduce in the next chapter. My personal 'philosophical worldview' (Creswell and Creswell, 2018), aligned to critical realism (3.2), provided the lens through which the study was designed and data were analysed, with a view to making the complex practice of ITE visible. From a critical realist perspective, I aimed to connect the 'inner world of ideas', from participants in the review, to the 'outer world of observable events' (Ackroyd and Karlsson, 2014, p.21), which in this

case was the practice of ITE. I used the themes generated through my analysis

to develop a flexible framework for articulating ITE practice, which I introduce

next.

Chapter 4: Overview of the generated themes and framework

4.1 Introduction

In line with the hybrid approach I adopted for theme generation (3.8.1), in this chapter, I introduce my framework and the themes that underpin it, generated through my analysis of data rather than the literature from the field. In chapter five, I draw on this analysis and relevant literature to substantiate and utilise my framework to articulate how teachers learn how to teach, as described by participants. This chapter focuses on my third research question, How can the professional practice, as described by the participants, be used to inform the development of a flexible framework for how student teachers' learning may be facilitated in ITE?

The approach I have taken is one of telling the story of ITE practice, that is faithful to the data (Braun and Clarke, 2013), through the voices of the participants. Drawing on the work of Clarke and Braun (2018, p.108), I view the themes generated as 'key characters in the story'. Moreover, the analysis was of multiple participant perspectives (Gorski, 2013), each describing '*some* of the story' (Pawson and Tilley, 2014, p.164). As discussed in section 2.4, it is a complex story and as such, the framework presented aims to provide a flexible structure or 'practice architectures' (Kemmis and Grootenboer 2008) to support the telling of it. By taking a critical realist stance (see section 3.8.1), it is important to note that the story is 'mediated' by the 'participants' of the review, as well as my own 'interpretive resources' (Terry et al, 2017, p.21), which is indicative of a hermeneutical approach (Schwandt, 2000). In this sense, as an

experienced teacher educator, I took an active role in theme generation. The approach I took draws on Ely et al's (1997, p.205-206 cited in Braun and Clarke, 2006, p.80) observation that themes do not 'reside' in the data waiting to be discovered, if they 'reside anywhere, they reside in our heads from our thinking about our data and creating links as we understand them'.

Throughout, the discussion of tensions and competing participant voices is included, where this formed part of the findings generated. As such, it is integral to the discussion of themes, rather than treated as a separate section and addresses my second research question (1.4). When undertaking the analysis, I was reminded of the words of the late American-British novelist Raymond Chandler who said, 'A good story cannot be devised; it has to be distilled' (The Guardian, 2009). To distil can be defined as to take the 'most important parts of something and put them in a different and usually improved form' (learners dictionary). In the case of my study, the 'most important parts' relate to the 'research object' (Braun and Clarke, 2013), ITE practice, which through thematic analysis, are distilled into themes. As explained in section 3.8.1, I define themes as, abstract entities that capture something important in relation to the study and underpin and unite experiences (DeSantis and Ugarizza, 2000). I also describe taking a hybrid approach to theme generation, between theoretical and inductive. My particular analytic focus of ITE practice and the use of my prior knowledge is indicative of a theoretical approach (Tuckett, 2005). Whereas, theme generation was driven by data, which is more aligned to an inductive approach (Terry et al, 2017). I use the themes generated to create a flexible framework for articulating ITE practice, addressing my third

research question (1.4). To complete the use of the earlier definition of distil, the resulting framework could be viewed as an 'improved form' for articulating ITE practice.

In this chapter, I begin by providing an overview of my flexible framework, created as a result of my analysis and the part each theme generated plays in the overall 'story' (Braun and Clarke, 2006) of ITE practice. In the chapter that follows, I explore each theme in depth by introducing it, followed by a discussion of the analysis and the interplay between the findings and pertinent literature from the field. To an extent, this chapter introduces the themes, viewed as 'key characters' (Clarke and Braun, 2018) and the following chapter gives each one time to tell their part in the story of ITE practice, along with how the story is structured through their interactions with each other. Aligning to a critical realist's interest in relationships between people and structures (Archer, 2010), as discussed in section 3.2.1, it is important to note that the 'key characters' are not able to tell the story alone, they work together and as such each may be necessary in facilitating STs' learning but none are sufficient in themselves. Here it was important for each theme to make sense on its own but to recognise that they all need to work together in telling the story of ITE practice (Braun and Clarke, 2013).

4.2 An introduction to the flexible framework and themes generated

As discussed in section 3.8.1, my analytic interest was the practice of teaching new teachers how to teach, as described by participants in a national review in England. Rather than focusing on one particular aspect of practice, my study

aimed to explore how new teachers learning can be facilitated through the range of practice described and how this may be presented using a framework. The process I experienced in doing this was indicative of that described by Richards and Richards (1994, p170) who state that explanations are,

> …'mental maps', abstracted webs of meaning, that the analyst lays over bits of data to give them shape without doing violence to them. The researcher must weave these webs ... see the links and draw the threads together, often by creative leaps of imaginative analogies.

Although, rather than creating 'mental maps', I physically manipulated the data on paper to 'draw threads together' for theme generation, as described in section 3.8.2, thus creating a 'visual thematic map' (Braun and Clarke, 2013, p.232), as illustrated in table 3.1. This aided the exploration of themes and the relationships between them and informed the overall structure of the framework. The approach I took is indicative of Terry et al's (2017, p.28) view that '(visual) mapping aids' provide,

> …a way of identifying what the boundaries of, and the relationships between, each theme might be, as well as how different themes work together to tell an overall story about the data.

As seen below, my framework (table 4.1) uses a 'hierarchical relationship' (Braun and Clarke, 2013, p.231) to present seven themes, which are organised under two overarching themes. In the naming of the overarching themes I was influenced by Kemmis and Grootenboer's (2008, p.58) concept of 'practice

architectures' which they view as social fields and structures that hold practices in place.

Table 4.1 My Pillars of Interaction and Interconnecting Bridges Framework for Articulating ITE Practice

My Pillars of Interaction and Interconnecting Bridges Framework for Articulating ITE Practice
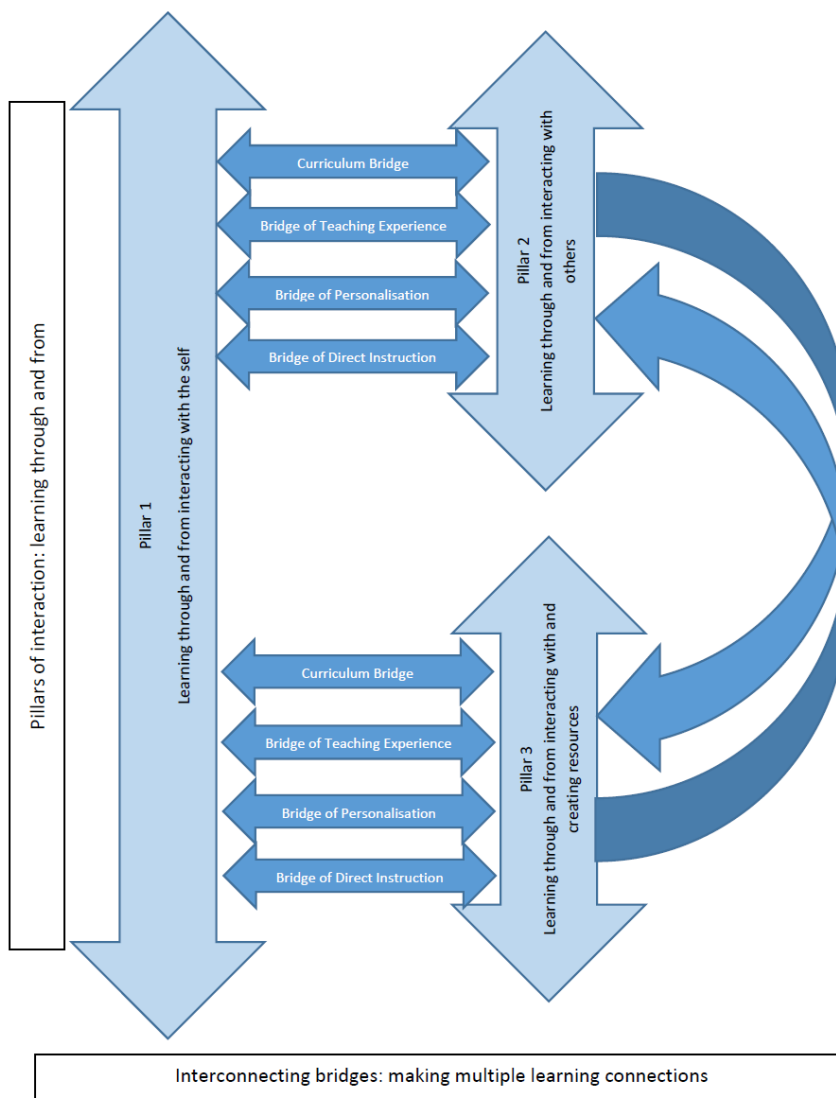
As defined by Braun and Clarke (2013, p.231), overarching themes do not usually 'contain codes or data', they 'capture an idea encapsulated in a number of themes' in order to 'organise and structure the analysis'. The first overarching theme 'Pillars of Interaction' encompass three themes, all of which relate to the idea of learning how to teach as a highly interactive process, requiring interaction with multiple 'others' across a range of contexts. I chose the word 'pillar', to be representative of the view of participants, that interaction provided essential **support** for learning. Whilst I concur with Philpott (2014) that attention needs to be given to the 'how' students learn, over the where and from whom, learning as described by participants was often linked to 'where' it took place and 'who' students interacted with in order to facilitate it. As such, discussion of how students learn necessitated the inclusion of 'who' they interact with and 'where' this takes place. In addition, 'what' students interact with, such as resources, research and policies, was also a feature of participants' discussions of 'how' STs learn. For the purpose of my study, to reflect the range of interactions identified through the analysis, I define interaction as a communication or direct involvement with someone or something. Appertaining to the overarching theme 'Pillars of Interaction', three themes were generated, all of which relate to learning how to teach through interaction. By way of introducing each theme, I provide a summary of the 'core idea and meaning', with the intention of providing 'clarity and scope (content)' in relation to their place in the 'analytic story' (Terry et al, 2017, p.31) of ITE practice. As outlined in section 4.1, each theme is explored in more depth in chapter 5.

4.3 An introduction to the three pillars of interaction

Put succinctly by one of the participants in the review, STs need '*an understanding of themselves*'. Participants described STs' learning from what they do, think and know, in order to learn how to teach and to learn about themselves as teachers. Connected to the 'idea' in the overarching theme of 'Pillars of Interaction' discussed earlier, the central organising concept for the first theme is self-interaction, reflecting the contribution that 'internal dialogue' or 'self-talk', through 'ongoing self-reflection', makes to the process of learning how to teach (Chohan, 2010, p.10). Unsurprisingly, central to discussion relating to STs' learning from and about themselves, was the significance of time allocated to and the development of, skills of reflection. One participant described effective ITE as having a *'strong focus on critical reflection on practice, taught, modelled and documented'.* Although, particular models for reflection, such as Korthagen's (1985 cited in Korthagen and Lagerwerf, 2001) ALACT model (see 2.5.4), did not feature in discussions. In order to capture the 'essence' (Braun and Clarke, 2006, p.92) of what this pillar is about, I settled on the title of 'learning through and from interacting with the self'. I viewed learning 'through' to relate to dialogue and learning 'from' to relate to observing. In other words, learning *through* 'internal dialogue' (Chohan, 2010) and *from* observing yourself teaching. It is important to note that my study views observation as 'more than simply seeing something, but rather a mental process involving both visual and thought' (the-art-of-observation).

The second theme, generated within the overarching theme of 'Pillars of Interaction', centres around the concept of ITE as a collaborative endeavour.

Here, interaction described by participants was two-fold, firstly students learning through and from their interaction with a range of 'others' and secondly, the importance of collaboration between the 'others' to support students' learning. There were some competing participant views in relation to who students should learn from and what form this learning should take, revealing some tensions between the roles of university and teacher educators or 'outstanding' teachers, in particular. Participants described students' learning through interacting with a range of more experienced others, from school and university tutors to subject experts and the wider community. In addition, learning from and through interaction with their peers, drawing on each other's knowledge, particularly subject knowledge, and experiences, was a feature. Learning from and through interacting with a diverse range of learners and using specific approaches to support their learning, such as 'shadowing' pupils was also viewed as helpful. To reflect the wide range of 'others' students interact with to support their learning, I gave this pillar the title of 'learning through and from interacting with others'. Similar to the previous pillar, to illustrate the range of and approaches to the interactions described by participants, I differentiate between through and from, viewing learning through as dialogue with the range of others as described and learning from as observing and being observed by others.

The central organising concept for the third and final pillar of interaction, within this overarching theme, was STs' learning through and from interacting with and creating resources. Participants described students learning through interacting with a range of resources, from research journal articles and

research objects to school policies, with reference to using as well as creating resources. Learning from resources, to an extent, could be viewed as still learning from and through others, as the 'other' authored or created the resources in the first place. In light of the advice from Terry et al (2017, p28) that 'good quality themes should be distinctive, with little 'bleeding' of codes between themes', I gave consideration as to whether this should be a separate pillar or combined with pillar two. Drawing on my definition of interaction in section 4.2, I viewed this as a different form of interaction to that in pillar two, which is more in line with 'direct involvement with something'. In addition, STs' learning from creating resources did not align with the central organising concept of pillar two, which relates to interaction with someone, rather than something. After some thought, I decided to keep it as a separate pillar. To reflect the considerations above, I gave the third pillar the title of 'learning through and from interacting with and creating resources'. Within this pillar, the word 'through' is intended to represent dialogue that occurs between the resource, (i.e. the absent author or creator of it) and the student teacher through their interpretation of and or use of it (Trede, et al, 2009). As with pillar 1 and 2, learning 'from' relates to observation, which in this pillar refers to producing research through observations as well as the use of visual resources.

The overviews of each of the three pillars above include a leitmotif, which contributes to the overall structure of the ITE story, as described by participants. The leitmotif presents interaction as learning 'from', which relates to a form of observation and learning 'through', which represents dialogue. Both observing and being observed and dialogue were at the core of students'

interaction within each of the three pillars. The interaction introduced in each of the three pillars, is intended to support students' learning. However, my analysis suggests that the interactions described in each of the three pillars above is necessary but not sufficient in itself to provide the full-story of ITE practice, as described by participants. My analysis generated four further themes, which suggests there is more to ITE practice than that which is captured in each of the three pillars. I grouped these themes under the overarching theme of 'interconnecting bridges'. Linking back to Kemmis and Grootenboer's (2008, p.58) concept of 'practice architectures', I viewed the 'interconnecting bridges' as strengthening the structure of ITE practice. Giving structure to students' learning within and across the three pillars of interaction and supporting students with making multiple learning connections. Creating, what Twiselton (2007, p.490), in her study of the impact of the National Literacy Strategy on STs, describes as a 'coherent conceptual network of interconnected understandings on which the teacher can draw'. Likewise, Palmer (2017, p.11), emphasises the importance of teachers' 'capacity for connectedness'. The bridges enable students to 'weave a complex web of connections' (p.11) and as such, aims to represent the complexity of ITE. Similar to Crowe and Berry's (2007, p.33) intentions for their five principles, discussed in chapter 2, the framework generated through my analysis provides an 'explanatory pathway into a complex set of interconnected ideas'. Like their principles, it aims to present a 'big-picture view' (p.33) rather than discussing specific aspects of ITE practice in depth.

As with the three pillars of interaction earlier, in what follows, I introduce each of the four themes or 'interconnecting bridges', along with their 'core idea and meaning' (Terry et al, 2017, p.31), in order to outline their place in articulating how STs learn. In depth discussion, relating to the analysis that generated each interconnecting bridge can be found in chapter 5.

4.4 An introduction to the four interconnecting bridges

The first theme generated under the overarching theme of 'interconnecting bridges', I named the 'Curriculum Bridge'. At this juncture, it is important to explain the definition of 'curriculum' that I employ. Finney (2002, p.70) suggests the term is open to a range of definitions, from the narrowest, specifying content and the sequence in which it is taught, to the widest, which encompasses planning, implementation and evaluation. My own view leans more to Finney's wider definition. However, my study aims to deconstruct the complex practice of ITE through focusing on component parts and how they facilitate students' learning. Therefore, a narrower view better serves this purpose. As the content of the curriculum is not within scope, I focus on participants' descriptions of how the curriculum is designed and implemented to support students' learning or what I have described previously as focusing on the how rather than the what. Therefore, central to this theme is how curriculum content is sequenced and integrated across contexts for learning, enabling students to make learning connections both across and within the content itself but also within and across the different contexts within which they learn.

In England, ITE has a prescribed, mandatory, minimum content to be taught through the Core Content Framework (CCF) (DfE, 2019b). However, the introduction to the CCF makes it clear that it should not be treated as an ITE curriculum. Instead, in order to design the ITE curriculum, it suggests that ITE

> …providers should carefully craft the experiences and activities detailed in the ITT Core Content Framework into a coherent sequence that supports trainees to succeed in the classroom (p.4)

In relation to designing the curriculum, the above refers to 'experiences and activities' as well as 'sequence'. Similarly, during my analysis, I considered collapsing both the curriculum bridge and the bridge of experience (outlined later), to form one theme. During this aspect of the analysis, I was reminded of the advice from Terry et al (2017, p.30) that 'reviewing analysis involves making choices about the best and sharpest boundaries for inclusion and exclusion'. Whilst both bridges are linked to curriculum design, I viewed the central organising concept for each as distinct. The curriculum bridge focuses on how students' learning is facilitated through when and where the content of the curriculum is taught. It reflects participants' descriptions pertaining to structuring the curriculum, within and across learning contexts, which aligns well with the notion of 'practice architectures' (Kemmis and Grootenboer, 2008), mentioned in section 4.1. Whereas the experience bridge centres on students learning through their experience of the practice of teaching. Attending, to an extent, to the need for carefully crafted experiences described in the quotation from the CCF above. When describing how the ITE curriculum facilitates learning, my analysis suggests that participants felt it should be clearly structured to enable

students to make multiple connections within and across learning contexts. I identified two key features in participants' descriptions of a clearly structured curriculum, namely that it should be 'integrated' and 'incremental'.

The second interconnecting bridge, I named the bridge of teaching experience, which has at its centre, the concept of students learning through their experiences of the practice of teaching or as described by Norris (2000, p. 173), learning 'to teach by teaching'. This theme captured participants' descriptions of how students' practice of teaching should be structured, in order to support their learning. Attention is given to the length and frequency of students' experience in school, to facilitate learning through teaching, as well as teaching activities they undertake. Analysis of participants' discussions relating to students learning the 'craft of the classroom', which described students learning taking 'place on the job' (DfE, 2010), sits within this theme. However, the focus here is not on observing other teachers, viewing the 'craft of the classroom' as a craft to copy. Instead, the focus is on students' own teaching experiences and through these, how they learn craft skills, such as engaging pupils and assessing their learning. Helping STs to 'learn their craft' (Darling-Hammond, 2010, p.45) through their experiences of teaching.

Interestingly, participants viewed students learning through the practice of teaching to be solely within the school context. Whilst there was some recognition of the benefits of providing '*safe'* opportunities for students to '*take risks and try out ideas'*, this was in regard to relationships between a school mentor and the student teacher, within the school context, rather than 'safely' honing teaching skills outside it. Although participants included many university

teacher educators, approaches to students learning through the practice of teaching, in a context outside the school classroom, such as Grossman et al's (2009) 'approximations of practice' discussed in section 2.5.5, did not feature in participants' discussions.

When describing effective ITE, participants emphasised the importance of personalising each students' learning journey, both in terms of identifying specific areas of development and planning bespoke support to address them. This 'core idea' of personalising students' learning, 'underpins' (Braun, et al, 2015 p.102) the third theme, within the overarching theme of interconnecting bridges, which I named the 'bridge of personalisation'. It was felt that whilst, a clearly planned structure in relation to the curriculum and carefully crafted experiences of teaching were important, as reflected in the two themes/bridges above, there was a need for flexibility within the structure, to respond to a student's individual needs. Participant described different points of departure for STs' learning journeys, recognising their prior experiences, skills, values and knowledge. A range of approaches to identifying student's developing learning needs supported what was often described as keeping student's learning '*on track'*.

This notion of 'tracking progress' was a feature of participants' discussion within this theme, with a view that where 'expected progress' was not being made, personalised interventions were required to put students' learning 'back on track'. This approach seems to run counter to Korthagen and Lagerwerf's (2001) model of personalisation, discussed in section 2.5.4, which suggests a 'bottom-up' approach, seeing the programme following the learning. Whereas

here it is proposed that if the learning does not follow what is expected from the programme, then there is a need to intervene to get it back on track.

The final theme/bridge within the overarching theme of interconnecting bridges is summarised well through the participant comment that '*training should definitely tell them things'*, which is critiqued in the next chapter*.* The 'things' that STs should be 'told' during their ITE, as described by participants, focused mainly on practical strategies. It was felt that direct instruction facilitated students learning how to do 'things', which usually but not exclusively related to their classroom practice. This focus is indicative of a teacher 'training' approach discussed in section 2.1.2. Participants used phrases such as *'the right form of instruction',* suggesting that specific routines, formulas, and strategies should be taught to students and applied through their own practice. Whilst the majority of participant discussion within this theme related to practical strategies for classroom practice, some discussion focused on practical strategies for STs' development. Directly teaching students strategies and key concepts to support their own learning, rather than the learning of the pupils they teach. To reflect the findings introduced above, I named this particular bridge, the 'bridge of direct instruction'. Central to this theme is the notion of STs' learning through direct instruction, which 'tells them how to do things'.

In relation to my second research question, focusing on tensions and competing participant voices, within this theme, there were differing participant views in relation to the value and emphasis given to teaching students specific strategies, routines and formula. This was indicative of the polarised debate between initial teacher training and initial teacher education, discussed in

section 2.1.2. Furthermore, there were some strong views relating to who is best placed to provide direct instruction, as described, suggesting that this should come from those who are experienced in applying the strategies, routines or formulas themselves.

4.5 An introduction to the Pillars of Interaction and Interconnecting Bridges Framework

As stated at the start of this chapter, the above introduces the themes generated through my analysis of secondary data, collected from those in the field, for a national review of ITE in England. The themes are hierarchical (Terry et al's, 2017), with two overarching themes, entitled 'pillars of interaction' and 'interconnecting bridges'. The first of which, 'Pillars of Interaction', sits over three themes or what I term 'three pillars'. All of the pillars are underpinned by participants' descriptions of learning how to teach through interaction. This is represented in each pillar as students learning 'from', relating to observing and being observed by others and learning 'through', a form of dialogue. In the first pillar, entitled 'learning through and from interacting with the self', participants described learning *through* 'internal dialogue' and *from* observing yourself teaching. Interaction in the form of STs' learning *from* observing and being observed by others, as well as *through* dialogue with a range of others is at the centre of the second pillar, entitled 'Learning through and from others'. Within the final pillar, 'learning through and from interacting with and creating resources', students learn *through* dialogue that occurs between the resource (created or authored by another or themselves) and the student teacher

127

through their interpretation of and or use of it and learning *from* relates to observation in the form of visual resources.

The second overarching theme, in my framework (table 4.1), 'interconnecting bridges' contains four themes. Each reflects participants' descriptions of practice that provides some form of structure to students' learning within and across the three pillars, which strengthens ITE practice and supports students with making multiple learning connections. The 'curriculum bridge' focuses on practice relating to how students' learning is structured through the sequencing and integration of the curriculum, across and within the three pillars. Students learning through structured experiences of teaching is at the centre of participants' descriptions of practice within the 'bridge of teaching experience'. The 'bridge of personalisation' is generated through participants' descriptions of structuring students' learning to facilitate a personalised approach. Finally, the 'bridge of direct instruction' is underpinned by a view from participants of students learning through being directly told how to do things. My analysis suggests that through structuring STs' learning, through the four 'interconnecting bridges', learning in and across the three pillars of interaction is less likely to be left to chance.

I used the themes outlined above, generated through my analysis of professional practice, as described by participants, to structure, what I have named, the 'Pillars of Interaction and Interconnecting Bridges Framework' for articulating ITE practice, set out in table 4.1. The themes illustrate the 'underlying structures' (Willig, 2012, p. 13) of ITE practice to further understand it as a whole, as well as supporting the articulation of it by breaking it down into

component parts. Aligned to a critical realist approach, discussed in chapter 3, the framework provides teacher educators with knowledge of structures (Ackroyd and Karlsson, 2014), generated through analysis of multiple perspectives (Gorski, 2013), from those in the field, to make the complex practice of ITE visible.

4.6 Revisiting data labelled as no-code

As outlined in section 3.8.2, I followed Braun and Clarke's (2006) six phases for thematic analysis. During the code generation phase, I asked myself 'what is this telling me about how new teachers learn?' Data that did not appear to provide insight into this question were allocated no-code, the criteria for which I explain later in this section (Saldana, 2016). Following the 'defining and naming themes' (Braun and Clarke, 2006) phase, I revisited the no-codes to assess their potential to contribute to the generated themes or their worthiness of additional themes. As a result, a number of codes were categorised to the themes in the framework outlined above. Revisiting the no-code group did not result in the generation of further themes. However, for completeness, in this section I briefly outline what the no-code group related to and explain why they were assessed a not being within scope for my study.

In section 3.7, I state the aims of the Carter (2015) review, for which the secondary data I used for my study was originally collected. One of these aims was to 'recommend ways to improve choice in the ITT system by improving the transparency of course content and method' (Carter, 2015, p.5). This aim generated discussions centring on what would be useful information for people

looking to apply for ITE. Whilst there was potential here for participants to include information for applicants relating to how they will learn on their programme of ITE, this was not evident in the data. Instead, the focus tended to be on the different routes into teaching and information for applicants such as the cost, length and geographical location of the programme, as well as the demands it will place on them, in addition to the application process itself.

As data accessed through the FOI request included discussions from the review group, it included information about the group logistics such as the terms of reference for the group and the working arrangements. In addition, data included members of the group outlining the purpose of the meetings with participants as well as introductions. Data here did not provide insights into how STs learn so remained in the no-code group. Interestingly, as a number of participants were teachers or school leaders, occasionally, discussion would relate to more of a school agenda, such as the potential advantages of employing subject specialists in primary schools and the retention of teachers. Discussion of teachers' continuing professional development, such as opportunities for undertaking a master's degree, as well as that of the status and value of the profession, also remained in the no-code group.

With the main outcome of the Carter (2015) review being the prescription of a ''Framework of core content for initial teacher training (ITT)' (Munday, 2016), it was not surprising that the majority of data within the no-code group related to participants' discussion of ITE content and what they viewed as important. Content related to what participants felt STs should know, such as providing '*a really strong grounding in child development-for all children, not only those with*

SEN'. Also within the no-code group was participants' description of what STs should be able to do, such as being able *'to create a positive classroom environment'*. Interestingly, the 'Initial teacher training (ITT): core content framework' (DfE, 2019) which was the later iteration of the 'Framework of core content for initial teacher training (ITT)' (Munday, 2016), is organised under the headings 'learn that' and 'learn how to'. The first of which states what STs should know and the second what they should be able to do, which is indicative of the data in the no-code group outlined above. Whilst, I found the content of this data interesting, as it shed some light on the creation of the 'ITT Core Content Framework', it was not in scope for my study, which as described throughout, focused on 'how' STs learn, rather than 'what' they learn or are able to do. My focus is on how STs 'learn that' and how they 'learn how to'. As such, this data remained in the no-code group.

4.7 Summary

In this chapter, I have provided an overview of the themes generated and introduced the role each plays in articulating how STs learn the complex practice of teaching, as described by participants. I outlined how I used the themes as a structure for my Pillars of Interaction and Interconnecting Bridges framework for articulating ITE practice (table 4.1). Through the next chapter, I examine each of the generated themes, introduced above, in more depth and provide insightful, critical discussion exploring the interplay between my findings and relevant research from the field in relation to my research questions.

Chapter 5: Discussion of findings and relevant literature from the field

5.1 Introduction

In the previous chapter, I introduced my framework (table 4.1) and the themes that generated it. In this chapter, I substantiate my framework and themes through critical discussion of relevant literature in the field, along with illustrative extracts from the data (italicised). I use my framework to structure this discussion as a tool to articulate the practice of how STs learn teaching, as described by participants. As outlined in section 4.2, my analysis generated two overarching themes. The first, which I entitled, Pillars of Interaction, has three themes sitting within it. Underpinning each of these is a notion of learning to teach as an interactive endeavour, viewing interaction as an essential support for STs' learning. The second overarching theme Interconnecting Bridges, I describe as strengthening STs' learning in the Pillars of Interaction through providing structure and opportunities for STs to make multiple learning connections. There are four interconnecting bridges within this overarching theme.

5.2 Pillar 1: Learning Through and from Interacting with the Self

Within this pillar, participants emphasised STs' learning about themselves as teachers, exploring and challenging their assumptions about teaching and developing their personal values, as important aspects of learning teaching. Here, learning teaching can be conceptualised as an identity making process (Beijaard, 2019), supporting STs to consider 'who they are as teachers, who they believe they are, and who they want to be as teachers' (p.1). Indeed,

Masters and Freak (2015, p.14) suggest that starting an ITE course involves embarking 'on a complex voyage of self and professional discovery'. Likewise, Browning and Korthagen (2021, p.2) state that learning to teach is often viewed by research in the field as 'a personal quest'. As illustrated in the extracts below, participants focused on this notion of 'self' through supporting STs to challenge and test their assumptions and develop personal values to learning teaching. Therefore, I was keen to explore the data within this theme for participant descriptions of *how* ITE practice may provide opportunities for students learning through such approaches. Interestingly, some participants explicitly linked this to students' learning in relation to behaviour management. Possibly based on a view that how a teacher behaves will affect how their pupils behave.

> *It was agreed that the best ITT provision challenges trainees'*
> *assumptions and creates a thirst to expand their knowledge. One*
> *colleague mentioned the importance of giving trainees a framework of*
> *values and ethics guidance.*

> *Universities are best placed to develop teachers' personal values, which*
> *will inform their behaviour management*

> *Behaviour management training should include "understanding self" - i.e.*
> *the only person you can control is yourself and behaviour management*
> *is about learning how you can have an impact on the students.*

Brookfield (2004, p.2) goes as far as suggesting that 'in many ways we *are* our assumptions'. Within this line of thought, supporting students to explore their

assumptions underpinning their practice links directly to how they see themselves as teachers. Literature from the field suggests that critical reflection plays an important role in supporting students' learning about themselves as teachers and their teaching (Shandomo, 2010, Brookfield, 1995, 2004, Merrifield, 1993). However, Brookfield (2004, p.7) reminds us that 'reflection is not, by definition critical'. Cranton and Carusetta (2004, p.21) describe critical reflection as 'open, questioning, mindful consideration of how we think about ourselves and our teaching'. In their three-year project, working with twenty-two educators to explore authenticity in teaching, they propose that having a good understanding of self both professionally and personally leads to being 'more likely to articulate values, demonstrate congruence between values and actions, and be genuine and open' (p.19). As illustrated in the data extracts below, critical reflection was a key feature of participant discussions.

> *Coaching rather than mentoring - rather than transactional advice, coaching instils a problem-solving approach (critical reflection) which will sustain the trainee*

> *During observations of a trainee teaching, a tutor/mentor makes a record of what takes place in the lesson without judgemental comments. This "transcript" is used by the trainer to discuss the lesson with the trainee, encouraging them to analyse what happened and what worked well and less well. Such a "coaching" approach encourages a trainee to develop their skills of critical reflection that are essential for the development of good teachers.*

The promotion of critical reflection depends to a considerable extent on training mentors to use methods of observation and debriefing that encourage the trainees to evaluate their own teaching from the very beginning in ways that are strongly focused on pupils' learning – clearly identifying the evidence on which they are basing their judgements

In the extracts above, participants mainly focused on mentors working with STs to help them critically reflect on practice. Furthermore, participants appeared to link critical reflection to a coaching model rather than one of mentoring. Whilst the terms coaching and mentoring are often used interchangeably (Joo et al, 2012), van Nieuwerburgh's (2012, p.17) definition of coaching below, shares similarities with participant descriptions and discussion of 'Helping students to learn how to reflect on and learn from their own practice' in Pillar two (5.3.6).

one-to-one conversation focused on the enhancement of learning and development through increasing self-awareness /and a sense of personal responsibility, where the coach facilitates the self-directed learning of the coachee through questioning, active listening, and appropriate challenge in a supporting and encouraging climate.

However, participant descriptions of 'Students learning through mentoring conversations' in Pillar two, shares similarities with definitions of 'formal mentoring relationships', that are 'structured with certain requirements and time frames' (Joo et al, 2012, p.28). Murray (1991, p.xiv) defines mentoring as

a deliberate pairing of a more skilled or experienced person with a lesser

skilled or experienced one, with the agreed-upon goal of having the

lesser skilled person grow and develop specific competencies

Specific competencies referred to above, for ITE in England, are the Teachers'

Standards (DfE, 2011). Furthermore, Gibson and Cordova (1999), suggest that

mentoring involves sharing wisdom about the conventional norms, values and

practices within a particular organisation. With the above definitions of coaching

and mentoring in mind, I suggest that participants described both models.

Coaching to support STs to use critical reflection to learn about themselves as

teachers and from their practice of teaching, within Pillar one. Within Pillar two,

later in this chapter, describing mentoring to learn in and from the practice of

more experienced teachers, along with support in achieving particular targets,

aimed at meeting the Teachers' Standards (DfE, 2011). However, a coaching

model appeared to better-fit participant descriptions about supporting students

to learn teaching through learning about the 'self', which is central to Pillar one.

I have focused on critical reflection, as this was a key feature of participant

descriptions, although other forms of reflection were also mentioned, such as,

professional reflection, guided reflection, self-reflection and *focused reflection.*

This range of approaches to reflection were utilised in descriptions within similar

contexts, suggesting participants were not necessarily clear about the

differences between the different types of reflection in learning teaching.

Whichever form reflection took, participants felt learning to reflect needs

explicitly taught. As stated by one participant, *Reflecting doesn't necessarily*

come naturally. This supports Hiver et al (2021, p.55) assertion that 'capacity or

desire for deliberate thoughtfulness about one's practice does not come automatically to teachers'. To support STs to learn to reflect, as illustrated in the participant extracts below, in addition to explicit teaching, participants described the use of role models, creating opportunities for reflection and recording their reflections.

> *Strong focus on critical reflection on practice, taught, modelled and documented*

> *Trainees are only likely to recognise the importance of critical reflection and research literacy if they can see those qualities in the teachers with whom they work and who are presented to them as exemplars*

> *Effective training supports this capacity for problem solving through critical reflection on practice. The university can provide trainees with opportunities to 'stand back' from their day to day work and reflect on what works, what doesn't work and why*

The importance of teaching students how to reflect, as well as explaining how it can help them to learn to teach is emphasised in Russell's (2013, p.81) view that,

> Many of us seemed to assume that the meaning of *reflect* is self-evident. I hear many complaints from students that they are weary of so much reflection, particularly when so many different assignments call for reflection and when they have been given little guidance in terms of what

reflection involves, what the results of reflection should look like, and

how reflection can help them learn to teach.

Whilst it was felt that students *need to be given tools and frameworks to undertake really effective professional reflection*, there was a limited range of approaches to teaching students how to reflect, within participant descriptions. Observing a recording of themselves teaching, '*reviewing the film in a low-stakes environment',* was deemed as one way of facilitating student reflection to learn about themselves as teachers and their own practice. The *'low stakes'* or safe environment is likely to be important if STs' learning is to be facilitated through watching themselves teaching '*when things go wrong and reflecting on that experience'.* One participant went as far as stating, students '*should expect to be filmed and understand its part of reflection*'. As discussed in section 2.5.4, Korthagen (2011), suggests the use of video supports students to develop a 'personal practical theory' based on their own experiences or 'gestalts'. Another approach to STs' learning about their own practice, suggested by participants, was using a *'reflective journal'.* It was suggested that the use of such journals differed across the ITE sector, with some using it as a 'tool' for evaluating lessons and others using it as a *'reflective tool'* throughout a students' ITE journey. Reflecting on a recording of their own practice, as well as the use of a reflective journal, affords students with opportunities to explore and question why they behaved as they did during their practice of teaching. In keeping with the central organising concept for pillar one; I suggest that these approaches relate to how STs view their practice or in other words what STs say to

themselves about their teaching and how they see themselves as teachers. Chohan (2010, p.10) suggests that,

> By engaging in reflective practice, people can delve deeper into the intricate aspects of their thought patterns and become increasingly conscious of their values, beliefs, and assumptions and how they in turn frame how they behave.

In his concept of 'assumption hunting' Brookfield (1998) states that critical reflection is a process of researching assumptions that underpin your practice. This, he suggests, involves students seeing their practice through four different but complementary lenses,

> the lens of their own autobiographies as learners of reflective practice, the lens of learners' eyes, the lens of colleagues' perceptions, and the lens of theoretical, philosophical, and research literature (p.197)

Thus, within my framework, I suggest that critical reflection draws on students' learning across all three pillars of interaction, through interaction with the self, interaction with others and interaction with research literature. Furthermore, what others say to STs and how others view them as teachers, along with feedback on their practice, as described in Pillar two, is likely to influence 'what they say to themselves and how they perceive their abilities' (Chohan, 2010, p.24). In other words, their self-perception of competence or self-efficacy (Bandura, 1997). Bandura (1994, p.71) defines self-efficacy as,

people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave.

Bandura's theory of self-efficacy plays an important role in a STs' ability to learn (Larry, 2017). Self-efficacy beliefs are strongly influenced by students' self-perceptions of their own successful, or otherwise, teaching experiences or mastery experiences (Tschannen-Moran and Hoy, 2007). Furthermore, self-efficacy beliefs are thought to be more malleable in the early stages of learning teaching (Tschannen-Moran and Hoy, 2007). Therefore, providing STs with positive experiences of teaching (see bridge of teaching experience), along with supportive, constructive feedback on it (see pillar two), is likely to lead to more robust self-efficacy beliefs. Tschannen-Moran and Hoy (2007) suggest that starting a career in teaching with low self-efficacy may lead to teachers leaving the profession early.

5.3 Pillar 2 Learning through and from interacting with others

As introduced in section 4.3, a key feature of participants' discussions pertaining to how STs learn, related to their interaction with others. This included learning through dialogue with, as well as from observing and being observed by a range of others. There was a range of 'others' discussed; more experienced others, student's peers and their learners, each of which are discussed in this section. I start by discussing participant views of STs' learning through interacting with more experienced others, ranging from school and

university tutors to subject experts and the wider community. This is followed by a description of how participants viewed students learning from and through interaction with their peers, drawing on each other's knowledge, particularly subject knowledge, and experiences. Lastly, I draw on participant's views of students learning from and through interacting with a diverse range of learners and using specific approaches to support their learning, such as 'shadowing' pupils.

5.3.1 Pillar 2 Learning through and from interacting with others: Learning through and from exposure to 'outstanding teachers' and 'excellent practice'.

There was a view from some participants that students learn through, what was described as being *put in an environment with outstanding teachers* and providing them with *exposure to outstanding teachers.* Being *exposed to excellent practice* was described, by participants, as *critical.* The suggestion here is that students learn how to teach through being 'exposed' to 'outstanding teachers' and 'excellent practice'. Not only does this raise the question of criteria for such practice and titles and who makes such a judgement, it also implies that student learning happens by osmosis, with STs absorbing learning as a result of such 'exposure'. Drawing on my subject interest of teaching children how to read, this appears to be akin to the view that children will learn how to read if you immerse them with high quality books. Whilst this is viewed as necessary, it is generally recognised that learning to read involves much more than this (MacKay, 2007).

Similarly, whilst recognising that students' learning from more experienced others is more complex than simply being 'exposed' to 'best' practice, discussed later, Feiman-Nemser (2001, p. 1017) suggests it does however afford opportunities for students to 'develop powerful images of good teaching' (Feiman-Nemser,2001, p. 1017). Developing 'visions of what is possible and desirable in teaching to inspire and guide their professional learning and practices', she suggests is essential for student teacher learning. Klette and Hammerness (2016, p.26), stress the importance of developing a 'shared vision of good teaching' with learning opportunities for students being aligned with it. Developing such 'visions' supports STs with challenging their assumptions and beliefs about teaching, which is an example of the interrelationship between this pillar and pillar 1 (Feiman-Nemsar, 2001). The discussions throughout this chapter, relating to my research question 'What are the tensions and competing participant voices?, suggests that there is not a vision of good teaching that is shared nationally and if this were desirable, it is unlikely there would be agreement about who is best placed to decide. Therefore, 'exposing' STs to those that are viewed as 'outstanding teachers' is dependent on each providers' vision of outstanding teaching. Although developing a shared vision across those responsible for ITE within a particular provider, is not without its challenges (Hammerness, 2013). Moreover, it is likely that an increase in the number of 'others' involved in a student's ITE, decreases the achievability of a shared vision for an ITE provider, all of which adds to the complexity of ITE.

5.3.2 Pillar 2 Learning through and from interacting with others: Learning through and from observing the practice of 'more experienced' teachers

Students learning through and from teachers in school was a key feature of participant discussions, as was the multiple ways to facilitate it. Learning through observing the practice of other teachers was viewed by participants as one of the ways students learn through and from others. For example, participants suggested that *observations of a range of teachers, including outstanding practitioners, are a core part of the training programme* to *observe and learn from best practice across a range of contexts.* Participants described observations as needing to be *planned* and *structured,* with a need for students to *be given the tools beforehand to be systematic observers and reflectors*, although what 'the' tools were was not articulated. Not being able to explore comments such as this further with participants was a limitation of drawing on secondary data for my study. I would have liked to have explored with participants what such 'tools' might be.

Suggesting students are 'given *the* tools' implies that there are a set of tools that students should be taught in order for them to learn through observing others. In her 'Learning from Mentors study', which drew on observations of practice of 26 pairs of mentors and STs across England, China and the United States, Schwille (2008, p.148) talks about students learning through observing 'demonstration teaching'. This, she states, differs 'from the "osmosis" approach, where the mentor hopes the novice will "see" and notice something on her or his own'. Instead, these were 'planned events' which were 'prepared for by identifying what the novice should watch for and what questions the novice should ask about the mentor's "in flight" thinking and decision making'. Similarly, literature from the field, discussed below, suggests that we cannot

assume that students will know how to learn teaching through observing others and that this is something that needs to be taught.

As stated in section 2.3.2, whilst the Carter Review (2015, p.39) recognises that 'effective observation is challenging and is an area where further research would be helpful'; the literature discussed below was not referred to in participants' discussion. The concept of 'noticing', introduced next, could be viewed as a 'tool' to support teachers learning through observing the practice of others. However, the lack of reference to this concept, led me to question whether participants are aware of and draw on such literature to inform their work with students. As a teacher educator for more than 18 years, in a university context, I was not aware of the concept of 'noticing', until I undertook this study. This led me to consider whether it would be useful to include references to key concepts and authors in the field within each of the themes for my framework.

Mason (2002a, 2011, 2021), among others (van Es and Sherin, 2002, 2006, 2008) propose students are taught to learn teaching by observing the practice of others, through a concept described as 'noticing'. According to van Es and Sherin (2002, p.575) noticing entails supporting teachers,

> in learning to first notice what is significant in a classroom interaction, then interpret that event, and then use those interpretations to inform pedagogical decisions.

In relation to the first step, Mason (2002a, p.38) states that students will only 'notice' aspects of practice that they are already 'disposed or primed to see'.

The suggestion here is that 'priming' students to notice particular practices, such as those identified by the Core Practices Consortium (Core Practices Consortium, 2021), discussed in the theme of Bridge of Direct Instruction or surfacing students' dispositions, assumptions and beliefs about teaching (see Pillar 1), supports with planning for 'noticing'. As discussed in section 2.2, teaching is complex practice and as such 'the act of focusing attention on and making sense of situation features in a visually complex world' (Jacobs and Spangler, 2017, p.771) is a necessary skill for STs when learning from observing practice. 'Noticing' supports students with focusing on a 'key feature' of practice, while they are observing (Star and Strickland, 2008).

After the observation of practice of another teacher, the next step is supporting students to interpret what they have noticed, treating observed practice as an 'object of inquiry' (Ellis, 2010). van Es and Sherin (2002, p.575) stress the importance of interpretation, suggesting that 'how individuals analyze what they notice is as important as what they notice'. Participants described students' learning through reviewing and discussing their observations, as illustrated in the participant extract below.

> *Structured time and opportunities away from the classroom to review their observations of others and their own practice in the light of research-informed understandings, growing experience, and through discussion with peers and experienced teachers, are also crucial to the development of the critically reflective professionals in primary and secondary education that we all want to see.*

Participants described the above as *analytical professional dialogue,* which it was suggested *lies at the heart of all good ITE training.* The reference to 'research-informed understanding' (see pillar 3) reinforces viewing observed practices as 'objects of inquiry' (Ellis, 2010). Not only observing what teachers do but to interpret why they do it (Labaree, 2000). Through this process, their interpretations of the practice of others affords STs with opportunities to review, inform and develop their own practice, linking the 'primary experience and the future of the activity designated by that experience' (p.116-117). This is an example of the interrelationship between learning from observing practice and the bridge of teaching experience discussed later.

Participants stressed the importance of students observing a *diverse range of experienced and expert practitioners* emphasising that students will not be *well equipped if their training encourages them to become a 'clone' of their mentor.* Learning to interpret their observations of a range of teachers, allows for flexibility in their approach to teaching (van Es and Sherin, 2002). The findings above, along with the body of literature on 'noticing' suggest that learning teaching from observing others is not as straight forward as 'observing a master craftsman or woman' (Gove, 2010). Ethell and McMeniman (2000, p.87) warn us that,

> Observation alone has a danger of focusing only on observable classroom behaviours. Student teachers may limit their practices to imitating or cloning, devoid of insight and initiative. They may lack understanding of the educational principles guiding effective teaching practice.

Rather than 'tapping into' the practice of others, it involves students 'jointly understanding and then experiencing the future of the practices' in their own experiences of teaching (Ellis, 2010, p.116). In summary, 'noticing' requires STs to be taught how to learn through observing the practice of others.

5.3.3 Pillar 2 Learning through and from interacting with others: Learning through and from observing videos of the practice of 'more experienced' teachers

As described above, learning teaching through observing the practice of others was viewed by participants as essential to ITE. However, Hatch and Grossman (2009, p.73) draw our attention to the relative lack of control teacher educators have over both the 'nature and quality' of the practice observed, as well as little opportunity for teacher educators to observe the same practices, at worst resulting in, what one participant described as,

> *Permitting new teachers to be allocated to whichever teacher will have them, and then abandoning them to the vagaries of chance, hoping that they'll be trained well.*

The use of video to support STs' learning from observations of particular practices has been suggested as a potential solution here (Star and Strickland, 2008, van Es etal, 2017). Van Es and Sherin (2002) draw our attention to a number of advantages to using video to support teachers learning through noticing and interpreting classroom interactions. Firstly, it allows for some control over the 'nature and quality' of practices observed and allows for a group of students to view the same example of practice and collectively discuss

their observations. Secondly, video is permanent and as such allows for sections to be paused, rewound and reviewed multiple times, supporting interpretation and viewing practices observed from multiple perspectives. Finally, it can be edited and annotated to focus on specific aspects of practice. A study of in-service and pre-service teachers by Sherin and van Es (2005), found that observing videos of practice supported their ability to 'notice' and make sense of specific aspects of it.

Interestingly, whilst participants viewed video as a useful tool to support students learning from observing their own practice (see Pillar 1), observing the practice of teachers was seen to require taking place in schools. Perhaps this is indicative of the school-based emphasis of current ITE policy in England. Alternatively, perhaps this was because participants did not view video as affording the opportunity to 'access the minds' of teachers, only 'observable behaviours' (Ethell and McMeniman, 2000, p.87). I am reminded here of Crowe and Berry's (2007), second principle of practice in their 'Thinking like a teacher' approach discussed in section 2.5.3. Namely, that prospective teachers need opportunities to see into the thinking like a teacher of experienced others. One might think a potential solution here is for the teacher, whose practice is the focus of the observation, to be involved in the interpretation of it. However, some suggest (Resnick, 1989, Sternberg and Horvarth 1995) that 'expert' teachers' ability to articulate the thinking behind their practice should not be assumed.

The findings above, along with discussion of literature in the field suggests that students should be taught how to learn teaching through observing the practice

of others. In addition, it is suggested there are advantages and disadvantages to observing practice in 'real-time' in school and observing recorded practice via video. There are similarities here with the discussion of Grossman et al's (2009) representations of practice in section 2.5.5. As well as learning through observing teachers' practice, participants briefly mentioned other approaches to students learning from 'more experienced others', namely; *collaborative planning and teaching, shared marking and moderation of pupils' work, systematic analysis of students' work to identify common misconceptions that need to be addressed* and *joint discussion of articles about teaching specific content or concepts.* However, as these approaches to students learning from 'more experienced others' were only mentioned briefly, I note them here but was not able to draw on the data to discuss them in depth.

5.3.4 Pillar 2 Learning through and from interacting with others: Learning through and from University teacher educators

Participants, some of which were university teacher educators themselves, appeared to be less clear about how students learn through and from interacting with university teacher educators. For example, one participant stated that the *university tutor* was *best placed to provide academic rigour and draw on wide expertise and research to ensure that mentors and trainees have opportunities to be fully up to date with recent developments in the subject.* This assertion appears to suggest that the role of the university tutor is to ensure students are 'up-to-date' in relation to particular subjects. However, participants also felt that *university-based courses should make more of links with academic subject departments to teach subject knowledge,* suggesting that *subject*

expertise can be shared from university subject departments with suggestions such as *experts from subject departments… deliver 45 minute lectures on most recent research on different areas.* These participant extracts appear to suggest student learning from engagement with research into particular subject areas, facilitated by interaction with more experienced others, need not necessarily be the role of a university teacher educator. Here, a subject university tutors outside of the field of education was viewed as facilitating students' learning.

Participants described university teacher educators as having an important role in quality assuring (QA) the learning opportunities afforded to students in schools. An example participant description of this QA role is to

> *ensure that where the school is not providing* [effective mentoring] *issues are addressed. This could be, for example, a situation where a trainee is not receiving a weekly progress review meeting because the Subject Mentor has not been allocated time for this and is feeling very pressured.*

Similarly, some participants viewed a key role of the university teacher educator to be focused on mentor learning, rather than student learning as part of quality assuring the work of mentors in facilitating STs' learning. This adds another layer of complexity to the role of teacher educator, as here they are facilitating mentors learning about how to support STs to learn teaching. Participants suggested that a helpful approach to this was for *the tutor and mentor to engage in joint observation and feedback of the trainees' teaching.* Supporting mentor learning was viewed by participants as essential, for example, one participant stated,

There is no guarantee that outstanding teachers will become outstanding mentors, but partnerships with universities have been shown to provide a culture and space to support the development of outstanding practice in mentoring through membership of a strong collaborative community

Whilst not the focus of my study, a number of studies have focused on the importance of mentor preparation (Crasborn et al 2008, Valencic and Vogrinc, 2007). Furthermore, some government education departments have produced detailed learning guides for teacher mentors (Department of Education and Early Childhood Development, State of Victoria, 2010). According to Williams et al (2001, p260), mentor professional development requires 'structural collaboration' over time. Bullough (2005) emphasises the role of the university teacher educator in supporting mentor professional development in his description of a structure of seminars, through which mentors and university teacher educators develop relationships as well as mentoring skills. This, he suggests helps mentors to view 'mentoring as distinct from teaching' (p.154). However, there was a view by some participants that mentor professional development should be the responsibility of other mentors, rather than university teacher educators, as outlined in the example from a participant below.

The most effective training for mentors involves other experienced mentors, able to share their developed expertise and to draw on specific examples of work with trainees in their own contexts. They can provide specific exemplification of how to break down the processes involved in learning to teach, and of how to meet competing objectives, such as

giving trainees sufficient experience of working with GCSE and A level

classes, without jeopardising the chances of the pupils in those classes.

They can model the high standards of engagement with research and

scholarship that are expected of mentors training teachers to be critically

reflective and research-informed – and influence new mentors in ways

that simple exhortations from a university-based tutor will not achieve.

Whilst there were differing views about who is best placed to provide professional development for school mentors, participants viewed this as critical in providing quality learning opportunities for students in school. As stated by one participant *there are almost two training programmes - one for the trainee and one for the mentor.* I discuss participants' views of how STs learn from and through school mentors later.

Other than a QA role and ensuring students subject knowledge was 'up-to-date', discussed above, there was little detail in participants' discussion about how STs learn from and through engaging with university teacher educators. A further example is when asked about the role of universities; a participant stated that the role involves *providing services such as quality assurance, subject expertise, validation or direct management to accredited providers such as SCITTs [School Centred Initial Teacher Training] and teaching schools*. Concepts such as those discussed in Grossman et al's (2009) framework for thinking about the teaching of practice in the university context (see section 2.5.5) either did not feature in participant discussion or were not recorded in the group discussion notes. If the former, it leads one to question to what extent university teacher educators are aware of and utilise research into how STs

learn to inform their practice. Furthermore, if the role of university teacher educators, in supporting students learn teaching, is not articulated or understood across the ITE sector, there is a danger that the role is reduced to 'providing services' as described above. I am hopeful that my framework (table 4.1) will help here.

5.3.5 Pillar 2 Learning through and from interacting with others: Learning through and from school mentors

Participants viewed student's learning through and from school mentors as essential. For example, one participant stated that *mentoring is a key part of ITE;* another stated that mentoring was *absolutely central to successful ITT* and one participant stated that there was an *absolute correlation between the quality of trainee outcome and quality of mentoring.* Moreover, it was noted from a group discussion that *the group strongly agreed that the quality of mentoring is absolutely critical.* Interestingly, Hobson et al's (2009, p.207) 'review of the international research literature on mentoring beginning teachers' concluded that 'evidence for the direct impact of mentoring on beginning teachers' development, especially their teaching skill, is somewhat limited' (p.209), suggesting this is an area in need of further study. Participants considered mentoring to be complex professional practice (Schwille, 2008), describing mentoring as *a difficult and complex task*, viewing it as *a difficult skill* with *a pedagogy of its own, the theory of how trainees learn - knowing when to intervene and when not to.* As described in the previous section, participants described the importance of professional development to support mentors undertake this role, along with the need to quality assure their work with

students. Participants viewed university teacher educators as having a *developmental role in equipping mentors with a repertoire of strategies to support trainees' learning.* It was felt that the mentor should *provide opportunities and assistance for mentees to review and learn from their (mentees') own and others' experiences.* It is these opportunities for students' learning as described by participants, that I attend to next.

5.3.6 Pillar 2 Learning through and from interacting with others: Helping students to learn how to reflect on and learn from their own practice

Participants described mentors observing students teaching, followed by discussion with them, as key in supporting students to reflect on and learn from their own practice. For example, one participant stated that students should not be *left alone to practise their teaching skills.* As discussed below, participants viewed students' experience of teaching alone as not enough to support their learning. Instead, they viewed student learning taking place 'through reflection on experience and through interaction with others' (Korthagen et al, 2006, p.1025). However, their views of facilitating this echoed the interpretation of mentoring as complex practice described above. For example, one participant stated that

> T*rainees need to be taught how to deconstruct what has happened in the classroom, they need to be explicitly taught how to reflect. Reflecting doesn't necessarily come naturally.*

It was felt that *an essential feature* of mentor professional development pertains to *encouraging the trainee to develop the ability to self-reflect.* One participant

stated that *enabling trainees to self - reflect - as teachers… is our most powerful tool.* When discussing how mentors help students to reflect on and learn from their practice, it was suggested by one participant that

> *Weak practice is where mentors will only be asking trainees to replicate what they do, rather than asking trainees to reflect.*

This is indicative of what another participant called *judgementoring* which they described as an

> *over-use of a restrictive mentor-led 'feedback' model in post-lesson discussions; revealing too readily and/or too often their own judgements on or evaluations of the mentee's planning and teaching*

Participants described effective mentoring practice as supporting students with learning how to reflect on and learn from their own practice. As exemplified in the participant extracts below, it was felt that the professional dialogue, or lesson debrief as some described it, between the mentor and student, following a mentor observation of a student teaching, should be student led, helping the student to learn how to reflect on and learn from their practice. Participants felt that this approach helped the student to be less dependent on the mentor's observations and comments.

> *It is important that they begin any debriefing by finding out the trainees' own opinion of the strengths and weaknesses of the lesson and encourage them to identify the evidence on which they are basing their judgment. Such an approach builds the trainee's own capacity for*

reflection and encourages them to focus on the evidence available to them.

Lesson debriefing in which the trainer listens carefully to the trainee's view of how a lesson went and avoids dominating the discussion. Together they analyse the lesson and the pupils' geographical learning, before establishing the priorities for the trainee to work on next. Targets and an action plan, to provide a trainee with challenging but achievable goals to work towards with trainer support.

In terms of observation and feedback the focus has shifted from what the trainee is doing to looking for evidence of what the students are learning.

As suggested above, it was felt that 'lesson debriefs' should focus on pupils' learning with students drawing on evidence to support their reflections. Thus, viewing student's practice through their ability to facilitate the learning of their pupils (Hobson, 2009). This may support with students' development, which Fuller (1969), in her significant work in this space, suggests begins with a focus on themselves, progresses to focus on their teaching and eventually focuses on their pupils. Therefore focusing discussion on pupils' learning from the start may support this developmental process.

Similar to the discussion earlier relating to students learning through observing others teaching being most effective when there is a specific focus, it was felt that this is also effective for mentor observations of student teaching, *ensuring that they have identified a specific focus for observation related to the trainee's current targets for development.* The participant descriptions above are

indicative of Korthagen and Lagerwerf's (2001) model for professional learning, along with their five guiding principles, discussed in section 2.5.4. The gestalt may be viewed as the student's experience of practice relating to the agreed identified focus, which is linked to the student's *targets for development*. The target is generated from previous observations and reflections on practice and as such is drawn 'from concrete practical problems and the concerns of student teachers in real contexts' (Korthagen and Lagerwerf, 2001 in Korthagen, 2011). Supporting the student to reflect on the gestalt, through a student led discussion of their practice, supported by evidence of pupils' learning, affords opportunities for them to develop a 'personal practical theory' at the schema level (Korthagen, 2011, p.37), which focuses on 'taking action in a particular situation' (p.37).

Whilst participants did not refer to any particular models of reflection, there are similarities between participant descriptions of how mentors support students to reflect on and learn from their practice with Korthagen's (1985 cited in Korthagen and Lagerwerf, 2001, p.39), ALACT model of reflection, also discussed in section 2.5.4. The **A**ction comes from previous mentor observations of student's teaching, in the form of a target. Participants described mentors and students setting targets to *hone in on particular issues* to *help their mentees to set achievable goals.* Target setting was viewed as part of the process of reflection, with *regular reflection/ target setting by students shared with mentors to focus areas of development.* Following a mentor observation of a student teaching focusing on the identified target, the student **L**ooks back on their teaching and focuses on the target in retrospect. The

discussion with their mentor supports them to develop their **A**wareness of essential aspects and the impact their practice had on pupils' learning. The mentor supports the student to question and challenge their practice in the observed lesson, to **C**reate alternative methods of action that would be appropriate in the context, which is developed into another target or a revised target. The **T**rial phase requires the student to work on the target in the next Action, with the trial and action considered as one phase. Here, as with the discussion of Mason's (2002) noticing earlier, participant descriptions appear to be based on evidence from research in the field but this is not made explicit in their descriptions and any reference to research is sparse at best. As I discuss my findings in relation to the body of literature in the field, I get a sense that I am surfacing the research evidence underpinning participant descriptions of ITE practice.

5.3.7 Pillar 2 Learning through and from interacting with others: Learning through and from working alongside 'more experienced' teachers.

As well as observing and being observed by more experienced teachers, participants also described students learning through 'working alongside' them, as illustrated in the participant extracts below. This entailed co-planning and co-teaching as well as evaluating lessons together.

> *In the best placements, teachers entering the profession work alongside experienced qualified teachers who cultivate peer-led learning, excite them about teaching, plan and evaluate lessons together, and observe and learn from each other.*

> *Co-teaching between a mentor and trainee, where both contribute to planning the lesson, sharing the teaching, and subsequently analysing the lesson together.*

> *The school mentors provide "hands on" experience for the trainees and opportunities to work alongside good geography practitioners and discuss and evaluate practice.*

> *…working alongside to develop skills such as planning, questioning and assessing children, supported work as a developing teacher with regular feedback, opportunities to demonstrate independence but still with access to support, reflection and feedback*

This 'assisted' practice, enables the student to do with the help of a more experienced teacher, what they are not yet ready to do by themselves (Schwille, 2008). However, as indicated by the first extract above, this may also offer opportunities for the student and teacher to *learn from each other,* suggesting an interdependent, rather than an independent approach (Dynak et al, 1997). Taking such a collaborative approach to learning teaching fosters a less hierarchical relationship between the student and more experienced teacher. Stetsenko (2008) proposes that co-teaching moves a student teacher from taking a passive 'spectator stance' to a 'transformative activist stance'. Observing the practice of teachers may be viewed as students taking a 'spectator stance' to their learning, reflective of Mason's (2002a) 'noticing'. Whereas co-teaching affords opportunities for the student to actively engage with, participate in and even shape the practice of other teachers. Learning

159

through actively participating in the action of teaching (Schwille, 2008). The findings from McCullagh and Doherty's (2020) study of STs in Northern Ireland co-teaching with peers and in-service teachers, suggests that dialogue between them is particularly effective in supporting STs' learning in relation to planning, practice and evaluation of practice. For example, the study found,

> The benefits arising from the need for dialogue between co-teachers was frequently referenced [by students]. Proposing and rationalizing their plans moved participants further in their thinking than if they had been teaching alone (p.12).

There are similarities here to principal two of Crowe and Berry's (2007) five principles underpinning their 'think like a teacher' approach discussed in section 2.5.3. When co-planning, co-teaching and co-evaluating lessons, dialogue provides the student teacher with access to thought processes and decision making drawing on the teacher's experiences of teaching. However, like the discussion of observing and being observed teaching earlier, Crowe and Berry's (2007) point out that the dialogue should focus on developing the student's learning in relation to a particular aspect of their practice.

5.3.8 Pillar 2 Learning through and from interacting with others: Learning through and from engaging with subject associations

A further group of 'more experienced others' identified by participants as helping students to learn teaching was those associated with subject associations. Although it is important to note that such discussions were from participants representing them, rather than across a range of colleagues from

the field of ITE. For example, participants stressed that connecting students to *the wider community of history educators* ensured *that they have ready access and encouragement to continue engaging with current historical scholarship.* Students' learning through engaging with subject association *journals… and online resources, but also through professional development events and conferences* was viewed as helpful. Engagement with journals and online resources relates to the discussion in pillar 3. Whereas events and conferences involve direct interaction with more experienced others, which is central to pillar 2. However, like Golding (2017), I was unable to find systematic studies relating to the impact subject associations may make to teacher development. This has been identified as a 'neglected area of educational research' (Hilferty, 2003, p.1). Although Golding's (2017, p.3304) small-scale study of maths teachers in England, who attended subject association conferences, found that as a result, they had 'a renewed commitment to their role as teachers of mathematics, refreshment and inspiration, and a deep and lasting impact on both their own learning and that of their students'.

5.3.9 Pillar 2 Learning through and from interacting with others: Learning through and from engaging with peers

The participant descriptions of students learning so far in pillar two focus on engaging with 'more experienced' others. However, participants also viewed students learning through and from engaging with peers as important. This was described by participants as 'peer learning', which Topping (2005) defines as interaction between people in a similar situation who help each other to learn and develop their own learning through doing so. Topping's definition of peer

learning shares similarities with the definition of collaborative learning provided by Dillenbourg (1999, p.1) who suggest it is 'a situation in which two or more people learn or attempt to learn something together'. Although he recognises this definition is open to multiple interpretations. Thurlings and den Brok's (2018) 'realist synthesis' of sixty-three studies, identified through using search terms 'such as collaborative learning, Community of Practice, peer coaching, peer feedback, peer assessment, and peer review' (p.18), suggest that 'learning from and with peers' is an effective approach to teacher learning. They refer to such activity as 'peer teacher learning activities'. As exemplified in the illustrative extract from a participant group discussion below, as well as viewing peer learning as helpful, participants in my study felt that STs should be taught 'strategies' to support this approach to their learning.

> *members of the group felt it was important for trainees to understand*
> *how important peers can be and provide strategies for supporting peer*
> *learning.*

However, according to Westheimer (2008) in his discussion of 'Learning among colleagues: Teacher community and the shared enterprise of education' in Cochran Smith et al (2008, p756) 'too few teachers are adequately prepared to learn *from one another'* (original emphasis). I was unable to find participant elaborations on what 'strategies' students should be taught to support such an approach. Furthermore, studies that focus on strategies to support STs with peer learning seemed to be absent from literature in the field, suggesting this is an area in need of further research. Nonetheless, participants did discuss a

range of 'peer learning activities' (Thurlings and den Brok's, 2018), which they viewed as helpful for student teacher's learning, which I turn to next.

Participants viewed STs sharing their experiences of and insights into a range of practices from different schools as a useful 'peer learning activity'. As the illustrative extracts below suggest, participants described students sharing experiences to enable 'a broader experience', which allowed for a 'rich exchange of ideas and experiences' and developed a 'breadth of understanding'. Furthermore, it was felt that a student 'community' or 'peer reference group' or 'network' was supportive not only in creating opportunities to 'reflect' on their experiences but to help 'build resilience'.

> *The cohort and community is very important. It provides an opportunity for trainees to share experiences.*

> *Trainees need a peer reference group, for example. Trainees learn from each other - this network helps build resilience. Allows for a broader experience.*

> *[students] are placed in Professional Studies groups alongside trainees in other subjects which allows for a rich exchange of ideas and experiences in such generic issues*

> *Centre based training within universities can give trainees a breadth of understanding by allowing them the opportunity to share experiences with those based in contrasting schools and by giving them the opportunity to reflect on their school experiences*

163

In the examples above the focus moves from viewing the student as an individual learner to recognising the role they may play in each other's learning (Le Cornu and Ewing, 2008). Le Cornu and Ewing (2008) in their 'conceptual framework for developing high-quality professional experiences for pre-service teachers' (p.1799), suggest that this requires a 'different commitment… from student teachers where they learn to value the learning of others as much as their own' (p.1803). Moreover, they suggest that such an approach affords more than learning from each other through simply sharing experiences. Instead, they suggest that

> the task of each participant is not only to share their experiences and learning but also to listen actively to their peers and ask enabling questions that will assist their peers to explore their own understandings on a deeper level. It provides another context to share knowledge and experience and to be accountable to each other (p.1806).

In addition, the findings of Manouchehri's (2002, p.734) case study, which investigated the peer interaction between two secondary mathematics STs discussing their experiences of practice, supported the 'potential of peer interaction to promote the development of professional knowledge' as well as the 'development of both self and peer reflective inquiry into practice'. Manouchehri's (2002) study and Le Cornu and Ewing's (2008) framework suggest that sharing and discussing their experiences of practice in schools, offers students more than simply exchanging ideas and providing 'broader experiences'. Instead, it provides the potential for collaborative reflection and

aids students' ability to explore different perspectives (Le Cornu and Ewing, 2008).

An additional 'peer learning activity' identified by participants involved students sharing expertise. As exemplified in the illustrative participant extracts below, description here focused on students learning from each other in relation to subject knowledge.

The best ITT providers pair up people based on the results from their audits.

The group also agreed that there are great benefits to peer learning - groups sharing subject knowledge and discussing subject-specific issues

Trainees' subject knowledge audits are also often used effectively to create a directory of expertise within a particular programme so that trainees can seek advice from their more knowledgeable peers in relation to specific topics

Regular sessions within the university-based programmes when trainees provide introductions to unfamiliar topics for their peers are an excellent tool for developing trainees' subject knowledge

Lewis (2014, p.22) suggests that 'with competing demands on students' time, subject knowledge development is often placed on the back-burner'. Students providing peer support for learning in relation to subject knowledge may provide a solution to such a challenge, which may account for this focus featuring in

participants' descriptions of peer learning above. There were a range of approaches to how this peer support may take place in the descriptions, from pairing students up and groups working together to creating a 'directory of expertise' and presenting to peers, all of which involve students taking responsibility for their own subject knowledge learning. In their study of the use of peers to support science STs develop their learning of subject knowledge, McCarthy and Youens' (2005, p.160), STs felt that 'peers were an underused resource'. Further development of models of peer support to facilitate students learning subject knowledge from each other, was viewed by their science STs, as needed.

5.3.10 Pillar 2 Learning through and from interacting with others: Learning through and from pupils

Earlier within this pillar, I discussed participant views of STs' learning through reflecting on their practice in relation to evidence of their pupils' learning. In addition, participants described another approach to STs' learning through and from their learners. As exemplified in the data extracts below, whilst participants did not go into detail, the concept of 'shadowing pupils' was viewed as being of benefit to STs' learning.

> *shadowing pupils was an effective approach to developing outstanding behaviour management. Mentors felt that in all these instances critical reflection was needed afterwards.*

> *Pupil shadowing was a technique that many of the trainees had benefitted from*

This experience involved work shadowing a pupil

For secondary, following a class for a day is a useful exercise

This approach aims to support STs to learn teaching through experiencing what their pupils experience. Knutas (2019, p.662) describes shadowing as 'following a research subject around'. In the participant descriptions above, the research subject is a pupil or a class of pupils. Knutas (2019, p.667) suggests that not only is what the 'research subject' revealed important but also how they 'interacted with other people and objects in his or her environment', providing opportunities for STs to gain new insights and test their assumptions. Although there appears to be an absence of research into STs' learning through shadowing pupils, Stanford University in California have championed this approach to teacher learning. Their 'shadow a student challenge' has resulted in the development of a toolkit to support teachers learning through shadowing their pupils (Scharf, 2019). There are similarities here with principle one of Crowe and Berry's (2007), 'Thinking like a teacher: principles of practice' discussed in section 2.5.3. This principle gives emphasis to viewing teaching from the learners' perspective through creating opportunities for students to experience how it feels for the learner. Although, their approach was not in a classroom context.

Cook-Sather and Youens (2007, p.66) take this a step further in their 'comparative descriptive analysis of two projects, one based in the United States and one based in England', which reposition pupils as 'active

participants' within ITE. The positioning of pupils as teacher educators (Cook-Sather, 2009), engaging in the dialogue of ITE, they suggest,

> prompts student teachers to reflect critically on their own experiences and perspectives because, in direct dialogue with students, those experiences and perspectives are thrown into immediate, stark relief (Cook-Sather and Youens, 2007, p.71).

However, Cook-Sather (2009) notes that the inclusion of pupils' voices and perspectives in ITE is unusual, with examples of actively including pupils being sparse.

5.4 Pillar 3: Learning through and from interacting with and creating resources

Within this theme, participants described students learning how to teach through interacting with and creating, research as well as policies and plans. In the theme title, I group these under the term resources.

5.4.1 Pillar 3: Learning through and from interacting with and creating resources: Engaging in and with research

Whilst there was differing emphasis as discussed below, it was clear that participants viewed engaging in and with research (BERA, 2014) as playing an important role in students learning how to teach. It is surprising, therefore, that more emphasise was not given to such views in the Carter Review (2015) and the Core Content Framework (2019), both of which were informed by the data used in my study. The Carter Review (2015) references STs' engagement with

research from the perspective of 'evidence-based' teaching, viewing research through the 'what works' lens (Mayer and Mills, 2021), reproducing evidence (Reid and O'Donoghue, 2004). Furthermore, the extract from the review below implies that students engaging in their own research, creating evidence, is of secondary importance.

> Our findings suggest that sometimes ITT focuses on trainees conducting their own research, without necessarily teaching trainees the core skills of how to access, interpret and use research to inform classroom practice (Carter, 2015, p. 8).

The Core Content Framework (2019, p.29) gives a nod to the role research plays by suggesting student teacher's 'learning from educational research is… likely to support improvement'. The lack of emphasis on the role of research in these policy documents may be indicative of the ideological views reflected in the Carter Review (2015) about the value of the academic award discussed in section 2.3.1.

Across the data within this pillar, participants described students learning through being both consumers and producers of research. However, as discussed above and exemplified in the illustrative participant extract below, there was greater emphasis on the former.

> *It is more important for trainees to be research literate and able to critique research, than for them to be able to carry out research themselves.*

Participant discussions focussed on students exploring research evidence with a view to considering how to apply it in practice. This appears to suggest a 'top-down', overly 'simplistic', 'evidence-based' approach without due attention given to context and relationships (Boyd, 2017, p.97). The endorsement of such an approach can be seen in the question below directly asked to participants.

> *What do the best ITT providers do to ensure new teachers are prepared to adopt evidence-based teaching and are research literate?*

What appears to be a leading question assumes that adopting 'evidence-based teaching' is 'best practice'. However, differing views of students as consumers of research were evident within participant discussions. At one end, suggested approaches such as providing students with access to a '*research based tool kit… to solve issues around conduct',* suggests students take an uncritical approach as consumers of research to learn how to teach (Mayer and Mills, 2021). As described by one participant,

> *In the worst cases… trainees are just expected to implement the latest policy or initiative without any understanding of its rationale, antecedents or basis in research*

Following the publication of the Carter Review (2015), the DfE (2019c) published a Trainee Teacher Behavioural Toolkit. This took the form of a list of strategies and routines to be implemented by STs. The research evidence that informed the toolkit, if indeed it was research based, was not included in it. At the other end, participants emphasised directly teaching (see bridge of DI) students *basic research literacy (e.g. key concepts of validity, reliability,*

randomised control trials) to enable them to be *intelligent consumers of research,* able to critique and judge its value for their own learning and that of their learners (Mayer and Mills, 2021). Descriptions here reflect students learning through an 'evidence-informed' rather than 'evidence-based' approach, making use of different sources of evidence, using professional judgement and knowledge of context to make informed decisions (DfE, 2017). This gave students access to, what was described by participants as, '*the public knowledge base that underpins effective teaching'.* One participant suggested that this provided students with '*skills over and above those required to teach in a single environment or specific school settings'* and as such supported *'new teachers to adapt to different environments, circumstances and policies'.*

5.4.2 Pillar 3: Learning through and from interacting with and creating resources: Interacting with and implementing school policies.

Whilst not as evident as engaging in and with research, participants described students learning through interacting with and implementing school policies. Particular reference was given to whole school policies on behaviour and assessment. It was felt that learning through interaction with *in-school systems* was more effective than *one hour of behaviour management in the year then GO*. Engaging with a whole school approach was deemed as engendering student confidence. However, merely implementing a policy without any understanding of its rationale was seen as problematic, limiting the ability of STs to critique it for rigour, drawing on a rich knowledge base. For example, one participant stated that '*it is essential that aspiring teachers are encouraged to look beyond the confines of their particular school placements for models of*

outstanding practice' and that engaging with scholarship facilitated this by connecting students with a *'wider community'.* As well as whole school policies, participants described students learning through planning lessons and implementing schemes of work. It was felt, however that *'a balance needs to be struck, for new teachers, between not reinventing the wheel and not being over-dependent on schemes of work'.* Participants described students critiquing text books and schemes of work, rather than *'using it as a script'.* Considering *'why the scheme works or how it could be improved',* it was suggested, helped to develop *'conceptual understanding'.*

5.4.3 Pillar 3: Learning through and from interacting with and creating resources: From 'fledgling' to 'intelligent' consumers of research

These differing views of students learning through and from interacting with and creating resources may be indicative of the philosophical tensions in the ITT and ITE debate discussed in section 2.1.2. From viewing STs as technicians implementing a 'research based toolkit', scheme of work or school policy to a view of them as professionals enabled to 'think beyond' prescriptive approaches to critically evaluate their usefulness in their specific context (Samuel, 2010, p.753). A participant representing the History Subject Association succinctly described such differing views as a,

> *tale of two discourses - one informed and rooted in diverse practice of numerous history teachers over time; the other not informed, and narrowly rooted in one or two contexts. The first learning from the public knowledge base that underpins effective teaching… [providing] students*

with skills over and above those required to teach in a single

environment or specific school settings… [supporting] new teachers to

adapt to different environments, circumstances and policies.

Reflecting my discussion in section 2.1.2, I do not view the above discourses as polarised but see one as a subset of the other. As a starting point, having a 'research based toolkit', school policy or scheme of work to draw on in a particular context may be useful for a student teacher, as a 'fledgling' consumer of research, to learn how to teach. However, becoming *intelligent consumers of research* requires STs to go beyond this. I suggest there are links here with the discussion of Korthagen's (2011) 'three-level model' outlined in section 2.5.4. Within the three-levels he suggests that, in general, teachers do not move beyond the level of developing a 'personal practical theory', as their focus is on 'taking action in a particular situation' (p.37). Moving to what Korthagen describes as the 'level of formal theory' requires more 'generalised understanding' across 'similar situations' (p.37). As described in the participant extract above, such 'theoretical understanding' has potential to enable STs to learn how to 'adapt' their teaching to different contexts.

As suggested in the illustrative participant extract below, whilst studying for an academic qualification, it is likely that STs will be required to move to the 'formal theory' level.

The qualification helps to produce enquiring teachers who have the

capacity to research and implement initiatives that benefit learners, and

> *provides them with skills over and above those required to teach in a*
> *single environment or specific school settings*

However, to what extent students will view the 'formal theory' level as useful in learning how to teach may be limited, if the teachers that they work and identify with and 'wish to become' (Lampert, 2010, p.29) rarely work at this level or view it as useful to do so. As illustrated in the participant extract below.

> *Trainees are only likely to recognise the importance of critical reflection*
> *and research literacy if they can see those qualities in the teachers with*
> *whom they work and who are presented to them as exemplars*

Furthermore, the findings of the DfE (2017) Evidence-informed teaching: an evaluation of progress in England, Research report, suggests that most teachers lack confidence in engaging with and critiquing research, making the assertion above even more problematic for students learning how to teach through being *intelligent consumers of research*.

There is little sign of governmental support in England for this picture to change. Despite extracts from the Carter Review (2015) data, such as that below from the Association of School and College Leaders (ASCL), the recent DfE (2021a) publication 'Delivering World-Class Teacher Development' gives little to no emphasis on the role of research, with one mention in the entire report and no reference to the role of Universities.

> *ASCL calls for the ITE curriculum to include core components on using*
> *and creating evidence, so that teachers from the point of entry into the*

profession understand that throughout their careers they are expected to use evidence to inform and develop their practice, and create evidence (that is, do research).

5.4.4 Pillar 3: Learning through and from interacting with and creating resources: An 'enquiry-based approach' to learning

Participants discussed students learning through an *enquiry-based approach,* enabling them to see *themselves as researchers from the beginning,* encouraging *trainees to experiment with innovative approaches through practitioner research.* The suggestion here is that students learn through being 'enquirers into educational practice' (Reid and O'Donoghue, 2004), learning through carrying out their own research, as producers of research. Proposing students learn '*through* enquiry rather than being prepared *for* enquiry' (p.566). However, Reid and O'Donoghue (2004, p.565) suggest that within a culture of 'educational reproduction', applying evidence, rather than generating it, with a focus on technical skills, this approach is a 'recipe for failure'. As with the discussion above, success is likely to be dependent on student's experiencing school contexts and teachers that take an 'enquiry-based' approach to teacher learning. The BERA (2014, p.6) report 'Research and the Teaching Profession' states that,

> A focus on enquiry-based practice needs to be sustained during initial teacher education programmes and throughout teachers' professional careers, so that disciplined innovation and collaborative enquiry are

embedded within the lives of schools or colleges and become the normal way of teaching and learning, rather than the exception.

Within a short PGCE programme, which is typically thirty-six weeks, it was suggested by participants that *emphasis should be on 'planting the seeds' of research into trainees.* Building on the discussion above, however, there are likely to be limited opportunities for these seeds to grow. This is due to the distinct absence of the requirement of the profession to engage in or with research throughout the suite of policy documents, badged as the DfE's (2021b) 'golden thread' of professional development, from ITE to school leadership. Namely, the mandatory Core Content Framework (2019b) for ITE, the Early Career Framework (2019a) which is mandatory for all new teachers during their first two-years of teaching and the suite of National Professional Qualifications Frameworks (DfE, 2021b), which range from 'Leading Teacher Development' to 'Executive Leadership'. The role of research scarcely gets a mention throughout all of these frameworks. As such, it is fair to say that the value government ministers give to research in teacher education has 'diminished over time' (BERA, 2014, p.15) and there are no signs of it making a comeback any time soon.

5.5 Theme: Curriculum Bridge

As outlined in section 4.4, for the purpose of my study, the definition of curriculum I use relates to content and the sequencing of it. As I am focusing on how STs learn, rather than what they learn, the content of the curriculum does not form part of my analysis. Therefore, the data that generated this theme

(table 4.1) represents participants' descriptions of curriculum implementation. In other words, the 'enacted curriculum' (Harste and Vasquez, 2017) of when, where and how the content of the curriculum is taught, to facilitate STs' learning. My analysis of participant descriptions within this theme found an emphasis on two key aspects of curriculum implementation. Firstly, a view that a holistic rather than a modularised approach should be taken. Secondly, that curriculum learning should be integrated across different learning contexts. In what follows, I discuss my findings in relation to each of these key features of participants' descriptions within this theme, along with relevant literature from the field.

As shown in the illustrative extracts below, when asked about effective ITE, participants viewed linking aspects of curriculum learning to the broader context as a key feature.

> *The group felt it was important that students come out of ITT with a holistic view of their subject (rather than a modularised view). Students should understand the definition of the subject and how it contributes to wider life.*

> *(Effective ITE) Sees behaviour management as a separate part of teacher training, but understood holistically.*

> *Weak training just focuses on curriculum topics, with no concept of subject as a whole.*

The above suggests that enabling students to connect their curriculum learning within a broader context helps them to understand the 'bigger picture' and the contribution of what they are learning makes to it. Although, examples in the main focused on subject curriculum content, there are similarities here to aligning learning to a shared vision (Feiman-Nemser, 2001) of good teaching and the purpose of education. Barnes (2014) suggests that the need to integrate the content of curricula into students' 'awareness of the world' should influence how it is presented and experienced. Indeed, STs' critical consideration of the purposes of education are important if they are to make sense of their ITE curriculum (Biesta, 2010). Taking a holistic approach is indicative of the two questions at the heart of a curriculum posed by curriculum theorists Harste and Vasquez (2017, p.16), namely 'what kind of person do I want to be?' and 'what kind of world do I want to live in?' The first of which bridges into the discussion of 'the self' and teacher identity in pillar one.

As well as connecting learning to the wider context, participants gave importance to providing both formal and informal opportunities for students to revisit and make connection between their learning of curriculum content across different learning contexts. For example, participant descriptions of 'weak' teaching of curriculum content, relating to behaviour management and subject knowledge below, suggest a need for the 'careful weaving' of curriculum content throughout ITE, rather than being taught in isolation.

> *Over focus on behaviour when this isn't linked to other issues such as planning and use of data.*

Provision is weak where behaviour management is not a natural part of the programme - part of every day conversation

Weak provision separates generic training and subject knowledge; on a strong course, subject specificity infiltrates everything

As discussed in the bridge of direct instruction, later in this chapter, participants' felt that there is a place for directly teaching aspects of the curriculum, such as subject knowledge and behaviour management strategies. However, as illustrated through the extracts above, such direct instruction does not encapsulate the 'entirety of the planned and enacted ITE curriculum in classroom/behaviour management' (Rowe, 2021). Whilst an ITE curriculum specifies what STs should know and be able to do, 'enacting it requires developing instructional approaches to help teachers learn to do these things for particular purposes in context' (Ball and Forzani, 2009, p.503). As illustrated by the example participant extracts below, 'weak' ITE was described as not providing opportunities for STs to 'link' or 'connect' their learning through direct teaching to their experiences and practice in school.

Weak training in behaviour management is characterised by doing an isolated hour on behaviour management which is not connected to school experience.

Weak practise is often characterised by stand alone sessions (with no links to classroom practice) which focus on who to administer tests rather than cover assessment in a deep and meaningful way.

Conversely, participants described effective ITE as integrating students' curriculum learning into practice. However, as participant extracts below show, a range of approaches underpinned participant descriptions of such integration. The first two examples suggest integrating learning through an acquisition model, where STs are taught an aspect of practice outside the classroom and then 'apply' or 'practice' what they have learned in a school context (McDonald et al, 2013).

> *It is as important as ever that trainees understand the purpose of assessment and the process of testing and that this is covered explicitly-trainees should also have the opportunity to immediately apply new knowledge of assessment into practice.*

> *The group felt that it was very important that trainees learn about assessment, and have the opportunity to practice assessment, in the context of their own subject*

In England, all ITE programmes are required to include the content from the Core Content Framework (DfE, 2019), as a basis for their curricula. This framework draws from the same data I used in my study and appears to support an acquisition approach to students' learning. The content is divided between 'Learn that…' statements, which the framework describes as 'key evidence statements' and 'Learn how to…' statements which are described as 'practice statements' (p.4-5). The framework states that,

> These categories define an entitlement to practise key skills as well as an opportunity to work with and learn from expert colleagues as they

apply their knowledge and understanding of the evidence in the

classroom (p.5)

The above description appears to be underpinned by a theory 'evidence' into

practice model of ITE. Providing opportunities for student to 'apply' their

knowledge in the classroom, 'learning that' and then putting learning into

practice. However, expecting STs to 'transfer' learning can be a complex

undertaking (Eraut, 2009). Eraut (2009, p. 76) describes the concept of transfer

as 'the learning process involved when a person learns to use previously

acquired knowledge/skills/competence/expertise in a new situation'. He

suggests that the level of challenge relating to transfer is influenced by a range

of factors, including, how similar the situations are, the 'disposition of the

transferee' and 'the time and effort devoted' to the process (p.76-77). The

concept of 'transfer' is discussed in Ofsted's (2020, p.31) ITE curriculum

research 'Building great teachers?' report which states weaker ITE providers,

focused on the detail of theory in modules and seminars at the centre-

based provision, without developing the means for transferring this into

useful practice in placements.

The 'means' referred to in the above quote links to Eraut's (2009) influential

factor of 'time and effort'. Participants described purposefully integrating

curriculum learning across learning contexts. Such integration requires 'time

and effort', rather than 'simply transmitting theoretical knowledge about

teaching in the hope that student teachers will apply this in the classroom'

(Chapman et al, 2014, p.40). Participant descriptions of integrating curriculum

learning fell into two camps. The first, as illustrated in the participant extracts below, required co-operation. Here, it was felt that those responsible for student teacher learning across different contexts should work with each other, in order to be 'aware of' and 'build on' the 'other training'.

> *Mentors should be aware of the other training the trainee is having, so they can build on that learning and ensure it is incorporated into practice.*

> *Having clear school-based tasks and activities enables mentors to support the university-based training coherently by tailoring their school training programmes to build on and develop the university-led training in context.*

Rather than there being one 'training' programme, this suggests different ones for different learning contexts, which is less likely to achieve effective integration of students' learning across them. In their most recent inspection framework, Ofsted (2020, p.25) also appear to suggest the notion of two curricula, stating that 'providers blend the school-based and centre-based curriculums'. As a significant amount of STs' learning takes place in a school context, Rowe and McLain (2008) propose an ITE curriculum as a partnership curriculum. Recognising that 'structured learning' takes place across different contexts, necessitating a collaborative approach through which 'no single site of 'delivery' is perceived as 'better' (p.3). A partnership curriculum usefully describes participants' approaches to integrated curriculum learning as collaborative, rather than co-operative. Requiring those facilitating students' learning across different contexts to work together, rather than with, to achieve

what one participant described as a *'seamless programme'.* As the description below exemplifies, this entails designing, developing, implementing and evaluating a *'joint curriculum'* together, rather than two separate ones, demanding 'time and effort' (Eraut, 2009).

> *Joint planning and regular review of the joint curriculum (in light of feedback from trainees and from mentors, conducted at the end of each placement) depends on a measure of continuity from year to year. This allows new mentors to be inducted into a well theorised and tested programme and for both new and experienced mentors to draw on their experiences to keep shaping and refining the programme so that it responds to trainees' needs and to changing circumstances in their school, or to curricular reforms.*

It was felt that achieving this necessitated recognising '*the distinctive contributions of school and university based partners'* and removing the '*notion of institutional separation arising from schools and HEIs having differing agendas'.* Some participants viewed integrating 'staff' across different contexts for students' learning as helpful to achieving a *'joint'* or partnership curriculum.

> *Freer movement between the classroom and HEIs would support closer working between schools and HEIs, ensuring better mutual understanding of each setting's priorities and facilitating up-to-date classroom experience and research knowledge across ITE partnerships. Continuity could be maintained by experienced staff in both settings, augmenting more free flowing groups of staff.*

183

As the discussion of my findings, along with associated literature from the field above suggest, facilitating students' learning through an integrated approach to curriculum implementation is complex work, requiring collaboration and carefully designed learning experiences.

5.6 Theme: Bridge of Teaching Experience

As outlined in the previous theme, drawing on Lampert's (2010) discussion of the differences between 'learning to teach' and 'learning teaching', participant descriptions within the Bridge of Teaching Experience theme shows more alignment to 'learning teaching'. Here, participants described STs' learning occurring 'while doing the work' (p.21) of teaching. In other words, students learning through their experiences of teaching. Both approaches of 'learning teaching' and' learning to teach' are implied in the participant description of key features of effective ITE below.

> *There are 2 key features: The first is classroom craft and undoubtedly this must be developed in school. The current framework for PGCE and School Direct Tuition has 2/3 of trainees' time in school. Beginning teachers require the support of an effective school-based mentor and access to a professional studies programme that will support the practical skills development. The second type of professional knowledge is explicit codified academic knowledge. This is accumulated propositional knowledge (knowledge of facts, knowledge that such and such is the case) stored in texts, scholarship, research and cultural practices of teaching. For teachers*

it involves acquisition of specialist subject knowledge (degree) and graduate

training (theory). HEIs are best placed to deliver this.

To an extent, the 'key features' described above reflect the 'Learn how to…' and 'Learn that…' statements from the Core Content Framework (DfE, 2019). The former being the focus of this theme and the latter featuring in the discussion of the previous one. Described as the 'practicum turn' by Mattson et al (2011), ITE in England gives significant prominence to STs' learning through practical experience in school. With an expectation that two thirds of a one-year ITE course is spent learning in schools, understanding how best to facilitate STs' learning through their experience of teaching warrants significant attention. Instead of 'taking batches of front-loaded coursework in isolation from practice and then adding a short dollop of student teaching to the end of a programme' (Darling-Hammond, 2006, p.307), this shift to a school based learning approach, puts 'teaching at the center of learning to teach' (McDonald et al, 2014, p.501), rather than simply practicing what has been learned elsewhere. As illustrated in the extracts below, when describing effective ITE, a key feature of participant descriptions was how STs learn 'the craft of the classroom', through their experiences of teaching.

> *Appropriate school based training to develop craft skills*

> *Purpose is to teach trainees to "master the craft of the classroom" this is fundamentally practical - until you start teaching, you can't learn it. It's practical skill that requires judgement and experience*

Practical 'craft skills' focus on the 'tasks and activities of teaching' (Ball and Forzani, 2009, p.497), paying close attention to the 'core tasks' used by teachers in the 'work of teaching' (p.498). This aspect of learning teaching is underpinned by a notion of 'teaching as a collection of practices' (Lampert, 2010, p.25) focusing on what teachers do (see the Bridge of Direct Instruction). However, drawing on the T.S. Eliot ('The Dry Salvages' 1963) quote 'We had the experience, but missed the meaning', Ellis (2010, p.105), warns us that we should not assume that learning from teaching experience is 'self-evident' (p.116). Such an assumption risks sidestepping the need to understand the 'underlying structures' (Britzman, 2003, p.49) that afford STs learning from their experiences of teaching. In relation to structure, as exemplified in the extract below, some participants felt that the starting point for ITE should be the STs' experience of practice.

> *Some members argued that training should always start with practice. It is important that trainees have an enquiry-based approach; they should be encouraged to ask questions of their own practice, test assumptions and explore through their own classroom approach.*

Weaker ITE was described by one participant as, putting '*Theory before practice. Too much time in lecture halls, not enough in classrooms'.* Participant descriptions that generated this theme suggest a practice before theory approach to STs' learning, viewing learning as 'rooted in the learner's own experiences' or 'gestalts' (Korthagen, 2001, p.71) as discussed in section 2.5.4. However, in the main, see later discussion for exceptions, rather than a 'rush to practice' (Ellis *et al*., 2011, p.22) expecting a high degree of competence from

the start, participants described the need for a *'well developed model of progression of experience in school in terms of developing expectations of trainees'*. Whatever route into teaching students were taking, even if this was a school-based ITE programme, it was felt that students *'still need to build up skills gradually over the year'.* One participant suggested effective ITE,

> *Provides a sufficient level of challenge and variety as well as providing opportunities to reflect and follow up, discuss and absorb the experience rather than be swamped by it.*

Another used,

> *an analogy of riding a bike or swimming. The deep end simply drowns new staff - let them learn with water wings and stabilisers at first, and gradually allow them autonomy. An incremental approach to devolving responsibility.*

As discussed in section 2.5.4. taking a graduated approach to the complexity of demands on STs' experience of teaching helps to avoid 'gestalts' of 'survival' (Korthagen, 2011, p.40). Feiman-Nemser (2001, p.1014) warns us that that taking a "sink or swim" approach is likely to result in STs sticking to 'whatever practices enable them to survive whether or not they represent "best practice". Furthermore, positive experiences of teaching rather than feeling overwhelmed by it, links to the discussion of perceived competence and 'self-efficacy' discussed earlier in Pillar One, Learning Through and from Interacting with the Self.

Further to the starting points for STs' learning through their experiences of teaching, much participant discussion within this theme majored on the duration and structure of such experiences. Some participants felt that effective ITE '*Provides experiential training, and as much of it as possible*' with one ITE provider boasting how, in their provision, STs '*only have 9 days away from school*' providing them with, what was described as, a '*full school experience - doing everything including pastoral care, taking games, talking to parents etc*'. As mentioned earlier, these descriptions appear to suggest more of a 'rush to practice' (Ellis *et al*., 2011, p.22) approach, potentially favouring the quantity of experience over the quality of learning afforded by it. STs' learning within this context appears to be more concerned with daily practicalities than critical reflection to learn through and from their practice (Raffo & Hall, 2006, Golding, 2015). Simply spending more time in school have been shown to have limited positive impact (Grossman, 2010, NCATE, 2010). As exemplified by the participant extract below, other approaches to structuring learning through students' experiences of teaching appeared to support taking an incremental approach to it, prioritising quality and providing time for reflection over quantity of teaching experience.

> *Our model of training allows trainees to gradually develop their teaching skills after initial observation of the classes they will be teaching. Trainees build up to 12 hours of teaching a week with a real focus on quality and reflection and not quantity of lessons.*

Similarly, another participant stated that '*Classroom experience should be punctuated with moments of reflection, with a mentor, thinking about what went*

wrong (or right) and why'. Thus, opportunities to help students to learn how to reflect on and learn from their own practice, as discussed in Pillar Two, can be supported or hindered by how STs' teaching experiences are structured. It was suggested that,

> *serial' rather than block placements for at least part of the programme (i.e. with time split each week between school and university) allow for highly effective integration of the different sources of knowledge on which beginning teachers need to draw, with a chance to explore research-based and theoretical principles in their observation and through their own practice, with continued scope to bring their insights and experiences back together for careful discussion within a subject group.)*

The description above illustrates how a serial placement structure for STs' teaching experiences may provide opportunities to support students with: integrating their curriculum learning (discussed in the previous theme), learning through and from their own practice through dialogue with others (discussed in Pillar Two), as well as exploring the interplay between research and their practice (linked to Pillar Three). Here, instead of replacing 'research-based understandings of effective practice with practice itself' (Burn and Mutton, 2013, p.1), which could be said of the earlier participant descriptions within this theme, this approach aims to support students with making learning connections to 'make sense of, interrogate and learn from' (p.1) practice. Learning teaching can be an 'abrupt and lonely process' (Feiman-Nemser, 2001, p.1030), providing supportive structures for STs to learn through and

from their practice of teaching avoids what one participant described as students '*being left alone to practise their teaching skills'.*

As illustrated in the participant extract below, opportunities to structure teaching experiences through what was described by participants as an '*immersion day'*, as well as '*week-long placements'*, in special schools or pupil referral units, was felt to enable STs to develop a wider range of skills than those afforded in mainstream schools.

> *Members of the group described the benefits of trainees having week-long placements (with a specialist subject focus) in a special school, where trainees deliver lessons. All trainees are briefed before the placement on what they are likely to experience, so they will be prepared. Some do other specialist placements (e.g. Pupil Referral Unit (PRU) or medical needs service) and these are also beneficial. Exposure to working in a variety of settings equips teachers with a wider range of skills and develops their knowledge of how to work with other adults.*

As well as learning through structured experiences of teaching in a range of settings outside mainstream schools, participants gave importance to STs' learning through experiences of teaching in a range of different schools. As exemplified through the participant extract below, this was seen to facilitate STs' learning to adapt their teaching for different contexts and pupils.

> *The idea that 'schools grow their own' teachers which is part of the discourse behind the most recent moves towards more school-led teacher education seems to want to 'flatten' out any variation within*

particular schools and prepare teachers to teach in only one way which happens to suit that particular school, and is essentially unhelpful in preparing adaptive professionals, able to work in a range of contexts.

One participant stated that ITE '*should be more than developing teachers for a specific setting*'. Another suggested that opportunities to teach in a range of settings enabled STs '*to make their practice more robust and to increase their understanding of the learning on which particular school strategies are based'.* It was felt that this demonstrated '*a commitment to preparing teachers for the profession rather than for a single school'.* Experience of teaching in a range of schools was seen to provide STs with '*some outside influence to gain a different perspective'.* The participant views above are summarised well in the participant extract below.

> *The move towards individual school/school-chain training routes carries a further risk of restricting students' experience to one professional model, the model on which their training will be based. These programmes limit the range of settings that a trainee experiences which reduces the opportunities for students to try things out with pupils under a different school system or with pupil groups who have a very different profile. This is not only limiting to professional practice and understanding but will have an impact on the transferability of students' learning, particularly if going to schools/ settings which are based on a very different model.*

The assumptions in these participant descriptions raise what Lampert (2010, p.30) poses as a 'difficult question', namely 'Is it possible to prepare novices for practice in a way that will enable them to work in any school, anywhere?' Whilst this is not a question I attend to within this study, the discussion of the role critical reflection plays in STs' learning, in Pillar One, appears to be key. Teaching students how to reflect on and learn from and through their own practice provides them with the skills to continue to learn teaching across different contexts, as opposed to learning to teach in a particular one. In other words, facilitating STs to 'learn their craft' (Darling-Hammond, 2010, p.45), rather than viewing the 'craft of the classroom' as a craft to copy.

Whilst the amount of time STs spend in school forms part of the mandatory guidance for ITE providers in England (DfE, 2021c), other than the requirement for teaching experience in at least two schools, how students teaching experience is structured has been, until recently, down to the individual provider. However, one of the quality requirements introduced as a result of the ITT Market Review (DfE, 2021d, p.9), discussed in chapter one, mandates a minimum of four weeks of 'intensive training and practice' for one-year ITE programmes and six weeks for longer ones, in addition to and 'distinct from the general placement'. These periods of 'intensive training and practice', the review states, should be underpinned by a 'practice-based' model, through which,

> expert practice is demonstrated to trainees, who should be supported to understand exactly what it is that makes this practice effective and to think about how it could be embedded in their own teaching. Trainees

should then have the opportunity to apply what they have learned

through rehearsal or live practice, receiving constructive feedback on

their delivery (p.9).

Furthermore, the quality requirement suggests that 'intensive training and

practice would typically involve groups of trainees' (p.55), which would require

those facilitating student learning in school to 'invest more time in provision for

them' (Burn and Mutton, 2013, p.7). The description of 'intensive training and

practice' above shares similarities with the 'core practice cycle' (Peercy and

Trojan, 2017, p.28) in figure 5.1. Within the cycle, the deconstruct phase

relates to focusing on a specific aspect of practice. Following this, STs observe

examples of the aspect of practice in action. STs then rehearse it through

practice teaching episodes, while being coached through the process, before

implementing it as part of a lesson with pupils, with reflection forming an

integral part throughout. Considering this description, the Bridge of Teaching

Experience has potential to support STs with making meaningful connections

between their learning. Here students make multiple connections between

deconstructing practice as described in the Bridge of Direct Instruction (core

practices) and observing specified practice of 'more experienced' teachers as

described in Pillar Two. Connecting this to their experiences of teaching at the

rehearsal and implementation stages through the Bridge of Teaching

Experience, along with the coaching approach to support students to critically

reflect on their practice, as described in Pillar One. However, what appears to

be missing in both the description of 'intensive training and practice' and the

'Core Practice Cycle' are connections to STs' learning in and through research

as described in Pillar Three. Opportunities to explore research that has informed the aspect of practice, viewing it as an object of enquiry as described in Pillar Three, would support an enquiry based and research informed approach to STs' learning.

Figure 5.1: Core Practice Cycle (Peercy and Trojan, 2017, p.28)
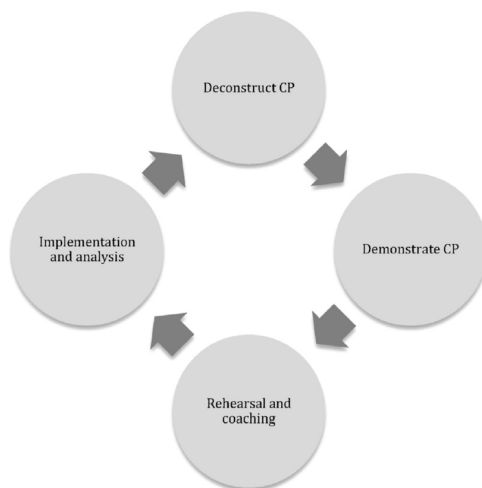
As the participants included university teacher educators, surprisingly, none of the descriptions included opportunities for STs to learn through and from teaching experiences outside the school context, such as Grossman et al's (2009) 'approximations of practice' discussed in section 2.5.5. There appears to be an assumption from participants that STs' learning through experiences of teaching can only take place in a school context. However, I suggest that within the Core Practice Cycle, in figure 5.1, the rehearsal and coaching phase provides opportunities for STs to deliberately practice 'particular instructional activities' (Lampert et al, 2013, p.227) outside the school context. This may be through 'approximations of practice' (Grossman et al, 2009), 'microteaching' or 'rehearsals' (Lampert et al, 2013). All of which allow STs to try things out and

hone their skills through self-assessment, peer discussion and feedback from a teacher educator in a low-risk environment (Grossman et al, 2009). These approaches cannot replace learning through and from practice in 'real' settings but they do allow STs to build confidence and skill prior to navigating 'the rapids of real practice' (Grossman, 2010, p.2077). This approach also has potential to develop STs' 'self-efficacy' (see Pillar One).

5.7 Theme: Bridge of Direct instruction

Central to this theme are participant views that there are aspects of practice that need to be explicitly taught to STs, succinctly put by one participant as '*training should definitely tell them things'.* Participant descriptions that generated this theme focused on facilitating STs' learning how to do 'things', which usually but not exclusively related to classroom practical skills, routines and strategies. For example, when discussing STs' learning in relation to behaviour management, one participant stated that,

> *Trainees should be given some tangible strategies - for example, to be clear on boundaries, how to deescalate situations, how to ignore low-level behaviour, how to handle transition points in the lesson. Training on differentiation should emphasise use of questioning and rich talk in the classroom*

The suggestion above is that STs are 'given' 'strategies' for 'how to' do things. Another participant stated that effective ITE in behaviour management, '*Should teach basics e.g. routine for starting a lesson, getting complete silence before beginning, not shouting'.* Participants used phrases such as *'the right form of*

instruction', with some having a view that there was, '*a body of knowledge and some methods that are more likely than others to work'.* The focus on strategies and routines in the participant descriptions above are indicative of Grossman et al's (2018, p.4) description of 'core practices' which they suggest consist of,

> identifiable components (fundamental to teaching and grounded in disciplinary goals) that teachers enact to support learning. Core practices consists of strategies, routines, and moves that can be unpacked and learned by teachers

Whilst 'core practices' appears to be the expression most commonly used to represent the type of practices described above, terms such as 'high-leverage practices', 'key practices' and 'central practices', can also be found in literature from the field to represent similar practices (Dutro and Cartum, 2016). For example, Windschitl et al (2012, p880) offer an explanation for 'high-leverage practices' as a 'set of practices that are fundamental to support PK-12 student learning, and that can be taught, learned, and implemented by those entering the profession'. Indeed McLeskey and Brownell (2015, p.7) call for the identification of 'a set of high-leverage classroom practices that all teachers must learn'. Through these terms, researchers aim to 'name the strategies, routines, or activities that novices need to learn to do and from which they will continue to learn teaching' (Lampert, 2010, p.26). Participant descriptions within this theme link STs' learning with what practicing teacher 'do' (Hatch and Grossman, 2009). However, when discussing effective learning in behaviour management, there was disagreement among participants about which strategies should be taught, from *'restorative justice', 'promoting positive*

behaviours for learning', '*setting expectations'* and *'use of rewards'*. The outcome of which was a view that '*trainees should be taught a whole range so they can apply strategies in their own context'*. Likewise, identifying and agreeing a set of core practices has proven to be problematic for researchers in the field (Dutro & Cartun, 2016, Forzani, 2014, Franke and Kazemi, 2001, Grossman et al, 2009, Ball and Forzani 2009, Windschitl, et al, 2012).

Furthermore, there were differing views in relation to the effectiveness of STs learning practical strategies. For example, one participant stated that '*there is scope for more explicit teaching of practical strategies'* developing what was described as a '*toolkit of strategies'* , whereas others stated that '*trainees shouldn't be given quick fix strategies'* and '*Programmes shouldn't focus solely on practical strategies'.* These differing views are illustrative of the ITT and ITE ideology discussed in section 2.1.2. With the former viewing the teacher as technician, implementing strategies and the latter seeing the teacher as a professional going beyond implementing practical strategies, to understanding the why as well as the how. Here, there are similarities with Twiselton's (2007) assertions that a teacher training ideology develops STs as 'task managers' or 'curriculum deliverers', whereas taking a teacher education, rather than a training perspective supports STs to become 'skills/concept builders'.

As discussed in section 2.1.2, I do not view these two perspectives as polarised. Instead I see ITT as a subset of ITE, viewing it as necessary but not sufficient in itself. When discussing STs' learning practical strategies, one participant talked about taking a *'two-pronged approach',* stating that,

Teaching is challenging and students and new teachers need to start

with practical and specific advice and access to shared strategies

alongside a deeper understanding of the rationale and evidence

underpinning these resources. ITE is vital in providing this two- pronged

approach.

This participant description is more representative of my own views, in that

practical strategies and advice are useful starting points for STs, in order to

mitigate their teaching experiences as 'gestalts of survival' (Korthagen, 2011),

as discussed in the previous theme. Here I am reminded of Bernstein's (2000),

notions of 'reservoir and repertoire'. STs need a repertoire of strategies,

routines and techniques to draw on to support their practice. However, whilst

this is important, contexts, classes and circumstances change and 'what

worked' may not work any longer. This requires STs to be able to draw on their

'reservoir' of strategies, knowledge and ideas that enable them to interrogate

their own practice, in order to adapt their approaches and make informed

decisions (Brooks, 2021). As another participant put it, there is much more to

ITE than '*technical mastery of specific strategies and practices'.* Taking a *'two-*

pronged approach' affords STs opportunities to '*identify the advantages and*

disadvantages of different strategies and the contexts in which different

strategies are appropriate'. Furthermore, as one participant stated,

ITE programmes need to update discussed strategies and theories

based in light of latest strong/peer-reviewed evidence, sharing that

evidence base and reflective/challenging approach with students, with

the idea that this is a practice they learn/adopt throughout their careers.

When describing 'how' STs learn routines, practical strategies or what the literature from the field term as 'core practices' (Grossman et al, 2018), participants used verbs such as, *'be given', 'be taught'* and *'have training',* requiring *'explicit teaching'* and *'offering sessions on how'* to do 'things'. Although, other than referring to *explicit teaching'* and *'offering sessions'* approaches to 'how' STs should *'be given'* or *'be taught'* practical strategies were not forthcoming. However, participant descriptions imply learning through a process of direct instruction, focusing on 'a particular practice or a set of practices identified by the teacher educator' (Grosser-Clarkson and Neel, 2020, p.470). Though, Lampert and Graziani's (2009, p.507) study, discussed in chapter 2, differentiated between 'well designed instructional activities' from those that 'simply puts surface features of routines in place'. Instructional activities are intended to make core practices 'more visible and concrete' (Peercy and Troyan, 2017, p.34), thus not leaving the learning of them to chance (Ball and Forzani, 2009). Grossman et al (2009b, p.2069), viewed 'decomposition' (discussed in section 2.5.5) as central to 'breaking down complex practice into its constituent parts' to render it visible and learnable by STs. Building on the participant description of a *'two-pronged'* approach, instructional activities address both conceptual as well as practical aspects (Born et al, 2021) of a practice or set of practices. It was felt that this would provide opportunities to *'develop evidence based practice which is portable from one context to another as opposed to tips for teachers which may work in one context but not another'.*

Whilst teaching practical skills relating to STs' classroom teaching, focusing on their pupils' learning, dominated participant descriptions generating this theme, to a lesser extent, they also described directly teaching STs strategies to support their own learning. As suggested by the illustrative participant extract below, descriptions related to directly teaching STs how to learn through and from their own practice and the practice of others (see Pillar Two), through teaching them how to 'deconstruct' practice, as well as how to reflect on it.

> *Trainees need to be taught how to deconstruct what has happened in the classroom, they need to be explicitly taught how to reflect.*

Similarly, Wolkenhauer and Hooser's (2021, p.168) research into two teacher educators studying their own practice, found that explicitly teaching 'guided reflection and professional dialoguing skills' were central to their work with STs. In addition, in my study, through teaching '*basic research literacy (e.g. key concepts of validity, reliability, RCTs),* participants described explicitly teaching STs '*how to unpick research'*, facilitating their learning as, '*intelligent consumers of research'* described in Pillar Three.

When discussing who was best placed to teach STs practical strategies, participants suggested that it should be those who are experienced in utilising such strategies themselves. They felt that university teacher educators were well positioned to teach STs practical strategies to enable them to become '*intelligent consumers of research'.* However, as the illustrative participant extracts below show, when asked to describe *'common characteristics of weak training in behaviour management'*, there was some hostility shown towards

university teacher educators teaching practical strategies for the classroom. 'Weak training' was described as being delivered by,

> *Biased lecturers with little experience of tough classrooms. Self proclaimed gurus who advise marvellous strategies that only work if you're fabulously charismatic or, indeed, them. Bad advice - for example, telling new teachers to be their friends, flirt with them, crack jokes, prescribe engaging lessons as a magic bullet, advise endless appeasement, etc.*

When asked if *'enough time and emphasis was given to behaviour management in ITT programmes'* the response from another participant was,

> *No. It's a joke at the moment. Possibly because a lot of people responsible for training people in it couldn't do it themselves, or have lost all touch with the classroom, or were never good at it in the first place. Or have moved from low to high status without touching the sides of behaviour management. Or escaped teaching as soon as they could to become advisors and consultants and academics. There are many people in this game who don't resemble this unpleasant description. And there are many who do. Remember, citizens and colleagues: the next time someone gives you advice on how to run a room, ask yourself one crucial question: could they do it themselves? If the answer is no, then walk away. Just walk away. You deserve better, and your children undoubtedly do, too.*

Views such as those described in the participant extracts above show an absence of understanding of the role of the university teacher educator in facilitating STs' learning. Moreover, such views are likely to create barriers to the type of collaborative partnerships described in the Curriculum Bridge earlier. Whilst recognising the distinctiveness but complementary aspects of their roles, collaborative partnerships require both appreciation of and mutual respect between school and university based teacher educators responsible for facilitating STs' learning (AACTE, 2018).

5.8 Theme: Bridge of Personalisation

As outlined in section 4.4, participant description of how STs learn teaching that generated this theme, emphasised the need to take a personalised approach to it. As described by one participant, '*The best ITT should focus on the individual and identify their particular training needs'.* The focus here on the individual ST aligns well with Leadbeater's (2004, p.1) description of personalised learning which puts 'the learner at the heart of the education system'. Interestingly, as mandated by the Ofsted (2021, p.9) inspection regime, the current expectations for ITE in England, is that the curriculum, rather than the learner, is placed at the 'heart of inspection'. When discussing whether there should be a prescribed curriculum for ITE, one participant stated they,

> *wouldn't want a prescriptive curriculum to undermine the fact that training needs to be different for different people.*

Similarly, another participant stated that,

While this needs to provide a good overall framework, it also needs to allow for sufficient flexibility to respond to each trainee's prior experience and individual needs over the course of the year and to the specific features of each school context.

It would appear that the DfE has taken a pragmatic approach to participant responses such as those above. Rather than prescribe an ITE curriculum, one of the outcomes from the Carter (2015) review, for which the secondary data for my study was generated, was the Framework of Core Content for Initial Teacher Training (DfE, 2016), which was built on and recently replaced by the ITT Core Content Framework (CCF) (DfE, 2019). The framework states that it 'does not set out the full ITT curriculum' and whilst designing the ITE curriculum remains the responsibility of individual providers, it must 'encompass the full entitlement described in the ITT Core Content Framework' (p.4). Within the framework, there is no reference to taking a personalised or flexible approach to STs' learning. It is mandatory and is central to Ofsted's inspection framework, which requires ITE providers to evidence that their curriculum meets the minimum entitlement set out in the CCF. Failure to do so carries high risk. This led me to consider how participant descriptions described facilitating a personalised approach to STs' learning, within this context.

As exemplified below, through the illustrative participant descriptions of what they viewed as effective ITE, in the main, supporting STs' learning through a personalised approach, focused on responding to their individual development needs in order to keep their learning on 'track'.

Trainees' progress is consistently and rigorously monitored by school visits and reviewing target and action plans and files. Interventions are made quickly to ensure trainees made very good progress

The use of detailed target and action planning documentation enables the provider to clearly track the progress being made a trainee and to intervene where appropriate to maximise progress. Action plans are checked frequently by the school and the provider.

The suggestion in participant descriptions here is that taking a personalised approach, entails making sure STs' learning is keeping up with the programme, rather than making 'the program follow the learning' (Donaldson and Marnik, 1995 cited in Korthagen et al, 2001, p.69). The use of individual action plans, targets and interventions featured in participant descriptions generating this theme. However, how these are used is likely to impact on the level of personalisation they provide. As described in Pillar Two the role of the school mentor is pivotal in ensuring STs' personal involvement in setting targets for themselves, viewing them as 'active learners' affording them with 'choices about what they learn and how' and devising their own action plans (Leadbeater, 2004, p.16).

In order to ensure STs 'kept on track', careful monitoring of their progress was deemed by participants as being effective in supporting their learning. As described by one participant,

It is a programme requirement that all (STs) are afforded weekly sessions with their mentor after which they submit to the Course Leader

a Weekly Record of Progress (WRoPs) which details what they have done to address any Standards, sets new targets and details how these targets will be addressed. These WRoPs are monitored on a weekly basis by the Course Leader and, when applicable, feedback and guidance is provided.

Another participant described how,

The use of detailed target and action planning documentation enables the provider to clearly track the progress being made by a trainee and to intervene where appropriate to maximise progress. Action plans are checked frequently by the school and the provider.

It was felt that *'Where trainees are having problems they should be given rapid support from a specialist'*. This did lead me to question, what will happen when a ST starts their first teaching job, without the services of the 'rapid' intervention team. These descriptions suggest a 'top-down' rather than a 'bottom-up' approach to STs' learning. Taking what Brown and Duguid (1993, 2000) term as a 'supply side', with learning dictated by the provider, suggesting a predetermined trajectory. As opposed to a 'demand side' which is led by the learner, enabling them to 'relate new learning to what they currently know and understand' (Philpott, 2014, p.33). There is a risk that the 'supply side' approach will be further dominant as a result of the new 'ITT quality requirement' relating to the assessment of STs' professional practice, mandated through the ITT Market Review (2021d) in England. The requirement necessitates that providers utilise a 'curriculum-aligned assessment framework'

to assess 'both trainees' recall of the knowledge and skills set out in the curriculum and their ability to apply them to classroom practice' (p.14). The assumption here appears to be that all STs' learning in relation to the ITE curriculum will be the same. Such an approach does not reflect the participant descriptions of '*allowing for sufficient flexibility',* recognising '*that training needs to be different for different people'.* Furthermore, participant descriptions appeared to focus on others identifying STs' learning needs, rather than the ST identifying them for themselves.

As illustrated in the participant extracts below, when describing approaches to personalising STs' learning within the school context, careful thought was given to matching school contexts and mentor expertise with STs' individual professional development needs.

> *Interviewing prospective candidates in school, seeing them with students and being able to discuss learning and teaching and their aspirations for a future in teaching was a major step forward. It helped us place candidates in the best contexts with respect to their needs from the outset.*

> *We know from the outset the numbers of trainees that each school has requested. Hence, even at the recruitment stage we look at the background experiences, strengths and areas for development of trainees in order to select the placements that best fit their needs. The contrast placements are identified only when the interim progress reviews are completed so that we have a clear picture of trainee*

progress before these decisions are made. We endeavour to personalise

the contrast placement. For instance if an Associate Teacher has a

particular area of interest, or intention of working in a particular context,

we will try to accommodate this.

One participant described how '*Students are placed thoughtfully in settings that*

match their needs Partners communicate in a timely way when these needs

require different or additional support. Another described the need for

supporting STs' learning through '*An individually tailored programme of*

opportunities (such as focused meetings with coordinators/subject leads,

opportunities to visit other phases, teachers with different styles etc…)'.

Descriptions here link to the discussion of facilitating STs' learning in the Bridge

of Teaching Experience, purposefully planning and structuring STs' teaching

experiences in contexts deemed to support their professional development

needs. However, the approach to personalising STs' learning described above

is dependent on both the quality and quantity of school 'placements' to choose

from.

I suggest that the nearest to taking a personalised approach to STs' learning, in

its truest sense, which puts the STs' learning at the heart (Leadbeater, 2004), is

through the participant description below.

> *As the training progresses the trainee's needs and priorities evolve and*
>
> *the pedagogical input becomes more responsive to these needs. The*
>
> *outcomes of mentor meetings, observations, reviews and indeed the*
>
> *trainee's voiced aspirations, tell a story that helps us choose the most*

appropriate contrast placement in order to assure the best outcomes for

each individual.

Here, the STs' views are taken into consideration, as well as a range of other evidence to develop what was described by another participant as *'An understanding of the journey that trainees make and how best to support trainees on that journey'.* Viewing personalised learning as 'not just meeting student needs, but actually engaging students in the learning process' (Fullen, 2009, p.1). However, Leadbeater (2004, p.28), suggests that 'ultimately, personalisation cannot be seen as a stand-alone initiative. It needs to be understood as a characteristic and a culture of a whole learning system'. As discussed earlier, having the curriculum, rather than the learner at the heart of the ITE 'system' in England, presents a challenge in moving from a prescribed journey for STs' learning to an individualised journey.

5.9 Concluding thoughts

In this chapter, I used my framework to structure an insightful and critical discussion of each theme and demonstrated how my framework may be used as a tool to articulate ITE practice. I provided examples of interconnections between STs' learning within and across the framework and whilst I still presented the complexity of ITE practice, this was in a more manageable form. In the next chapter, I summarise my key findings from this discussion.
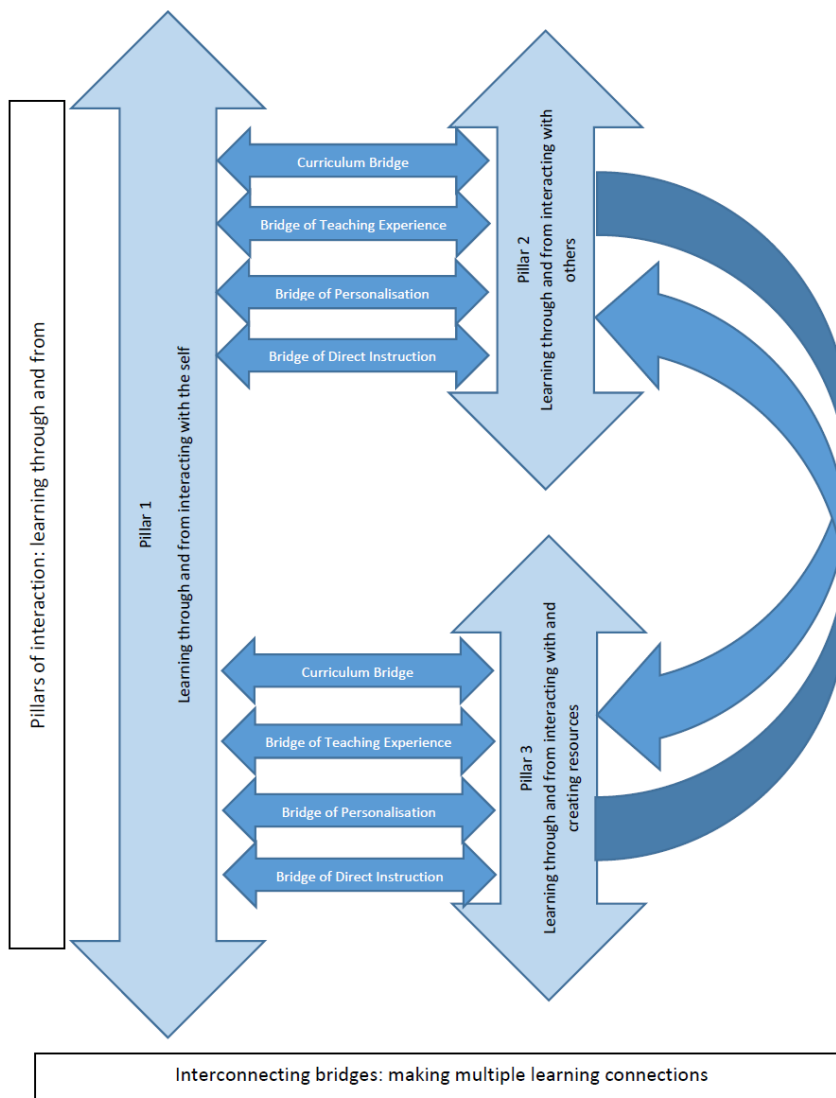
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Chapter 6 Conclusion

6.1 Introduction

My study has focused on articulating the complex practice of ITE, in relation to *how* STs learn, through the descriptions provided by participants who contributed to a national review of ITE in England (Carter, 2015). As explained in section 1.3, aligned to my strategic role as a Director of an Institute of Education, I took a holistic overarching view of teacher education practice and STs' learning, rather than exploring a particular aspect of it. My purpose throughout has been to explore how ST's learning can be facilitated and to represent multiple aspects of ITE practice. Central to this has been the development of my 'Pillars of Interaction and Interconnecting Bridges Framework for Articulating ITE practice (table 6.1, a repeat of table 4.1) which I structured using the themes generated through my qualitative thematic analysis, as discussed in chapter four. This framework, along with my critical discussion of it in relation to pertinent literature from the field (chapter 5), demonstrates the complexity of learning teaching and supports the conceptualisation of ITE as complex practice. As stated in section 1.2, my study is situated within a landscape of current ITE political policy changes and debates in England. In this final chapter, I outline implications of my key findings and provide new insights into how STs learn teaching and make a valuable contribution to debates, which inform the ITE policy landscape in England. Following this, I share my reflections on the research process, along with suggesting potential future research, both in relation to the findings of my study and the further development of my framework. I conclude with

implications for my practice and role as a Director of an Institute of Education in an English university.

Table 6.1 (a repeat of table 4.1)

My Pillars of Interaction and Interconnecting Bridges Framework for Articulating ITE Practice

Pillars of interaction: learning through and from

Pillar 1
Learning through and from interacting with the self

Curriculum Bridge

Bridge of Teaching Experience

Bridge of Personalisation

Bridge of Direct Instruction

Pillar 2
Learning through and from interacting with others

Curriculum Bridge

Bridge of Teaching Experience

Bridge of Personalisation

Bridge of Direct Instruction

Pillar 3
Learning through and from interacting with and creating resources

Interconnecting bridges: making multiple learning connections

6.2 How do student teachers learn how to teach and how is this facilitated, as described by the participants of a national review of Initial Teacher Education in England?

Throughout my study, the research question above has been front and centre. Aligned to a critical realist approach (3.2.1), my framework (table 6.1), generated through a qualitative thematic analysis of participant descriptions of how STs learn to teach, provided a structure for my response to this question. As such, I introduce my framework in chapter four and follow this, in chapter five, with a critical and insightful discussion of the themes that underpin it, along with relevant literature in the field. I integrate my response to the second research question; 'What are the tensions and competing participant voices of those who provided evidence for the review, pertaining to ITE policy and practice?' throughout my discussion in chapter five. In what follows, I refer to my framework to summarise the key findings from my study, in relation to both of the above research questions, as well as outlining implications from my findings for both ITE practice and policy.

6.2.1 Learning to learn how to teach

I suggest that the role that 'learning to learn how to teach' plays in STs' learning is a key finding of my study. As presented in the three pillars of interaction in my framework (table 6.1), learning how to teach involves learning through and from multiple interactions, across a range of contexts. My findings suggest that learning through such interactions should not be 'left to chance' or simply assumed. In order to learn how to teach, I suggest that STs need to learn how to learn how to teach. This is multifaceted or in other words complex but I argue

that my study goes some way in articulating it and framing this complexity. I propose that 'learning to learn how to teach' seems to be lacking in government policy, which focuses on 'learning how to teach'. Furthermore, I propose that the current preoccupation with the curriculum and a focus on content is not helpful here. Perhaps learning how to learn how to teach is thought to be too complex or in the context of 'grow your own teachers' learning how to teach in a particular context may be viewed as adequate. I am reminded here of the Dr Seuss quote 'It is better to know how to learn than to know' (Good Reads, 2021). Teaching STs how to learn teaching is central to ITE practice as described in my framework and essential in learning how to teach. Below, I draw on the structure of my framework to provide examples from my findings in relation to learning to learn how to teach.

Within Pillar One: Learning through and from interacting with the self (5.2), my findings suggest that STs need to be taught how to critically reflect in order to learn how to learn about themselves as teachers, this cannot be assumed. I link this to STs' 'self-efficacy' as learning how to learn from your own teaching supports 'self-efficacy' when strategies fail to work for a particular group of children in a particular context. Learning to learn how to teach was a significant feature of my findings in Pillar Two: Learning through and from interacting with others (5.3). Central to this was my finding that STs need to be taught how to learn teaching through and from their interactions with others. I suggest that learning teaching from observing others is not as straight forward as 'observing a master craftsman or woman' (Gove, 2010) and that STs' learning involves more than simply 'tapping into the practice of others' or being 'exposed' to

practice (participants). I propose that STs need to be taught how to learn through observing the practice of others, using 'tools' such as Mason's (2002, 2011, 2021) 'noticing', preparing them in advance to focus on specific aspects of practice. In addition, learning through and from peers was viewed as effective and that STs should be taught how to learn how to teach through engaging in the learning of other STs, as well as their own. However, whilst participants described a range of peer learning activities, I could not find evidence of strategies to teach STs how to learn through peer learning in participant data or relevant literature. Being explicit about using specific approaches to support STs' learning from pupils, such as 'shadowing' also featured in my findings. Moreover, to facilitate STs' learning how to learn teaching, their mentors need to be taught how they can support STs with this. Therefore, teaching mentors how to teach STs how to learn teaching, adds another layer of complexity to ITE practice.

Through my discussion of findings in the Bridge of Teaching Experience (5.6), I argue that we cannot assume STs' learning from their experiences of teaching as 'self-evident'. STs need to be taught how to reflect on and learn from and through their own experiences of teaching. In other words, how to learn how to learn through their experiences of teaching. Affording them with the skills to continue to learn teaching across different contexts, as opposed to learning to teach in a particular one. Furthermore, within the Bridge of Direct Instruction (5.7), in addition to teaching STs strategies and routines to support pupils' learning, my findings suggest that STs should be explicitly taught strategies to support their own learning of teaching.

6.2.2 Learning to teach and learning teaching

Drawing on Lampert's (2010) distinctions between 'learning to teach', which implies learning is applied in the future and 'learning teaching', which takes place during the act of teaching; my findings suggest that both form part of STs' learning. Within the curriculum bridge theme (5.5), participant descriptions were indicative of 'learning to teach' as a theory 'evidence' into practice model or learning *for* practice. This requires STs to 'transfer' their learning which is challenging (Eraut, 2009) but this challenge may be reduced through carefully integrating the curriculum across contexts for learning. My analysis showed that there were two different approaches to such integration evident in participant descriptions. The first was a co-operative approach, which appeared to suggest two curricula, in that STs' learning in each context should 'build on' the 'other training'. The second was a co-constructed curriculum requiring collaboration between those responsible for STs' learning across contexts to develop a *'joint'* *or* partnership curriculum. I suggest that whilst the latter approach reduces the challenge of 'transfer', it requires time, commitment and mutual respect from all involved. My findings, along with associated literature from the field suggests that facilitating students' learning through an integrated approach to curriculum implementation is complex work.

Participant descriptions within the theme of the Bridge of Teaching Experience (5.6) were more aligned to Lampert's (2010) notion of 'learning teaching', viewing STs' learning through their experiences of teaching or learning *through* practice. Here, once again, there were two differing participant views in relation to structuring STs' learning within this theme. Some descriptions appeared to

favour the quantity of experience with a focus on learning routines and the daily practicalities of teaching, whilst others supported a carefully planned incremental approach and the quality of learning afforded by it, focusing on providing time for critical reflection. Here my findings suggest that how STs' teaching experiences are structured, in relation to quality or quantity, can support or hinder their opportunities to learn from their own practice. Furthermore, my discussion in Pillar One (5.2) emphasises the importance of STs having positive experiences of teaching, as this impacts on their perceived self-efficacy which plays an important role in their ability to learn (Larry, 2017). Importantly, my findings show that STs 'learning to teach' *for* practice and 'learning teaching' *through* practice needs to be carefully planned for and cannot be left to chance.

6.2.3 Keeping learning 'on track'

As discussed in section 4.4 and 5.8, the concept of keeping STs' learning 'on track' was a key feature of participant descriptions. Where 'expected progress' was not made, it was deemed that personal interventions were required to get STs' learning 'back on track'. I suggest that this is indicative of a 'top-down' approach, ensuring STs' learning is keeping up with the programme, rather than 'making the programme follow the learning' (Donaldson and Marnik, 1995 cited in Korthagen et al, 2001, p.69) (5.8). In section 5.8, I argue that this view is underpinned by a 'supply' (Brown and Duguid, 1993, 2000), rather than a 'demand' approach to STs' learning. Taking a prescriptive predetermined approach to STs' learning, through which others identify their learning needs, rather than taking a ST led approach, which actively engages them in their

learning. Furthermore, in section 5.8, I suggest that a 'supply' approach is emphasised through the new 'ITT quality requirement' (DfE, 2021d), which mandates the assessment of STs' professional practice using a 'curriculum-aligned assessment framework' to assess their 'recall of the knowledge and skills set out in the curriculum and their ability to apply them to classroom practice' (p.14).

My study recognises that the ITE curriculum plays an essential role in STs' learning. However, through my findings, I propose that while government policy continues to place the curriculum at the heart of ITE, instead of the 'learner' (Leadbeater, 2004) and '*analytical professional dialogue'* (5.3.2), developing STs as autonomous, professionals, capable of identifying and addressing their own continuing professional development needs throughout their careers, will remain a challenge.

6.2.4 Initial Teacher Training (ITT) as a subset of Initial Teacher Education (ITE)

As discussed in section 2.2.1, rather than viewing the debates between ITT, underpinned by a teacher as technician ideology, and ITE taking a view of the teacher as a professional, as polarised (Loughran, 2009), I propose that ITT is a necessary subset of ITE. My analysis in the Bridge of Teaching Experience (5.6) revealed tensions between government policy around 'grow your own teachers' (Gove, 2010), viewing the 'craft of the classroom' as routines and strategies to copy. With the alternative approach being, preparing teachers to teach in a range of schools supporting them to 'learn their craft' (Darling-

Hammond, 2010, p.45). The former is indicative of an ITT ideology and the latter of ITE. However, my findings in the Bridge of Direct Instruction (5.7), propose that ITT is an important stage in STs' learning. Thus, I do not view these two seemingly opposite approaches to be mutually exclusive. I suggest that learning to implement strategies and routines for a particular class, copying the 'craft' of others, is a useful starting point for STs. Enabling them to develop a 'repertoire' (Bernstein, 2000) of routines, strategies and techniques to support their experiences of teaching to help prevent Korthagen's, (2011) 'gestalts' of 'survival' (2.5.4). However, teaching STs to be able to teach in a range of contexts, where 'what worked' in one may not work in another, requires them to draw on a 'reservoir' (Bernstein, 2000) of skills and knowledge that enable them to interrogate their own practice (Brooks, 2021). Teaching STs how to learn how to teach as discussed in 6.2.1 earlier, plays a key role here, enabling STs to learn and develop their 'own craft' or in other words, knowing what to do when they don't know what to do, develops teachers as professionals, able to move beyond trained approaches to 'doing'. Importantly, teaching STs to learn their 'own craft' is likely to support the current government challenges relating to the retention of teachers in England.

My findings in Pillar Three, 'Learning through and from interacting with and creating resources' (5.4), provide further discussion of ITT being a subset of ITE but this time relating to the role of research in STs' learning. My findings suggest that participant descriptions focus on STs as consumers, rather than producers of research. Within the participant descriptions there were two perspectives, one indicative of an ITT ideology, viewing STs as technicians

217

implementing schemes, school policies and 'research based toolkits' and the other more aligned to an ITE perspective, viewing STs as professionals taught to critically evaluate their usefulness within a particular context. I suggest that the first is a helpful starting point for STs as 'fledgling' consumers of research, however, in order to progress to the latter to become 'intelligent' consumers of research STs need to be taught 'research literacy' to enable them to critique its value for their learners and their own learning. My findings suggest that the former involves STs' learning through transferring evidence from one context to another, taking an 'evidenced based' approach, whereas the latter views STs' learning through translating evidence , indicative of an 'evidence informed' approach. Reflecting my view of training as a subset of ITE (2.1.2), I view this as a developmental process rather than polarised debates. As suggested in Twiselton's (2007, p493) research (5.7), considering them as 'points on a scale' with ITT at one end and ITE at the other.

However, with the significant emphasis on an ITE curriculum and STs learning from more experienced others in school within current government policy (5.3), reflecting only part of the story of ITE told through the participants in my study, there is a risk that STs will not develop the skills and knowledge to progress from ITT to ITE. One participant in my study stated, STs' learning involves *'planting the seeds' of research into trainees'*. Although, I suggest that the paucity of references to learning through engaging in or with research throughout the suite of frameworks (5.4), championed by the DfE (2021b) as the 'golden thread' of teacher professional development, from STs to executive leadership, results in limited opportunities for the 'seeds' to grow. Thus, limiting

teachers' ability to 'grow "roots" on their practice' (Darling-Hammond, 2014, p.551) (2.5.2). Through the discussion of my findings, I suggest that perhaps a more appropriate term would be Initial Teacher Education and Training (ITET), viewing training as an important part of ITE, representing part of the complex story of learning teaching.

6.2.5 The misunderstood and marginalised role of the university teacher educator in facilitating student teachers' learning

My findings suggest that throughout participant descriptions of how STs learn, the role the university teacher educator plays was both marginalised and misunderstood. The discussion of my findings in section 5.3.4, proposes that participants viewed the main function of teacher educators to be providing 'services' to support STs' learning in schools, rather than having a role to play in it themselves. Moreover, despite some of the participants being university teacher educators, descriptions of how STs learn through and from them, such as those discussed in 2.5.3 and 2.5.5, were absent. Considering the challenges of articulating the complex practice of teaching STs the complex practice of teaching, discussed in section 2.2, led me to question whether all university teacher educators are able to articulate the role they play in STs' learning or even whether they are clear about their role.

Within the ITE policy trajectory in England (1.2), government ideology, which emphasises 'school-led' ITE, has influenced future practice. Based on the assumption that STs learn through 'observing a master craftsman or woman' (Gove, 2010), and viewing engaging in ITE in partnership with a university as

optional, I suggest has provided a clear need for university teacher educators to articulate their role. However, discussion here comes back to the differing ideologies and the role of the teacher discussed in section 2.1.2. Preparing STs to be technicians, simply applying observed routines and formulas does not require them to learn how to learn how to teach. However, preparing STs as professionals capable of 'autonomous decisions' and 'professional judgement' (Scales et al, 2018, p.68), requires them to continue learning about teaching throughout their career, which in turn necessitates them being taught how to learn teaching. As discussed in section 6.2.1, my findings suggest that teaching STs how to learn how to teach is fundamental to effective ITE practice. Without which, my findings argue the quality of teaching is restricted and the teacher retention challenges in England exacerbated, which, as shown in table 2.1, are the two areas that both reviews of ITE in England aimed to address.

I suggest that my study and the Pillars of Interaction and Interconnecting Bridges Framework for Articulating ITE practice (table 6.1) goes some way to reinstating the role of university teacher educators as experts in the fundamental practice of teaching STs how to learn how to teach, without which ITE runs the risk of leaving STs' learning to chance. When articulating 'how' STs learn, rather than 'what' they learn, I propose a helpful addition to the Core Content Framework's (DfE, 2019b,) 'Learn that…' and 'Learn how to…' statements, could be 'Learn from…' and 'Learn through…' statements, which focus on how STs learn how to learn, as facilitated by university teacher educators (5.5). Linking back to my motivation for learning as helping others to learn (1.1), I hope my study supports university teacher educators to articulate,

as well as learn about their role in facilitating STs' learning to; themselves, policy makers, school partners, as well as STs.

6.3 Summary of findings in response to the research questions

My study provides a response to the question' How do student teachers learn how to teach and how is this facilitated, as described by the participants of a national review of Initial Teacher Education in England?', through four key findings. Firstly, facilitating STs' learning, my findings suggest, centres on them learning to learn how to teach and that this should be taught and not assumed. Secondly, STs 'learning to teach' for practice and 'learning teaching' through practice both facilitate learning and needs to be carefully planned. Thirdly, how STs' teaching experiences are structured, in relation to quality or quantity, can support or hinder their opportunities to learn. Finally, my findings challenge the polarised ideologies around ITT and ITE, suggesting that ITT is a subset of ITE and is viewed as an important stage in facilitating STs' learning.

My response to the second research question 'What are the tensions and competing participant voices of those who provided evidence for the review, pertaining to ITE policy and practice?' is integrated throughout my discussion in chapter five. Key points drawn out are the tensions between:

• learning how to teach across different contexts and learning to teach in a particular context;

• the complexity of learning how to teach and the simplification of the process;

- a co-operative approach to partnership working, suggesting two ITE curricula, one school based and one centre based each building on the other, as opposed to one co-constructed curriculum;

- the quantity of school/teaching experience and the quality of learning afforded by it;

- a prescriptive predetermined approach to STs' learning and a ST led approach;

- placing the curriculum at the 'heart' of ITE and viewing the individual needs of the ST as central;

- university teacher educators being viewed as providing 'services' to support STs' learning in school and having a role in facilitating STs' learning

My response to the third research question, 'How can the professional practice, as described by the participants, be used to inform the development of a flexible framework for how student teachers' learning may be facilitated in ITE?' is two-fold. Firstly, through the creation of my 'Pillars of Interaction and Interconnecting Bridges Framework for Articulating ITE Practice' generated through my thematic analysis of participant descriptions. Secondly, using the framework to structure the articulation and discussion of ITE practice in chapter 5.

6.4 Reflections on the research process and limitations of the study

Some might question the use of secondary data to tell the story of ITE practice as described by those in the field. However, as I explain in section 3.5.1, taking a critical realist perspective, I aimed to draw on 'multiple perspectives' (Gorski, 2013), each of which 'will know *some* of the story' (Pawson and Tilley, 2014, p.164) of ITE practice. As I outline in section 3.2.1, taking an epistemic relativism perspective, a critical realist accepts we can only partially access reality but drawing on 'multiple perspectives' enabled me to develop a structure to support the telling of as fuller story of the practice of ITE, as the data allowed. Collecting primary data, which was representative of such a range of those involved in ITE, would not have been possible within such a limited time-scale.

Whilst I explain in section 3.3.2 one of the advantages to using secondary date is mitigating the potential for the researcher to influence participant responses. Although, as I recognise in section 3.7, participant responses may have been influenced by the make-up of the advisory group leading the review being predominantly of those involved in school-led ITE. This may have swayed participant responses to focus on STs' learning in school, rather than in a university context.

I experienced a disadvantage of using secondary data during the analysis phase of my study. During this phase, there were times when I became frustrated with the data and would have liked to have probed participant responses further. For example, when participants referred to tools and strategies to support STs' learning but did not explain what these were or how

they facilitated learning, I was not able to interrogate their responses further. This revealed a limitation of my research design, as it did not provide opportunities to follow up emerging lines of enquiry with supplementary data from participants of the Carter Review (2015). As stated in section 3.7, the data acquired through a freedom of information request had information redacted where it was possible to identify individuals. As such, it would not have been possible to follow up lines of enquiry with specific individuals. However, on reflection, time allowing, I would have interviewed some of the key informants for the Carter Review (2015), to further inform my findings.

As I suggest in section 3.5.2, I am not aware of any other studies designed to further our understanding of educational practice that draws on national data generated through a review of such practice. As such, I suggest that this is one of the ways my study makes an original contribution to the field.

My aim to present a 'big-picture view' of how STs learn to teach, rather than discussing an aspect of such practice in detail was certainly a challenge. I gave careful consideration to the balance between providing enough description and exploration of each aspect of practice included in my framework and discussion of the themes used to generate it, and capturing the complexity of learning how to teach as described by participants. I found that drawing on my 'experiential data' (Strauss, 1987), as discussed in section 3.3.3, as a useful 'research tool' (Braun and Clarke, 2013) here. Furthermore, taking a hybrid approach to theme generation (3.8.1), enabled me to draw on my prior knowledge of ITE practice to explore more implicit features of the data, in line with a theoretical approach (Tuckett, 2005), whilst still allowing the themes to be generated through the

data rather than literature, indicative of an inductive approach (Terry et al, 2017). This is exemplified through the structure of my thesis, which presents the themes generated to develop my framework in chapter four, prior to my discussion of them in relation to pertinent literature from the field in chapter five. Focusing on all aspects of how STs learn, as described by participants, rather than an aspect of it, necessitated reading a broad range of literature relating to how STs learn. Rather than viewing this as a disadvantage, I would argue that this broad-brush approach is necessary to provide a holistic picture. This has substantially developed my knowledge base of how STs learn and, as a result, further supported my understanding of facilitating their learning.

6.5 Future research and dissemination

From a critical realist perspective (3.2.1), I recognise that my framework and discussion of themes that generated it can only reflect partial reality, mediated through others as well as myself. In this sense, it accepts that our understanding of reality will always remain incomplete. The next steps for my study will be disseminating my findings, along with my framework. However, as discussed in section 6.3 my research design did not provide opportunities to probe participants' descriptions more deeply. As such, part of the next steps from my study is to draw on supplementary data from key participants of the Carter Review (2015) to inform further interrogation of my findings. This aims to support with future dissemination and publication of the findings from my study.

In addition, engaging in discussion and debate with those who may have different, and sometimes competing accounts of how STs learn teaching forms

an essential part of a critical realist approach. Through the concept of 'judgemental rationality' (3.2.1), critical realists commit to this. I am looking forward to sharing my findings and framework further, to evaluate and explore them, drawing on the 'multiple perspectives' (Gorski, 2013) of those in the field, including STs themselves. I am hopeful that my framework and findings may provide opportunities to bring the community of both school and university teacher educators together in articulating and embracing the complex practice of teaching STs how to teach, which includes teaching them how to learn how to teach.

In addition to the next steps in relation to my study, my findings suggest areas in need of further research in relation to particular aspects of ITE practice, regarding teaching STs how to learn teaching. In section 5.3.8, through my discussion of STs' learning through and from interacting with subject associations, I suggest that more evidence is needed for the impact subject associations may make to STs' learning. In addition, my findings in section 5.3.9, relating to STs' learning through interacting with their peers, suggest that how to teach STs to learn through such interactions warrants further attention. Finally, my discussion of STs' learning through and from interactions with pupils in section 5.3.10, suggests that research into actively engaging pupils' voices and perspectives in ITE may be fruitful.

6.6 My study's overall contributions to knowledge

I suggest that my study makes an original contribution to knowledge in three ways. Firstly, through my review of literature, I was unable to find a model or

framework that attempts to holistically illustrate ITE practice across different contexts for learning. My study and resulting framework take such a holistic approach and as such, I suggest, make a unique contribution to the field of ITE. Secondly, the analysis and comparisons of reviews of ITE in the UK and across the globe, represented in tables 2.1 and 2.2, make an original contribution to knowledge of ITE policy and ideology. Finally, from a methodological perspective, with regards to the use of secondary data. Accessing data through a freedom of information request, which was generated through a national review into education practice to further develop our understanding of it, I argue makes an original contribution.

6.7 Implications for my practice and my role as a Director of an Institute of Education in an English university

This chapter began with offering a summary of key findings and potential implications for practice afforded by them (6.2). However, undertaking this study has been a personal journey, which has had a profound impact on me. Therefore, I felt it was apt to conclude this thesis with a summary of implications for my practice and role. As a Director of an Institute of Education, with strategic responsibility for STs' learning, focusing my study on 'the big picture' in relation to how STs learn, to an extent involved researching my own practice. Within the turbulent landscape of ITE policy in England, I have found my study has enabled me to not only make sense of what appeared at first to be polarised debates into how STs learn but to bring them together in a structure that offers a way forward. Through my study and framework, I feel better equipped to guide and support the team of both school and university teacher educators

within my institute to further develop and articulate their practice of teaching STs how to teach and to understand further the roles they and others play in the process. I would argue that my study offers others leading ITE useful guidance from a strategic perspective. The key conclusion to this study, which I will champion through my local, regional and national discussions with the ITE community, is the importance of viewing STs as students of their own learning, learning to learn how to teach. Teaching future teachers to also be future learners of teaching, I suggest is at the heart of ITE.

References

AACTE (2018). A pivot towards clinical practice. Its lexicon, and the renewal of educator preparation. *A report of the American Association of Colleges for Teacher Education Clinical Practice Commission*. Available at: http://www.nysed.gov/common/nysed/files/cpc-aactecpcreport.pdf (Accessed: 3.3.21)

Ackroyd, S and Karlsson, J, Ch (2014), Critical realism, research techniques, and research designs in *Studying organizations using Critical Realism : A practical guide*, edited by Paul K., Jr. Edwards, et al., Oxford University Press, Incorporated

Alexander, R. (2008) *Essays on pedagogy*. London: Routledge.

Allen, J.M. (2011) 'Stakeholders' perspectives of the nature and role of assessment during practicum', *Teaching and teacher education,* 27(4), pp.742-750.

Archer, M. (1995). *Realist social theory: the morphogenetic approach*. Cambridge: Cambridge University Press.

Archer, M. S. (2000). *Being human: The problem of agency*. Cambridge, UK: Cambridge University Press.

Archer, M. (2010). *Perspective, critical realism and relational sociology, complementarity and synergy*, Equinox Publishing Ltd 2010, 1 Chelsea Manor Studios, Flood Street, London SW3 5SR., doi: 10.1558/jcr.v9i2.199

Archer, M (2016). *What is critical realism?* Available at:

http://www.asatheory.org/current-newsletter-online/what-is-critical-realism

(Accessed: 15.10.20)

Attride-Stirling, J. (2001) Thematic networks: an analytic tool for qualitative

research. *Qualitative Research* 1, pp.385-405.

Ball, D and Forzani, M (2009). The work of teaching and the challenge for

teacher education. *Journal of Teacher Education*. Vol. 60 (5) pp.497-511

Ball, D and Forzani, M (2010). What does it take to make a teacher? *The Phil

Delta Kappan*. 2, pp.8-12

Ball, D and Forzani, M (2011). Teaching skillful teaching. *The Effective

Educator*. 68, (4), pp.40-45.

Bandura, A. (1997). *Self efficacy: The exercise of control*. New York: W. H.

Freeman & Company.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia

of human behavior* (4, pp. 71-81). New York: Academic Press. Available at:

https://www.uky.edu/~eushe2/Bandura/BanEncy.html (Accessed 11.11.21)

Barnes (2014) speech *at 'Curriculum challenge: being a curriculum thinker'*,

HEA Education event held at the University of East London on Monday 7 April

2014. Available at: https://www.heacademy.ac.uk/under-rug-curriculum

(Accessed: 9.9.21)

Beach, D. and Bagley, C (2013), Changing professional discourses in teacher education policy back towards a training paradigm, *European Journal of Teacher Education*, 36, (4), pp.379-392

Beijaard, D (2019) Teacher learning as identity learning: models, practices, and topics, *Teachers and Teaching*, 25 (1), pp.1-6

Bernstein, B. (2000) *Pedagogy, symbolic control and identity: theory, research, critique*. London: Rowman and Littlefield

Berry, A. (2007) *Tensions in teaching about teaching : understanding practice as a teacher educator*, edited by Mary Lynn Hamilton, and Ruth Kane, Springer Netherlands.

Bhaskar, R. (1989). *Reclaiming reality: A critical introduction to contemporary philosophy*. London: Verso

Bhaskar, R. (1991). *Philosophy and the idea of freedom*. Oxford, UK: Blackwell.

Bhaskar, R., C. Frank, K. G. Høyer, P. Naess, and J. Parker, editors (2010). *Interdisciplinarity and climate change: transforming knowledge and practice for our global future*. Routledge, London, UK.

Biesta, G.J.J (2010). *Good education in an age of measurement*. Boulder. Paradigm

Biesta, G. Takayama, K. Kettle, M. and Heimans, S (2020) Call for papers: A new agenda for teacher education research, *Asia-Pacific Journal of Teacher Education*, 48 (5), pp. 460-462, DOI: 10.1080/1359866X.2020.1818484

Born, B.B, Moriconi, G.M and Louzano, P (2021). Pedagogies of pre-service teacher education: the core practice consortium case. *EDUR. Educação em Revista* 37 DOI: http://dx.doi.org/10.1590/0102-4698235838

Boyd, P. (2017). *Realistic clinical practice: proposing an enquiry-based pedagogy for teacher education*. In: Noble-Rogers, James, (ed.) World-class teachers, world-class education. GuildHE, London, UK, pp. 92-107.

Braun, V. & Clarke, V. (2006) 'Using thematic analysis in psychology'*, Qualitative Research in Psychology,* 3 (2), pp.77-101.

Braun, V. & Clarke, V. (2013) *Successful qualitative research: A practical guide for beginners*. London: Sage.

Braun, V. Clarke, V. and Terry, G. (2015). Thematic analysis. In P. Rohleder and A. Lyons (Eds.), *Qualitative research in clinical and health psychology* (pp. 95–113). Basingstoke: Palgrave MacMillan.

British Educational Research Association [BERA] (2018) *Ethical guidelines for educational research*, fourth edition, London. Available at: https://www.bera.ac.uk/researchersresources/publications/ethicalguidelines-for-educational-research-2018 (Accessed: 3.3.21)

British Educational Research Association [BERA] (2014). Research and the teaching profession: building the capacity for a self-improving education system. *Final report of the BERA-RSA Inquiry into the role of research in*

teacher education. Available at: https://www.thersa.org/globalassets/pdfs/bera-rsa-research-teaching-profession-full-report-for-web-2.pdf (Accessed: 12.10.20)

Britzman, D.P (2003) *Practice makes practice : A critical study of learning to teach*, Revised Edition. Vol Rev. ed. SUNY Press.

Bronkhorst, L. H. Meijer, P. C. Koster, B. and Vermunt, J. D. (2011). Fostering meaning oriented learning and deliberate practice in teacher education. *Teaching and Teacher Education*, 27, pp.11

Brooks, C (2021). *The Core Content Framework and the fallacy of a teacher training 'curriculum'*. Available at: https://blogs.ucl.ac.uk/ioe/2021/09/02/the-core-content-framework-and-the-fallacy-of-a-teacher-training-curriculum/ (Accessed 4.9.21)

Brookfield, S (1998). Critically reflective practice. *The Journal of Continuing Education in the Health Professions*, 18, pp. 197–205.

Brookfield, S. (1995). *Becoming a critically reflective teacher*. San Francisco: Jossey-Bass.

Brookfield, S. (2004). *The getting of wisdom: What critically reflective teaching is and why it's important.* Available at:
(https://static1.squarespace.com/static/51acea8be4b02783f894c272/t/53628f3be4b0bddd58665b76/1398968123150/Brookfield-Getting+Wisdom.pdf
(Accessed: 6.7.21)

Browning, T.D and Korthagen, F.A.J. (2021): The winding road of student teaching: addressing uncertainty with core reflection, *European Journal of Teacher Education*.

Brown, J.S and Duguid, P. (1993) 'Stolen knowledge' *Educational Technologies*, 33 (3) pp.10-15

Brown, J.S and Duguid, P. (2000) *The social life of information*. Cambridge: Harvard Business School Press

Bullough, R. V., Jr. (2005). Being and becoming a mentor: school-based teacher educators and teacher educator identity. *Teaching and Teacher Education*, 21, pp. 143–155.

Bunge, M (1993) Realism and antirealism in social science. *Theory and Decision* (35) pp. 207-305

Burn, K and Mutton, T (2013). A review of 'research-informed clinical practice' in *Initial Teacher Education. Research and Teacher Education:* The BERA-RSA Inquiry. Available at: file:///C:/Users/RMHarrison/Downloads/BERA-Paper-4-Research-informed-clinical-practice.pdf (Accessed 12.11.21)

Burn, K. and Mutton, T. (2015). *A review of 'research-informed clinical practice' in Initial Teacher Education.* Oxford Review of Education.

Caena, F (2014*). Initial teacher education in Europe: an overview of policy issues*. European Commission Directorate-General for Education and Culture School policy/Erasmus+ ET2020 Working Group on Schools Policy

Carlson, H. L. (1999). From practice to theory: A social constructivist approach to teacher education. Teachers and Teaching: *Theory and Practice* 5(2), pp.203–218.

Carter, A. C. (2015) *Carter Review of initial teacher training* Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/399957/Carter_Review.pdf (Accessed 25.10.17)

Chandler, R cited in the Guardian (2009) Available at: https://www.theguardian.com/books/booksblog/2009/feb/09/raymond-chandler (Accessed 3.5.20)

Chapman L, Jones K and White E (2014) *Developing outstanding practice in school-based teacher education*. Critical Publishing.

Chohan, S.K (2010) Whispering selves and reflective transformations in the internal dialogue of teachers and students. *Journal of Invitational Theory and Practice* 16, pp.10-28

Clarke, A. E (2005). *Situational analysis: Grounded theory after the postmodern turn*. Thousand Oaks, CA: Sage

Clarke, V. & Braun, V. (2017) 'Thematic analysis', *The Journal of Positive Psychology*, 12 (3), pp.297-298.

Clarke, V. and Braun, V. (2018) 'Using thematic analysts in counselling and psychotherapy research: A critical reflection', *Counselling and Psychotherapy Research*, 18 (2), pp.107-110.

Cochran-Smith, M. (2005). The new teacher education: for better or for worse? *Educational Researcher* 34 (7) pp.3-17

Cochran-Smith, M. Feiman-Nemser, S. McIntyre, J.D and Demers, K.E (2008) *Handbook of research on teacher education: enduring questions in changing contexts*. Routledge. New York and London

Cook-Sather, A. and Youens, B. (2007). Repositioning students in initial teacher preparation: A comparative case study of learning to teach for social justice in the United States and in England. *Journal of Teacher Education*, 58, 62

Cook-Sather, A. (2009). "I am not afraid to listen": prospective teachers learning from students. *Theory Into Practice*, 48, pp.176-183,

Corbin, J. and Strauss, A (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory (4th Ed.).* Thousand Oaks, CA: Sage

Core Practices Consortium (2021) Available at:

https://collaboratory.gse.upenn.edu/content/core-practices-consortium (Accessed 5.11.21)

Cranton, P and Carusetta, E. (2004) Authenticity in teaching. *Adult Education Quarterly*, 55 (1), pp.5-22

Crasborn, F., Hennisson, P., Brouwer, N., Korthagen, F., & Bergen, T. (2008). Promoting versatility in mentor teachers' use of supervisory skills. *Teaching and Teacher Education*, 24, pp.499–514.

Craven, G. et al (2015) *Action now: classroom ready teachers* Available at:

https://www.aitsl.edu.au/docs/default-source/default-document

library/action_now_classroom_ready_teachers_accessibl

(1)da178891b1e86477b58fff00006709da.pdf?sfvrsn=9bffec3c_0 (Accessed

3.7.19)

Creswell, J. W and Creswell, J. D. (2018) *Research design*. Sage

Crook, D. (2002) 'Educational studies and teacher education', *British Journal of Educational Studies* 50 (1) pp.57-75

Crotty, M. (1998) *The foundations of social research: Meaning and perspective in the research process*. London: Sage.

Crowe, A, R. and Berry, A (2007). Teaching prospective teachers about learning to think like a teacher: articulating our principles of practice. In Russell, J. and Loughran, J (2007*). Enacting a Pedagogy of Teacher Education*. Routledge. London and New York

Darling-Hammond, L. (2014). Strengthening clinical preparation: The Holy Grail of teacher education. *Peabody Journal of Education*, 89(4), pp.547-561. doi:10.1080/0161956X.2014.939009

Darling-Hammond, Linda. (2010). Teacher education and the American future*. Journal of Teacher Education* - 61. pp.35-47

Darling-Hammond, L (2006). Constructing 21st-century teacher education. *Journal of Teacher Education*. 57 (3) pp.300-314

Darling-Hammond, L., and Snyder, J. (2000). Authentic assessment of teaching in context. *Teaching and Teacher Education*, 16, pp.523-545. doi.org/10.1016/S0742-051X(00)00015-9

Delandshere, G., and Petrosky, A. (2004). Political rationales and ideological stances of the standards-based reform of teacher education in the US. *Teaching and Teacher Education*, 20(1), pp.1–15. https://doi.org/10.1016/j.tate.2003.09.002

Department for Education and Skills (DfES), (1972), The James report: teacher education and training, Available at: http://www.educationengland.org.uk/documents/james/james1972.html#03 (Accessed: 25.10.17)

Department for Education (DfE), (1992), *The new requirements for initial teacher training, (Circular 9/92).* London

Department for Education (DfE), (1993), *The government's proposals for the reform of initial teacher education).* London

Department for Education and Employment (DfEE), (1998). *Teachers: meeting the challenge of change*. DfEE: Green Paper. London

Department for Education and Skills (DfES), (2002) *Qualifying to teach* Available at: http://www.geodata.soton.ac.uk/rgse/fmanage/Information_Technology/readonly.access/QualifyingtoTeach.pdf (Accessed 25.10.17)

Department for Education (DfE), (2010), *The Importance of teaching* Available at: https://www.gov.uk/government/publications/the-importance-of-teaching-the-schools-white-paper-2010 (Accessed 25.10.17)

DfE (2011). Teachers' standards guidance for school leaders, school staff and governing bodies Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1040274/Teachers__Standards_Dec_2021.pdf (Accessed 1.3.20)

Department for Education (2011), *The National Strategies 1997-2011: a brief summary of the impact and effectiveness of the National Strategies* Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/175408/DFE-00032-2011.pdf (Accessed 10.10.20)

DfE (2017). Evidence-informed teaching: an evaluation of progress in England, Research report. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/625007/Evidence-informed_teaching_-_an_evaluation_of_progress_in_England.pdf (Accessed: 10.08.20)

DfE (2019a). Early career framework. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/978358/Early-Career_Framework_April_2021.pdf (Accessed: 10.10.20)

DfE (2019b). ITT core content framework. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/att achment_data/file/974307/ITT_core_content_framework_.pdf (Accessed: 10.10.20)

DfE (2019c). The trainee teacher behavioural toolkit: a summary. Available at:

https://www.gov.uk/government/publications/initial-teacher-training-itt-core-content-framework/the-trainee-teacher-behavioural-toolkit-a-summary (Accessed: 02.02.21)

Department for Education (DfE), (2011a), *Training our next generation of outstanding teachers* Available at:

https://www.gov.uk/government/publications/training-our-next-generation-of-outstanding-teachers-an-improvement-strategy-for-discussion (Accessed 8.10.20)

Department for Education (DfE), (2011b), *Training our next generation of outstanding teachers: implementation plan* Available at:

https://www.gov.uk/government/publications/training-our-next-generation-of-outstanding-teachers-implementation-plan (Accessed 8.10.20)

DfE (2021a). Delivering world-class teacher development. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/att achment_data/file/991390/Delivering_World-Class_Teacher_Development.pdf (Accessed: 6.07.21)

DfE (2021b). National professional qualifications frameworks: from autumn 2021 Available at: https://www.gov.uk/government/publications/national-professional-qualifications-frameworks-from-september-2021 (Accessed: 20.10.21)

DfE (2021c). Initial teacher training (ITT): criteria and supporting advice. Available at: https://www.gov.uk/government/publications/initial-teacher-training-criteria/initial-teacher-training-itt-criteria-and-supporting-advice (Accessed: 7.7.21)

DfE (2021d) Government response to the initial teacher training (ITT) market review report. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1039259/Government_response_to_the_initial_teacher_training__ITT__market_review_report.pdf (Accessed: 10.12.21)

DfE (2021e) Initial teacher training (ITT) market review report Available at: https://www.gov.uk/government/publications/initial-teacher-training-itt-market-review-report (Accessed: 20.7.21)

Department of Education and Early Childhood Development, State of Victoria. (2010). A learning guide for teacher mentors Available at: https://www.education.vic.gov.au/Documents/school/principals/profdev/learngteacherm.pdf (Accessed 12.8.21)

DeSantis, L and Ugarriza, D. N (2000) The concept of theme as used in qualitative nursing research. *Western Journal of Nursing Research* 22(3), pp.351-372

Dillenbourg, P. (1999). What do you mean by collaborative learning? In P. Dillenbourg (ed.), *Collaborative learning: cognitive and computational approaches* (pp.1-19). Oxford: Elsevier

Donaldson, G. (2010) *Teaching Scotland's Future: Report of a review of teacher education in Scotland* Available at: https://www.webarchive.org.uk/wayback/archive/20190701211038/https://www2.gov.scot/resource/doc/337626/0110852.pdf (Accessed 9.11.20)

Donaldson, G. A., & Marnik, G. F. (1995). Becoming better leaders: The challenge of improving student learning. Thousand Oaks, CA: Corwin Press.Doyle, W. (1979). Making managerial decisions in class MLA 8th Edition (Modern Language Assoc.) cited in Fred A.J. Korthagen, et al. *Linking Practice and Theory : The Pedagogy of Realistic Teacher Education*. Routledge, 2001.

Doolan, D. M. and Froelicher, E. S. (2009). Using an existing data set to answer new research questions: A methodological review. *Research and Theory for Nursing Practice: An International Journal*, 23, pp.203-215

Dutro, E. Cartum, A. (2016) Cut to the core practices: toward visceral disruptions of binaries in practice-based teacher education. *Teaching and Teacher Education*, 58, pp.119-128

Dynak, J. Whitten, E and Dynak, D (1997) Refining the general education student teaching experience through the use of special education collaborative teaching models, *Action in Teacher Education*, 19(1), pp.64-74

Edwards, A. (2001) 'Researching pedagogy: A sociocultural agenda', *Pedagogy, Culture and Society*, 9 (2), pp.161-186.

Edwards, P.K. O'Mahoney, J. Vincent, S (2014). *Studying organizations using critical realism: a practical guide.* Oxford University Press

Ellis, V (2010). Impoverished experience: the problem of teacher education in England. *Journal of Education for Teaching* 36 (1) pp.105-120.

Ellis, V., Blake, A., McNicholl, J. & McNally, J. (2011) *The work of teacher education.* Final report. Bristol: ESCalate.

Ely, M., Vinz, R., Downing, M. and Anzul, M. (1997) On writing qualitative research: living by words. Routledge/Falmer cited in Braun, V. & Clarke, V. (2006) *'Using thematic analysis in psychology'*, Qualitative Research in Psychology, 3 (2), pp.77-101.

Eraut, M. (2009) 'Transfer of knowledge between education and workplace settings', in Daniels, H., Lauder, H. and Porter, J. *Knowledge, Values and Educational Polic : A Critical Perspective*. Taylor & Francis Group pp.65-84

Ethell, R.G and McMeniman, M, M. (2000). Unlocking the knowledge in action of an expert practitioner. *Journal of Teacher Education* 51, (2), pp.87-101.

European Commission (2013). *Supporting teacher educators for better learning outcomes. Brussels: European Commission* Available at:

https://ec.europa.eu/assets/eac/education/policy/school/doc/support-teacher-educators_en.pdf (Accessed on 11.12.20)

Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record*, 103(6), pp.1013-1055.

Finney, D. (2002). *The ELT curriculum: a flexible model for a changing world*. 10.1017/CBO9780511667190.012.

Fleetwood, S (2005). Ontology in organization and management studies: a critical realist perspective. *Organisation articles* 12(2) pp. 197–222

Fleetwood, S. (2014). "Bhaskar and Critical Realism." In *Oxford Handbook of Sociology, Social Theory and Organisation Studies: Contemporary Currents*, edited by P. Adler, P. Du Gay, G. Morgan, and M. Reed, 182–219. Oxford: Oxford University Press.

Fletcher, A, J. (2017). Applying critical realism in qualitative research: methodology meets method. *International Journal of Social Research Methodology* 20 (2) pp. 181-194

Forgasz, R. Heck, D., Williams, J. Ambrosetti, A. & Willis, L. (2018) 'Theorising the third space of professional experience partnerships', in Kriewaldt, J., et al. *Educating future teachers: Innovative perspectives in professional experience.* Singapore: Springer Nature pp.33-47.

Forzani, F. (2014). Understanding "core practices" and "practice-based" teacher education: Learning from the past. *Journal of Teacher Education*, 65(4), pp.357-368.

Franke, M. L., and Kazemi, E. (2001). Teaching as learning within a community of practice: Characterizing generative growth. In T. Wood, B. Nelson, & J. Warfield (Eds*.), Beyond classical pedagogy in elementary mathematics: The nature of facilitative teaching* (pp. 47-74). Mahwah, NJ: Lawrence Erlbaum

Fullen, M (2009). Michael Fullan response to MS 3 questions about personalized learning Available at: https://michaelfullan.ca/wp-content/uploads/2016/06/Untitled_Document_16.pdf (Accessed: 17.2.21).

Fuller, F. (1969). Concerns of teachers: A developmental conceptualization. *American Educational Research Journal,* 6, pp.207-226.

Furlong, J. (2015). *Teaching Tomorrow's Teachers: Options for the future of initial teacher education in Wales* Available at: https://gov.wales/sites/default/files/publications/2018-03/teaching-tomorrow%E2%80%99s-teachers.pdf (Accessed 9.11.20)

Garmon Bibb, S. C. (2007). Issues associated with secondary analysis of population health data. *Applied Nursing Research*, 20, pp. 94-99.

Gibson, D. E. and Cordova, D. I. (1999). Women and men's role models: The importance of exemplars. In A. J. Murrell, F. J. Crosby, and R. J. Ely (Eds.), *Mentoring dilemmas: Developmental relationships within multicultural organizations* (pp. 121–142). Mahwah, NJ: Erlbaum.

Gilber Highet (1996) cited in Ball, D and Forzani, M (2009). The work of teaching and the challenge for teacher education. *Journal of Teacher Education*. Vol. 60 (5) pp.497-511

Glesne, C., and Peshkin. (1992). *Becoming qualitative researchers: An introduction*. White Plains, NY: Longman.

Golding, J. (2015). What has the coalition government done for the development of initial teacher education? *London Review of Education* 13 (2), pp.113-124.

Golding, J (2017) Mathematics teachers' capacity for change, *Oxford Review of Education*, 43(4), pp.502-517, DOI: 10.1080/03054985.2017.1331846

Good Reads (2021) Available at: https://www.goodreads.com/quotes/488827-it-is-better-to-know-how-to-learn-than-to (Accessed 2.10.21)

Gorski, P. S (2013) What is critical realism? And why should you care? *Contemporary Sociology* 42, 5

Gosj, J.C (2019). *Bite-size lecture 01: Roy Bhaskar's notion of judgemental rationality* Available at: https://critrealap.net/bite-size-lecture-01-roy-bhaskars-notion-of-judgemental-rationality/ (Accessed 20.10.20)

Gove, M. (2010) *Michael Gove to the National College Annual Conference*. Available at:
http://www.education.gov.uk/inthenews/speeches/a0061371/michael-gove-to-the-national -college-annual-conference-birmingham (Accessed: 08.10.20).

Grimmitt, M. (ed.) (2000) *Pedagogies of religious education: case studies in the research and development of good pedagogic practice in religious education*, Great Wakering, Essex: McCrimmon

Grosser-Clarkson, D and Neel, M.A (2020). Contrast, commonality, and a call for clarity: A Review of the use of core practices in teacher education. *Journal of Teacher Education* 71(4) pp. 464–476

Grossman, P and McDonald, M (2008). Back to the future: directions for research in teaching and teacher education. *American Educational Research Journal* March, 5, (1), pp. 184 –205

Grossman, P (2010) *Learning to practice: the design of clinical experience in teacher preparation*. Available at:

http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=D513BDC278074667066562EABCBB619E?doi=10.1.1.178.4088&rep=rep1&type=pdf (Accessed: 3.12.21).

Grossman, P, Hammerness, K and McDonald, M (2009). Redefining teaching, re-imagining teacher education. *Teachers and Teaching*, 15 (2) pp.273-289

Grossman, P. Compton, C. Igra, D. Ronfeldt, M. Shahan, E and Williamson, P.W (2009b) *Teaching practice: a cross-professional perspective. Teachers College record* 111(9), pp.2055–2100.

Grossman, P (2010). Learning to practice: the design of clinical experience in teacher preparation Available at:

http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=94FA2C1BA4F55296

C740BF680BCB380C?doi=10.1.1.178.4088&rep=rep1&type=pdf (Accessed: 4.11.21)

Grossman, P. Kavanagh, S. and Dean, C. (2018) The turn towards practice in teacher education. In: Grossman, P (Ed.) *Teaching Core Practices in Teacher Education*. Cambridge, MA: Harvard Education Press p. 1-14.

Guba, E. G (1990). The alternative paradigm dialog. In E. G. Guba (Ed.) *The paradigm dialog* pp.17-30 Newbury Park, CA: Sage

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105–117). Sage Publications, Inc.

Hammerness, K. (2013). Examining features of teacher education in Norway. *Scandinavian Journal of Educational Research*, 57,(4), pp.400–419

Harste, J.C and Vasquez, V.M. (2017). What do we mean by literacy now? Critical curricular implications in global conversations in *Literacy Research Digital and Critical Literacies* Edited by Albers, P.

Hatch, T. and Grossman, P. (2009). Learning to look beyond the boundaries of representation: Using technology to examine teaching (Overview for a digital exhibition: Learning from the practice of teaching). *Journal of Teacher Education*, 60(1), pp. 70-85.

Hilferty, F. (2003). *Subject teaching associations 1 and the professional representation of teachers in New South Wales*. Available at:

(https://www.acsa.edu.au/pages/images/2001_subject_teaching_associations.pdf (Accessed: 11.8.21)

Hiver, P. Whiteside, Z. Sánchez Solarte, A.C. and Kim, C.J (2021) Language teacher metacognition: beyond the mirror, *Innovation in Language Learning and Teaching*, 15 (1), pp.52-65

Hobson, A.J. Ashby, P. Malderez, A. Tomlinson, P.D. (2009). Mentoring beginning teachers: What we know and what we don't. *Teaching and Teacher Education* 25 pp.207–216

Husbands, C, (2010) What do history teachers (need to) know? A framework for understanding and developing practice. In I Davies (ed), *Debates in History Teaching*, London, Routledge, pp.84–95

Jackson, P.W (1986). *The practice of teaching*. New York: Teacher College Press, Columbia University

Jacobs, V. R., and Spangler, D. A. (2017). Research on core practices in K-12 mathematics teaching. In J. Cai (Ed.), *Compendium for research in mathematics education* (pp. 766-792). Reston, VA: National Council of Teachers of Mathematics.

James, M & Pollard, A, (2011) TLRP's ten principles for effective pedagogy: rationale, development, evidence, argument and impact, *Research Papers in Education*, 26(3), pp.275–328

Joo, B.K Sushko, J. S., and McLean, G. N. (2012). Multiple faces of coaching: manager-as-coach , executive Coaching , and formal mentoring. *Organization Development Journal*, 30(1), pp.19–38.

Kemmis, Stephen & Grootenboer, Peter. (2008). *Situating praxis in practice*.

Klette, K and Hammerness, K. (2016). *Conceptual framework for analyzing qualities in teacher education: looking at features of teacher education from an international perspective*. Acta Didactica Norge 10 (2) pp.26-52

Knutas, A. (2019). Shadowing or what? Experience of shadowing acts of being in the field of education*. Qualitative Inquiry*, 25(7) pp.661– 669

Korthagen, F. and Lagerwerf, B. (2001). Teachers' professional learning: how does it work? In F. A. J. Korthagen, J. Kessels, B. Koster, B. Lagerwerf, and T. Wubbels*. Linking practice and theory: The pedagogy of realistic teacher education* (pp. 175–206). Mahwah: Lawrence Erlbaum Associates.

Korthagen, F, Kessels, J Koster,B Lagerwerf, B and Wubbels, T. (2001). *Linking practice and theory : The pedagogy of realistic teacher education*. Routledge.

Korthagen, F, Loughran, J and Lunenberg, M (2005). Teaching teachers— studies into the expertise of teacher educators: an introduction to this theme issue. *Teaching and Teacher Education* (21) pp.107–115

Korthagen, F, Loughran, J and Russell, T. (2006). Developing fundamental principles for teacher education programs and practices. *Teaching and Teacher Education* 22 pp.1020–1041

Korthagen, F. A. J. (2010). Situated learning theory and the pedagogy of teacher education: Towards an integrative view of teacher behavior and teacher learning. *Teaching and Teacher Education*. 26 pp.98-106.

Korthagen, F. A. J (2011). Making teacher education relevant for practice: the pedagogy of realistic teacher education pp31-50 in *Thematic Issue: Towards Expertise in the Teaching Profession, Orbis Scholae* 5 (2).

Korthagen, F. (2017) Inconvenient truths about teacher learning: towards professional development 3.0, *Teachers and Teaching*, 23 (4) pp.387-405

Kriewaldt, J. and Turnidge, D. (2013). Conceptualising an approach to clinical reasoning in the education profession. Australian Journal of Teacher Education 38 (6): 102–115. In McLean Davies, L. Dickson, B. Rickards, F. Dinham, S. Conroy, J. and Davis, R. (2015) Teaching as a clinical profession: translational practices in initial teacher education – an international perspective, *Journal of Education for Teaching*, 41 (5) pp.514-528

Labaree, D.F (2000*). On the nature of teaching and teacher education: difficult practices that look easy. *Journal of Teacher Education*. 51 (3) pp.228-233

Lampert, M and Graziani, F (2009). Instructional activities as a tool for teachers' and teacher educators' learning. *Elementary School Journal* 109 (5), pp.491-509.

Lampert, M (2010). Learning teaching in, from, and for practice: what do we mean? *Journal of Teacher Education* 61 (1-2) pp.21-34.

Lampert, M. Franke, M.L. Kasemi, E. Ghousseini, H. Turrou, A.C. Beasley, H. Cunard, A. Crowe, K. (2013). Keeping It complex: using rehearsals to support novice teacher learning of ambitious teaching. *Journal of Teacher Education* 64(3) pp.226–243

Larry, T.A (2017). *Perceived self-efficacy and student-teachers relationships among diverse students' achievement in science*. Available at: https://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=2618&context=doctoral (Accessed 16.8.21)

Lawn, M. and Furlong, J. (2009) 'The disciplines of education in the UK: between the ghost and the shadow' *Oxford Review of Education* 35 (5): 541-552

Leadbeater, C. (2004). *Learning about personalisation: how can we put the learner at the heart of the education system?* Teachers transforming teaching. National College for School Leadership Available at: https://lx.iriss.org.uk/sites/default/files/resources/Learning%20about%20personalisation.pdf (Accessed: 12.11.21)

Le Cornu, R and Ewing, R (2008). Reconceptualising professional experiences in pre-service teacher Education… reconstructing the past to embrace the future. *Teaching and Teacher Education* 24 pp. 1799–1812

Learners Dictionary Available at:

https://www.learnersdictionary.com/definition/distill (Accessed 12.10.21)

Lewis, E. (2014). Considering cross-phase peer mentoring in ITE: what can each party bring to the table? *Research in Teacher Education*, 4, (1). pp. 22–27.

Lingard, B and Renshaw, P (2010) Teaching as a research-informed and a research-informing Profession. In Campbell. A and Groundwater-Smith, S. Connecting Inquiry and Professional Learning in Education. *International Perspectives and Practical Solutions*, 26-39. London and New York: Routledge

Loughran, J. (2006) *Developing a pedagogy of teacher education: Understanding teaching and learning about teaching*. London: Routledge.

Loughran, J. and Russell, T. (2007) Beginning to understand teaching as a discipline. Studying Teacher Education: *A journal of self-study of teacher education practices*, 3, pp.217–227.

Loughran, John. (2009). *Is teaching a discipline? Implications for teaching and teacher education. Teachers and Teaching*. 15. 189-203. 10.1080/13540600902875290.

Loughran, J and Menter, I (2019) The essence of being a teacher educator and why it matters, *Asia-Pacific Journal of Teacher Education*, 47(3), pp.216-229, DOI: 10.1080/1359866X.2019.1575946

Madill, A, Jordan, A, Shirley, C (2000) Objectivity and reliability in qualitative analysis: Realist, contextualist and radical constructionist epistemologies. *British Journal of Psychology* (91) pp. 1-20

MacKay, T. (2007*). Achieving the vision: the final research report of the West Dunbartonshire Literacy Initiative* Available at: file:///C:/Users/RMHarrison/Downloads/AchievingtheVision.pdf (Accessed: 09.10.21)

Manouchehri, A. (2002). Developing teaching knowledge through peer discourse. *Teaching and Teacher Education* 18 pp.715–737

Mason, J. (2002). *Qualitative researching* (2nd Ed.). London: Sage

Mason, J. (2002a). Researching your own practice: The discipline of noticing. Routledge.

Mason, J. (2011). Noticing: Roots and branches. In M. G. Sherin, V. R. Jacobs, & R. A. Philipp (Eds.), *Mathematics teacher noticing: Seeing though teachers' eyes* (pp. 35-50). New York: Routledge.

Mason, J. (2021) Learning about noticing, by, and through, noticing. *Mathematics Education* 53, pp.231–243 doi.org/10.1007/s11858-020-01192-4

Masters, Y., and Freak, A. (2015). Grappling with multiplicity: a framework for teacher formation. *Australian Journal of Teacher Education*, 40 (12).

Mattson, M., T. V. Eilertson, and D. Rorrison, eds. (2011*). A Practicum turn in teacher education*. Rotterdam: Sense Publishers.

Mayer, D and Mills, M (2021). Professionalism and teacher education in Australia and England. *European Journal of Teacher Education* 44 (1) pp.45-61

Mayer, D. (2021). The connections and disconnections between teacher education policy and research: reframing evidence. *Oxford Review of Education*, 47(1), pp.120-134, DOI: 10.1080/03054985.2020.1842179

Maxwell, J.A (2004), *Qualitative Research Design* (2nd ed.) SAGE Publications

McCarthy, S and Youens, B. (2005) Strategies used by science student teachers for subject knowledge development: a focus on peer support, *Research in Science & Technological Education*, 23(2), pp.149-162

McCullagh, J. and Doherty, A. (2020) 'A coteaching model for developing pre-service teachers' practice and confidence in teaching primary science through inquiry' *Education 3-13*.

McDonald, M, Kazemi, E and Schneider Kavanagh, S (2013) Core practices and pedagogies of teacher education: a call for a common language and collective activity. *Journal of Teacher Education* 64(5) pp.378–386

McLean Davies, L. Dickson, B. Rickards, F. Dinham, S. Conroy, J. and Davis, R. (2015) Teaching as a clinical profession: translational practices in initial teacher education – an international perspective, *Journal of Education for Teaching*, 41 (5) pp.514-528

McLeskey, J., and Brownell, M. (2015). High-leverage practices and teacher preparation in special education Available at:

https://ceedar.education.ufl.edu/wp-content/uploads/2016/05/High-Leverage-Practices-and-Teacher-Preparation-in-Special-Education.pdf (Accessed: 10.10.21).

Merrifield, M. (1993). Reflective practice in global education: Strategies for teacher educators. *Theory Into Practice*, 32(1), pp.1–6.

Moon, B. (2016). *Do universities have a role in the education and training of teachers? An international analysis of policy and practice*. Cambridge: Cambridge University Press.

Munday, S. (2016). *A framework of core content for initial teacher training (ITT)*. London: Department for Education.

Murray, M. (1991). *Beyond the myths and magic of mentoring*. San Francisco, CA: Jossey-Bass

Murray, F and Fallon, D. (1989). The reform of teacher education for the 21st century: project 30 year one report Available at: https://files.eric.ed.gov/fulltext/ED355178.pdf (Accessed 3.4.21)

Murray, J., Czerniawski, G. and Barber, P. (2011) Teacher educators' identities and work in England at the beginning of the second decade of the twenty-first century. *Journal of Education for Teaching*. 37 (3), pp.261-77.

Murray, J. and Male, T (2005). Becoming a teacher educator: Evidence from the field. *Teaching and Teacher Education*. 21 (2) pp.125-142

Murray, J. and Kosnik, C. (2011) 'Academic work and identities in teacher education', *Journal of Education for Teaching: International research and pedagogy*, 37(3), pp.243-246.

Mutton, T. Burn, K. Menter, I. (2017). Deconstructing the Carter Review: competing conceptions of quality in England's 'school-led' system of initial teacher education. *Journal of Education Policy* 32 (1), pp.14-33

NCATE (2010) Transforming teacher education through clinical practice: a national strategy to prepare effective teachers. Available at: https://files.eric.ed.gov/fulltext/ED512807.pdf (Accessed: 2.2.21).

NIE (2010). A teacher education model for the 21st century (TE21) A report by the National Institute of Education, Singapore Available at: https://www.nie.edu.sg/docs/default-source/te21_docs/te21_executive-summary_14052010---updated.pdf?sfvrsn=2 (Accessed 2.3.20)

Norris, S. P. (2000). The pale of consideration when seeking sources of teaching expertise. *American Journal of Education*, 108(3), pp.167-195

Ofsted (2020). *Initial teacher education (ITE) inspection framework and handbook* Available at: https://www.gov.uk/government/publications/initial-teacher-education-ite-inspection-framework-and-handbook (Accessed 08.10.20)

Ofsted (2020). Building great teachers? Initial teacher education curriculum research: phase 2 Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/att

achment_data/file/858568/Building_great_teachers__Initial_teacher_education_curriculum_research_phase_2_.pdf (Accessed 4.6.21)

Oliver, C. (2012). Critical realist grounded theory: A new approach for social work research. *British Journal of Social Work*, 42, pp.371–387.

Palmer, P.J. (2017) *The courage to teach: Exploring the inner landscape of a teacher's life*. Twentieth anniversary edition edn. San Francisco, CA: Jossey-Bass.

Pawson, R and Tilley, N (2014). *Realistic Evaluation*. Sage publications

Peercy, M.M, Troyan, F.J (2017). Making transparent the challenges of developing a practice-based pedagogy of teacher education. *Teaching and Teacher Education* 61 pp.26-36

Philpott, C (2014). A pedagogy for initial teacher education in England. *Teacher Education Advancement Network Journal*, University of Cumbria 6 (3) pp. 4-16

Philpott, C. (2014) Models of professional learning and what they mean for those working with teachers. Phipott, C. Scott, H. and Mercier, C. *Initial Teacher Education in Schools*. Sage.

Pinnegar, S. (1995) (Re-) Experiencing beginning. *Teacher Education Quarterly* 22 (3), pp.65-83

Raffo, C. & Hall,pe D. (2006). Transitions to becoming a teacher on an initial teacher education and training programme, *British Journal of Sociology of Education*, 27(1), pp.53-66

Redman-MacLaren, M., & Mills, J. (2015). Transformational grounded theory: Theory, voice, and action. *International Journal of Qualitative Methods*, 14(3), pp.1–12.

Reid, A and O' Donoghue, M (2004). Revisiting enquiry-based teacher education in neo-liberal times. *Teaching and Teacher Education* 20 pp. 559–570

Resnick, L.B (Ed). (1989). *Knowing, Learning and instruction: Essays in honor of Robert Glaser*. Hillsdale, NJ: Erlbaum.

Richards, L and Richards, T. (1994). 'From filing cabinet to computer' in Bryman, A. and Burgess, R.G. *Analysing Qualitative Data*, London, Routledge.

Ritter, J. K. (2011). On the affective challenges of developing a pedagogy of teacher education. *Studying Teacher Education* 7 (3) pp.219-233

Rivlin, H. N. (Ed). (1943). Encyclopaedia of Modern Education. New York: The Philosophical Library of New York City. In O'Neill, G. P. (1986). Teacher Education or Teacher Training: Which is it? McGill *Journal of Education*, 21 (3), pp.257-265.

Rodgers, C.R and Scott, K.H. (2008) The Development of the personal identity in learning to teach. In Cochran-Smith, M. Feiman-Nemser, S. McIntyre, D.J and Demers, K.E (2008) *Handbook of Research on Teacher Education*. Abingdon: Routledge, Routledge Handbooks.

Rowe, J (2021). *What does a 'high quality' ITE curriculum look like?* Available

at: https://schoolsweek.co.uk/what-does-a-high-quality-ite-curriculum-look-like/

(Accessed 4.12.21)

Rowe, J and McLain, MN (2018). The challenges of curriculum design in initial

teacher education (ITE): a perspective from Liverpool John Moores University.

Impact Journal of the Chartered College of Teaching. ISSN 2514-6955

Russell, T. (2013). Has reflective practice done more harm than good in teacher

education? *Phronesis*, 2,(1), pp.80–88.

Sahlberg, P. (2012) Report of the international review panel on the structure of

initial teacher education provision in Ireland Available at:

https://www.education.ie/en/Publications/Education-Reports/Report-of-the-
International-Review-Panel-on-the-Structure-of-Initial-Teacher-Education-
Provision-in-Ireland.pdf (Accessed 9.11.20)

Sahlberg, P (2014) *Aspiring to excellence: final report of the international

review panel on the structure of initial teacher education in Northern Ireland*

Available at: https://dera.ioe.ac.uk/20454/1/aspiring-to-excellence-review-panel-
final-report.pdf (Accessed 9.11.20)

Sahlberg, P (2019) *The structure of teacher education in Ireland: review of

progress in implementing reform* Available at:

https://hea.ie/assets/uploads/2019/05/HEA-Structure-of-Teacher-Education.pdf

(Accessed 9.11.20)

Salas, Eduardo and Cannon-Bowers, Janis. (2001). The science of training: a decade of progress. *Annual review of psychology.* 52. pp.471-99.

Saldana, J (2016). *The coding manual for qualitative researchers*. Sage

Samuel, M. (2010). Beyond the garden of Eden: deep teacher professional development. South *African Journal of Higher Education* 23 (4) pp.737-758

Savage, A and Hyde, R. (2014). Using freedom of information requests to facilitate research. *International Journal of Social Research Methodology*. 17 (3), pp.303-317

Savin-Baden, M and Major, C.H (2013). *Qualitative Research: The essential guide to theory and practice*. Routledge Press

Sayer, A. 2000. *Realism and Social Science.* Sage

Scales, R.Q DeVere Wolsey. T, Lenski, S. Smetana, L. Yoder, K.K. Dobler, E. Grisham, D.L. and Young, J.R (2018). Are we preparing or training teachers? Developing professional judgment in and beyond teacher preparation programs. *Journal of Teacher Education*, 69(1) pp. 7-21

Scharf, J. (2019) What does school look like through the eyes of a student? Available at: https://dschool.stanford.edu/news-events/what-does-school-look-like-through-the-eyes-of-a-student (Accessed 7.7.21)

Schwandt, T. A. (2000). Three epistemological stances for qualitative inquiry: Interpretivism, hermeneutics, and social constructionism. In N. K. Denzin, & Y.

S. Lincoln (Eds.), *Handbook of Qualitative Research* (2 ed., pp. 189-213). SAGE Publishing.

Schwille, S.A. (2008). The professional practice of mentoring. *American Journal of Education* 115, (1), pp.139-167

Shandomo, H.M. (2010). *The role of critical reflection in teacher education. school-university partnerships*, 4 (1) pp.101-113 Available at: https://eric.ed.gov/?id=EJ915885 (Accessed: 20.3.21)

Sherin, M. G., and van Es, E. A. (2005). Using video to support teachers' ability to interpret classroom interactions. *Journal of Technology and Teacher Education*, 13(3), pp.475–491.

Shulman, L.S. (1986) Those who understand: knowledge growth in teaching. *Educational Researcher,* 15 (2) pp. 4-14.

Star, J. R., and Strickland, S. K. (2008). Learning to observe: Using video to improve preservice mathematics teachers' ability to notice. *Journal of Mathematics Teacher Education*, 11, pp. 107-125.

Sternberg, R.J and Horvarth, J.A (1995). A prototype view of expert teaching. *Educational Researcher* 24 (6) pp.9-17.

Stetsenko, A (2008). From relational ontology to transformative activist stance on development and learning: expanding Vygotsky's (CHAT) project. *Cultural Studies of Science Education* 3 pp.471–491

Stewart, D. W. & Kamins, M. A. (1993). Evaluating secondary sources. In Stewart, D. W., & Kamins, M. A. *Applied Social Research Methods: Secondary research* (pp. 17-32). Thousand Oaks, CA: SAGE Publications

Strauss, A. L. (1987). *Qualitative analysis for social scientists*. Cambridge University Press.

Swan, J. (2001). Reviewed work: Postpositivism and educational research by D. C. Phillips, Nicholas C. Burbules. *British Journal of Educational Studies* 49, (1) pp. 109-111

Szplit, A., (2017). Inquiry-based continuing professional development for university teachers: polish initiatives and concerns. *In*: A. Szplit and P. Boyd, eds. *Teachers and teacher educators: learning through inquiry: international perspectives*.

Tabberer, R. (2013) *A review of initial teacher training in Wales* Available at: https://gov.wales/sites/default/files/publications/2018-09/review-of-initial-teacher-training-2013.pdf (Accessed 9.11.20)

Terry, G., Hayfield, N., Clarke, V. & Braun, V. (2017*) 'Thematic analysis'*, in Willig, C. & Rogers, W.S. *The SAGE handbook of qualitative research in psychology*. London: Sage., pp.17-37.

Ten Dam, G. and Blom, S. (2006). Learning through participation. The potential of school-based teacher education for developing professional identity. *Teaching and teacher education*, 22, pp.647–660.

Thurlings, M & den Brok, P (2018) Student teachers' and in-service teachers' peer learning: a realist synthesis, *Educational Research and Evaluation*, 24 (1-2), pp.13-50

Tight, M. (2019). *Documentary research in the social sciences*. London: Sage

Tilley, S. (2019). The role of critical qualitative research in educational contexts: A Canadian perspective. *Educar Em Revista*, 35(75), pp.155-180.

Times Education Supplement (2012), *Satisfy in phonics training or face Ofsted* Available at: https://www.tes.com/news/satisfy-phonics-training-or-face-ofsted (Accessed 11.10.20)

Topping, K. J. (2005). Trends in peer learning. *Educational Psychology*, 25(6), pp.631−645.

Trede , F. , J. Higgs , and R. Rothwell (2009). Critical transformative dialogues: A research method beyond the fusions of horizons .Available at: http://www.qualitative-research.net/index.php/fqs/article/view/1186 (Accessed 4.7.20)

Tschannen-Morana, M. and Hoy, A.W (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education* 23 pp.944–956

Tuckett, A.G. (2005) Applying thematic analysis theory to practice: a researcher's experience. *Contemporary Nurse* 19, pp.75-87.

Twiselton, S., (2007). Seeing the wood for the trees: learning to teach beyond the curriculum. How can student teachers be helped to see beyond the national literacy strategy? *Cambridge journal of education*, 37 (4), pp.489–502

Valencic Zuljan, M., & Vogrinc, J. (2007). A mentor's aid in developing the competences of teacher trainees. *Educational Studies*, 33(4), pp.373–384.

van Es, E. A., and Sherin, M. G. (2002). Learning to notice: Scaffolding new teachers' interpretations of classroom interactions. *Journal of Technology and Teacher Education*, 10(4), pp.571-597.

van Es, E. A., and Sherin, M. G. (2006). How different video club designs support teachers in "Learning to Notice. *Journal of Computing in Teacher Education*, 22, pp.125-135.

van Es, E. A., and Sherin, M. G. (2008). Mathematics teachers' "learning to notice" in the context of a video club. *Teaching and Teacher Education*, 24(2), pp244-276.

van Es, E. A., Cashen, M., Barnhart, T., & Auger, A. (2017). Learning to notice mathematics instruction: Using video to develop preservice teachers' vision of ambitious pedagogy. *Cognition and Instruction*, 35(3), pp. 165-187

van Nieuwerburgh, C. (2012). *Coaching in education: getting better results for students, educators, and parents*. Routledge, London and New York.

Vick, M. (2006) '"It's a difficult matter": Historical perspectives on the enduring problem of the practicum in teacher preparation', *Asia-Pacific Journal of Teacher Education*, 34 (2), pp.181-198.

Vincent, S and O' Mahoney, J (2019) Critical realism and qualitative research: an introductory overview. In: *The SAGE Handbook of Qualitative Business and Management Research Methods: History and Traditions*

Vogt W (ed.) (2008) *Selecting Research Methods Vol. 1: Selecting designs for gathering evidence*; Sage; London

Walby, K and Larsen, M. (2011). Access to information and freedom of information requests: neglected means of data production in the social sciences. *Qualitative Inquiry*. 18 (1) pp.31-42

Walby, K and Luscombe, A. (2018). Ethics review and freedom of information requests in qualitative research. *Research Ethics* 14 (4) pp.1-15

Westheimer, J. (2008). What kind of citizen? *Democratic Dialogues in Education*. Education Canada.

Wheeler, B (2005). Developing a topic. In B Wheeler (Ed.) *Music Therapy Research*. Gilsum, N.H: Barcelona Publishers.

Williams, A., Prestage, S., & Bedward, J. (2001). Individualism to collaboration: the significance of teacher culture to the induction of newly qualified teachers. *Journal of Education for Teaching*, 27(3), pp.253–267.

Willig, C. (2001) *Qualitative research in psychology: A practical guide to theory and method*. Buckingam: Open University Press

Willig, C. (2012). Perspectives on the epistemological bases for qualitative research. In H. Cooper (Ed.), *The handbook of research methods in psychology* (pp.1-17). Washington, USA: American Psychological Association.

Windschitl, M., Thompson, J., Braaten, M., and Stroupe, D. (2012). Proposing a core set of instructional practices and tools for teachers of science. *Science Education*, 96(5), pp.878-903.

Wolkenhauer, R and Hooser, A (2021). Becoming clinically grounded teacher educators: inquiry communities in clinical teacher preparation. *Journal of Teacher Education* 72(2) pp.168–179