THE UNIVERSITY OF WINCHESTER

The Faculty of Education, Health and Social Care

Becoming a Primary Physical Educator: Sourcing professional knowledge and confidence

Victoria Katherine Randall

Doctor of Education

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This Thesis has been completed as a requirement for a postgraduate research degree of the University of Winchester

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ABSTRACT FOR THESIS

Becoming a Primary Physical Educator: Sourcing professional knowledge and confidence

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Despite a number of reforms to education, concern over teachers' knowledge and confidence to teach physical education persists. This thesis examines the process of becoming a primary physical educator at the initial stage of a teacher's career. The aim of which is to consider the ways beginning teachers source their professional knowledge and the implications this has on their confidence to teach. The study argues for a clear articulation of the subject's knowledge-base and proposes a framework for the development of knowledge in primary physical education initial teacher education. Participants were drawn from a range of providers in England and were in the final year of their programme. The research adopted a mixed method approach using an online survey to obtain quantitative data and interviews to elicit constructs about beliefs from four case-study participants. The study identified that beginning teachers had perceived high levels of confidence across the subject's knowledge-base, but areas of most and least confidence were varied and personal to the individual. The sourcing of knowledge was mainly drawn from school and university settings, but in many cases personal interests and prior experiences formed a central role in sourcing content knowledge when no opportunity was presented. Despite the varying routes that exist to become a primary physical educator, this research argues that all beginning teachers require a breadth of knowledge during initial teacher preparation, with university and school partnerships offering explicit roles in developing professional knowledge to a secure level. It further argues that it is through a focus on individual teacher transformation, not merely reflection that will ensure inherent challenges faced by primary physical education will be addressed.

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No portion of the work referred to in the Thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

I confirm that this Thesis is entirely my own work.

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Dedication

I dedicate my thesis to my loving family and in particular my parents. They have encouraged me on all my ventures, always believed in me and shown unfailing support. I wish to extend a special gratitude to my father who has carefully and meticulously read every single page offering wise words of guidance. I could never have finished this without his help.

CHAPTER ONE

Introduction

Research Context

The last four decades have seen a period of sustained and radical change to the structure, content and regulation of primary education in England (Gilroy, 2014; McNamara et al., 2008; Murray and Passy, 2014). This has included the introduction and reform of a national curriculum (NC) (DfE, 1989; 2013b; 2014), national teaching standards (DfE, 2012; DfEE, 1998; DfES/TDA, 2007; DfES/TTA, 2002), and changes to the recruitment of teachers entering the profession (DfE, 1993; 2010; 2011). Primary physical education (PE) has been affected by all these reforms, with concern being raised about the quality of teaching in the subject (Griggs, 2007; Ofsted, 2013; 2014). Sloan claims 'there is considerable consensus that, in spite of the many excellent lifelines that have been thrown, primary PE is in serious trouble' (2010: 26). The London Olympic Games in 2012 heralded a commitment to 'inspire a generation' (Griggs and Ward, 2013; Parnell et al., 2016) which has enabled a resurgence of primary PE at government level, influencing decisions about funding, teacher education and curriculum content (DfE, 2013a; Griggs, 2010; Griggs and Petrie, 2016).

It is has been acknowledged that high quality teaching is the most important factor for influencing student achievement in schools (Caena, 2014; Hattie, 2003), with the development of new teachers entering the profession playing a critical role (BERA, 2014; DfE, 2011). However the issue of teacher competence in primary PE has remained an elusive matter for policy makers, teachers and academics for years with questions surrounding what the nature and content of PE should be (Amade-Escot and O'Sullivan, 2007; Green, 2008; Ofsted, 2009b; Rainer et al., 2012; Siedentop, 2002; Tsangaridou, 2006). This has been attributed to a number of competing ideological perspectives which are often criticised for being confused and contradictory (Green, 2010). The perception that generalist teachers consider PE to be a difficult and specialist area of the curriculum to teach is consistently presented in the literature (Fletcher and Mandigo, 2012; Garrett and Wrench, 2007; Harris et al., 2011; Morgan and Bourke, 2008). The current political agenda has reinforced this position with the launch of a new 'specialism' route for ITE made possible by government funding for primary PE and school sport (DfE and EfA, 2014; NCTL, 2015). Whilst previous studies have examined the

confidence of teachers in primary PE and the challenges they face (Haydn-Davies et al., 2010a; Moore et al., 1997; Morgan and Hansen, 2008; Morgan and Bourke, 2008; Pickup, 2012a; Rainer et al., 2012), little is known about where knowledge is sourced and how beliefs influence the development of professional knowledge (Tsangaridou, 2012b). The formal process of a teacher's development begins during the ITE year/s and is career long (Keay, 2006a). The purpose of this research has been to critically explore the knowledge development at the initial stage of 'becoming' a primary physical educator (Smith, 2007; Stidder, 2015).

My Professional Context

In 2009 I made the transition from teacher to teacher educator. In this role I wanted to seek greater subject and pedagogical understanding. The following extract has been taken from an early EdD module assignment *Professionalism in Education* and captures my early thinking.

> Since my appointment within primary ITE in January 2009, I have experienced conflicting ideas surrounding what it is to be a **teacher educator** in relation to **professional knowledge**. At this time I can relate to Schon's notion of 'while I do not accept your view of knowledge, I cannot describe my own' (1983:8). There is a truth that resonates in Schon's definition to my own professional context, in particular questions that ask what 'experience' do I need to undertake this role, do I have enough '**relevant knowledge**' and do I agree with my colleagues upon matters relating to professional practice? Although I may not always agree with viewpoints of my more esteemed colleagues, I am still in the process of trying to **construct** my own.
> (Module assignment, November 2011)

At the start of my EdD journey I was identified as a new teacher educator, an occupational group of professionals that Murray (2005) explains are under-researched and poorly understood. A teacher educator can face many challenges relating to identity and knowledge that make this stage of career transition daunting (Murray, 2005; Murray et al., 2011). These early reflections have influenced the direction of my research as I have grappled with what it means to be a teacher educator and the knowledge required for the preparation of teachers in primary PE (Pascual, 2006).

In my current role as a Senior Lecturer I have responsibility for the management of PE within ITE programmes for undergraduate and postgraduate routes. The preparation of taught modules includes the development of knowledge for generalist primary teachers

and those who have a specialist interest in the subject. As subject leader for PE I make decisions about knowledge, assessment and the progression of beginning teachers through the subject. These decisions are continuously reviewed, reflecting changes to the curriculum, government priorities and the students' individual needs. Through this research I have wished to recognise the individual teacher as self-reflective knower; someone with the authority to legitimise their understanding and make informed decisions about their future professional learning.

In February 2013, I became a member of the PE Expert Subject Advisory Group (ESAG), representing primary PE ITE. PE is one of seventeen sector led expert subject groups established by the Department for Education (DfE), which aims to provide guidance and practical support for teachers, schools and teacher educators. As a response to recent political changes, the PE ESAG identified that little guidance existed for teachers and beginning teachers about what professional knowledge is like when implementing the new NC. These initial discussions created a critical, but significant turning point for me regarding the importance of knowledge congruence in primary PE that has since influenced the direction of this thesis (Tripp, 1993).

Research Aims and Objectives

The aim of this research was to identify how beginning teachers perceive their confidence to teach primary PE and locate the sources of professional knowledge available to them. The research focused specifically on assessing the breadth of knowledge beginning teachers acquired during their ITE programme and the most and least influential sources for achieving subject confidence. To achieve these aims I needed to:

- Articulate a professional knowledge-base for primary PE;
- Adopt a method that allowed space for beginning teachers to reflect on and discuss their current professional knowledge;
- Critically analyse ways in which beginning teachers acquired their professional knowledge to inform future practice for ITE.

The objectives of the research were to:

- Communicate a professional knowledge base for primary PE;
- Develop a process by which beginning teachers identify and reflect upon their own professional development needs;
- Contribute positively to the literature on primary PE ITE by identifying how beginning teachers acquire their professional knowledge;
- Support ITE programmes in the planning of primary PE.

Research Questions

Although researchers have various motivations and interests for undertaking research, all are united by an intention to produce interesting studies with vital findings (Savin-Baden and Howell Major, 2013). The development of a research question is instrumental in the design of social research as it indicates what it is the researcher wants to know (Savin-Baden and Howell Major, 2013). A recent report into the role of research in ITE highlighted that an important function is to ask questions that will seek to improve the quality of teaching and learning and inform the content, design and structure of ITE programmes (BERA 2014).

The research questions for this thesis are:

- What breadth of professional knowledge do beginning teachers have?

- What professional knowledge of primary PE do beginning teachers have most/least confidence in?

- Where do beginning teachers source their professional knowledge of primary PE?

- What beliefs do beginning teachers have about their professional knowledge development?

Structure of the Thesis

Throughout the thesis I draw specifically on key themes from the literature concerning ITE, professional knowledge and education policy. In framing this research I have considered a number of theoretical concepts that illustrate the complexity of research in this area. These concepts have been situated within a framework influenced by Habermasian Critical Theory (Habermas, 1972; 1984; 1994) (to be discussed in chapter four) and have led to a map of the territory being investigated (Trafford and Lesham, 2008).
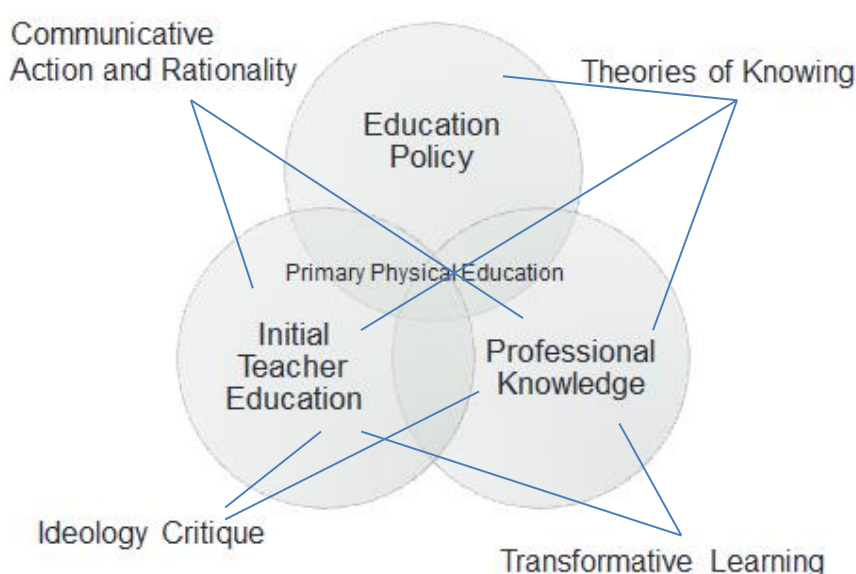
Figure 1.1: A map showing the theoretical framework for the thesis that has been influenced by the work of Habermas (1972; 1984; 1994)

Figure 1.1 represents the influence of Habermasian Critical Theory and the complex overlap it has with the central theoretical concepts of this thesis. Four overarching principles of Theories of Knowing, Transformative Learning, Ideology Critique and Communicative Action and Rationality have provided me with a structured framework to explore the research questions. Each Habermasian principle is placed around the outside of Figure 1.1, with interconnecting lines illustrating how each one connects to the core theoretical concepts.

Habermas' (1972) Theories of Knowing are presented in chapter three and are discussed in relation to the knowledge required for primary PE and the broader teaching profession. The influence of education policy is also discussed in chapter two and how

current political discourse has influenced what knowledge is prioritised, not only in education, but in ITE more specifically. Communicative Action and Rationality, Transformative Learning and Ideology Critique are examined further in chapter four as a central influence of the design and method for this research. Transformative Learning and Ideology Critique are specifically concerned with the research questions relating to where beginning teachers source their knowledge of primary PE and where beliefs about their knowledge have come from The appeal of Critical Theory in this thesis lies in the belief that research should be explanatory, practical and normative and have a purpose that is morally driven (Poutanen and Kovalainen, 2010). Further discussion about Critical Theory as a theoretical framework will discussed in more detail in chapter four.

The origin for many of the theoretical concepts of this thesis can be traced back to earlier study during the EdD programme. Figure 1.2 presents a summary of the main findings from the pilot study, which has subsequently led to the design of this thesis. Here Habermas' (1972; 1984; 1979) ideas of knowledge, emancipatory action and critique start to emerge by recognising the beginning teacher as a central figure and the influence that wider social and political institutions can have on knowledge development in ITE.

Summary of Pilot Study Findings	Focus for the Final Thesis
• Recognising the beginning teacher as a learner; • The role and contribution of the school and university in ITE; • Teacher educators experiencing a 'cacophony of calls' (Moore, 2004) but also unconscious awareness of their practice; • A need to articulate a professional knowledge-base for ITE.	• A focus on the beginning teachers' development in ITE; • The contribution of school and university in knowledge development; • A reduction of the unconscious awareness in the development of beginning teacher's professional knowledge. • Articulating a professional knowledge-base in ITE for primary PE;

Figure 1.2: Summary of pilot study findings

The organisation and structure of this thesis has been aligned to Ideology Critique (Habermas, 1972), the aims of which are to expose the interests of dominant powerful groups in society and empower those whose interests have previously been supressed. Ideology Critique has been highlighted specifically as it offers a staged and systematic

approach in which to structure this research (Morrison, 2001). The four-staged process is visible through the chapter outline and is detailed below.

Stage One: Interpreting the current situation

In order to arrive at an egalitarian society, Habermas (1972) argues that a thorough examination and interpretation of the 'situation' is required. This is presented as a hermeneutic exercise which reflects the principles of a transformative paradigm; a world view that 'knowledge is created by a depth of understanding that can be achieved only through sustained and meaningful involvement with the community affected by the service, program, or policy' (Mertens, 2005: 424). Critical Theory assumes that disempowered individuals in society are involved in a perpetuating cycle of knowledge transference.

> In the dimension of labor as a process of production and appropriation, reflective knowledge changes into productive knowledge…this knowledge is transformed into the steering of social process in a manner not unlike that in which natural science become the power of control (Habermas, 1984: 47).

It is through the practice of teaching (labor) that reflected knowledge becomes formalised and validated. It is considered by Habermas (1984) that when knowledge is made productive, it becomes powerful in steering the processes of future knowledge development. It is at the point of self-reflection that future enacted knowledge can be influenced. The initial stage of becoming a teacher is a formative time for developing knowledge (Day, 2002). It is also the teacher's first induction into the professional teaching community. An individual's ability to critically reflect and examine experiences, speech and texts will influence their engagement in that community and the decisions they ultimately make about knowledge (Mezirow, 2000).

Chapters two and three examine the first stage of Ideology Critique, where the current political context for ITE and primary PE will be discussed. The literature in these chapters will also explore what is meant by 'professional knowledge' and define its application within primary PE. These concepts will illuminate the historical and contemporary systems in which primary PE ITE operates, the knowledge-base for the subject and the inherent challenges it still faces.

Stage Two: Causation and attribution

Ideology Critique seeks to place the 'subject' at the heart of the process. In presenting reasons for why the current situation has been brought to existence, the causes and purposes must be examined from the perspective of the subject and their lived experiences (Morrison, 2001). Chapter four presents an account of the theory adopted for this research and places communicative action, rationality and transformation at the centre of the methodology (Brookfield, 2000; Habermas, 1984; 1987). The methods described in chapter five seek to understand how beginning teachers construct their knowledge of primary PE and by what means their knowledge is sourced. In the first instance, an online survey was used to capture final year beginning teachers' confidence to teach PE across a breadth of knowledge areas. Using a psychological personal construct approach, adapted from Kelly (1955), four beginning teachers' personal beliefs about PE were examined. The personal constructs illustrated how the beginning teacher came to legitimise their knowledge and the varying beliefs that were in operation around knowledge congruence. In his earlier work, Habermas likens this psychoanalysis as a means for bringing into consciousness the contexts, conditions, factors and behaviours that have influenced emancipation (Morrison, 2001).

Stage Three: The setting of an agenda

Critique serves to uncover how individuals may have ideological distortions that continue to perpetuate a social order (Brookfield, 2000). It is through the identification of factors, conditions and knowledge sources that an agenda can be set to improve the current situation. This research seeks to go beyond just a survey of the issues within primary PE ITE and propose an agenda to alter the current situation. Chapters six and seven will present and discuss the key findings from the research and expose the key sources that have influenced the development of participants' professional knowledge. The conclusion in chapter eight will summarise the findings for the research, identify my professional learning and make recommendations to support the transformation of beginning teachers' professional knowledge in ITE.

Stage Four: An evaluation of the new agenda

Habermas' key thinking around ideology is that it should be more than just a theory and should have practical intent (Carr and Kemmis, 1986; Morrison, 2001; Willis, 2007). The rationale for adopting a Habermasian lens has been to ensure it serves a purpose for

future professional practice; mine and others. The limitations and scope of this research will be presented in chapter eight with signposting of how aspects of the study could impact on wider practice in the field of ITE. Future research may wish to evaluate the recommendations made from this thesis and examine what a proposed framework for

The remainder of this thesis comprises the following chapters:

In chapter two I review the literature relating to ITE/primary PE policy and the factors that affect teacher confidence; I start by considering the political landscape within which Primary ITE operates, the recent and current shifts in policy in relation to ITE, and implications for teacher supply. I then consider the issue of supporting intending teachers in their understanding of Primary PE in current policy contexts. I review literature referring to teacher confidence in Primary PE, and I conclude by discussing the potential effect of the current practice of outsourcing Primary PE teaching to external providers on teachers' own development of expertise.

In chapter three I examine the notion of professional knowledge. I consider the concept of the professional in teaching, particularly in relation to current policy frameworks. I discuss the nature of professional knowledge and present a staged articulation of a professional knowledge-base for primary PE.

Chapter four explains the theoretical framework of Critical Theory and its influence in this study. I locate Habermasian critical theory in its origins in the Frankfurt School. I explain my choice of Critical Theory in relation to my personal and professional concerns. I outline the stages of Critical Theory that informed my study, and their relationship to the research questions.

In chapter five I detail the methods for collecting data and the ethical considerations made. I start by discussing the research design in terms of a communicative methodology. I then present my argument for adopting a research approach that mixes methods. I explain the process through developing the online survey used, and the process whereby respondents for the qualitative interviews were identified. I explain the basis of Kelly's personal construct theory and the development of repertory grid technique, and the way in which the 'repertory grid technique' was used as a way of developing interviews in this research.

In chapter six I present and describe the results of the online survey and interview case studies with beginning teachers.

In chapter seven I discuss and analyse the findings in relation to the literature.

In chapter eight I review the study as a whole, and my learning from it. I consider the strengths and limitations of the study, and possible directions for future research. I present some recommendations for the development of ITE approaches to Primary PE. I consider my contribution to the research field.

Making Sense of Primary Physical Education Initial Teacher Education

Introduction

This chapter presents the first stage of Habermas' Ideology Critique by drawing upon the key concepts of education policy and ITE through an examination of the current context for primary PE. This stage of critique has been defined by Morrison (2001) as a hermeneutic exercise that identifies and attempts to make sense of the current situation in order to understand the need for change. The aim of this chapter is to bring together key political messages for ITE with an understanding of the challenges faced in primary PE to better understand how the current system has come to be. The chapter will begin with a discussion about the changes to education through recent political reform. It will later present the more specific challenges, both historic and current in primary PE, in particular the issues surrounding teacher confidence. To conclude, I will explore the current political landscape and suggest how this has shaped an understanding of PE and those who teach it.

Initial Teacher Education within a Political Landscape

The research undertaken for this thesis has required an understanding of the relationship between current political ideology and how it influences professional knowledge for primary PE. Ideology is a term widely used that has itself been criticised by theorists such as Marx, for creating 'illusions' or 'false truths' (Garratt and Forrester, 2012). However social theorists argue that 'like it or not, it [ideology] always stands in virtual opposition to something else which is supposed to count as truth' (Foucault, 1980:118). What may be considered 'truth' by the wider society for instance, may be in contrast to the needs governed by the subject, the school or even the individual child. Even the political requirements of what PE should be doing and how it contributes to ITE, may not reach mutual consensus with the subject's professional members. In his extensive writing on structures, Apple (2000) proposes that educational actors such as teachers, can if they choose, resist political structural influences (Scott, 2008). Apple therefore states that 'the powerful are not that powerful' and 'the politics of official knowledge are the politics of accords or compromises' (2000:10). Apple (2000) also suggests that knowledge made explicit through politics, such as reform policy, has the intention to serve a particular group; but in reality there are layers of re-contextualising

that take place in many different sectors of society before policy becomes enacted in practice (Scott, 2008).

ITE has been subjected to sustained reform and debate for years, where the structure itself has become a site for political debate and struggle (Day, 2000; Furlong et al., 2000b; Gilroy, 2014; Murray and Passy, 2014). Such debate has presented policy-makers with a number of challenges including a fragmentation of responsibility, quality assurance, employability, professional autonomy, a national regulation of standards, organisation and coordination (Caena, 2014; Marshall, 2014; McNamara et al., 2008; Murray and Passy, 2014). In England, policy relating to ITE is currently the responsibility of the DfE, with the improvement of educational standards being a central societal issue. Policy context is important for this research because of:

- Increased importance afforded to school and therefore an individual's training experience;
- Diversity of routes into teaching is likely to lead to disparate ideas about what professional knowledge in PE is;
- Political documents that determine policy may prioritise what knowledge is deemed of value for teachers.

The White Paper, *The Importance of Teaching* (DfE, 2010) and the DfE's (2011) teacher training strategy, *Training the Next Generation of Outstanding Teachers* are two such recent policies that have directly impacted the recruitment, funding and training of teachers in England, aiming to address the issue of 'teacher quality'. These policies have not only implicated the curriculum that is taught, but the preparation of beginning teachers by aiming to:

- raise the status of the teaching profession to make it more attractive to top graduates;

- make sure that teachers receive solid training that gives them the practical skills they will need;

- give teachers access to high-quality professional development so they can continue to improve throughout their careers.

The reform of ITE in England has been clear in purpose, to attract and retain more excellent teachers. This is also a global consensus, as countries compete in their quest for children to meet educational goals (Caena, 2014). The view that England is in need of

educational reform is arguably a response to the spread of neoliberal ideas and policies about markets, privatization, deregulation and the private vs. public good (Zeichner, 2010); an agenda that has subsequently placed teaching and learning as a commodity within a global market and driven by schools. The university was once considered to have a central contribution in developing the 'knowledge society' (Habermas, 1989), but reforms have subsequently placed the value of knowledge about meeting economic and global goals (Larsen, 2013). Habermas suggests that universities should still be involved in knowledge production, specifically for the societies in which it is services, in particular with regard to '… differentiated complex interplay of research with the training of future students' preparation for academic careers, the participation in general education, cultural self-understanding and public opinion formation' (Gibbons et al., 1995: 707). By this distinction, ITE still has a place in university programmes of study as they combine an understanding of many of these knowledge categories.

The use of education as a political tool to resolve wider societal issues is not new and has often been believed to be the best economic policy we have (DfEE, 1998). With research from around the world indicating that teachers are considered to be the most powerful determinants of pupil achievement (Caena, 2014; Hattie, 2003), it is not surprising that education has featured so readily in government reform for ITE (Musset, 2010). The role of ITE as a political method of problem solving (Cochran-Smith, 2005) is apparent when considering the number of societal challenges that confront education within many developed countries (Constantine et al., 2009; Furlong et al., 2000a). For example, globally there are 54 million teachers and in order to have met the goals of education for children within primary education for 2015 alone, an additional 10.3 million teachers needed to enter the profession (UNESCO, 2006). This illustrates a problem not only in the recruitment of teachers, but also in matters relating to quality assurance and teacher development.

Developing Beginning Teachers in Primary Physical Education
ITE is a complex system of structures, where diverse policy and a lack of shared vision can pose barriers to collaborative action amongst its stakeholders (Mohan, 2011). ITE in England has been subject to much debate about how wider issues can be addressed, with changes to government policy influencing the various routes to becoming a teacher (House of Commons, 2010). The political agenda to involve schools more in ITE and attracting more graduates through employment-based routes has meant the

partnership between institutions is of paramount importance (Haydn-Davies et al., 2010a; Marshall, 2014; Talbot, 2007). In traditional programmes of ITE, universities and schools work together in some form of 'partnership' to provide comprehensive provision for the beginning teacher (Campbell et al., 2007). At the heart of the school-university model is the commitment to develop a programme where beginning teachers are exposed to different forms of educational knowledge; some of which come from school, some of which come from higher education (HE) and some from elsewhere (Campbell et al., 2007). Defining knowledge in educational terms has been a complex component of writing this thesis, as its presence in the literature is varied as both policy and practice has evolved (Ben-Peretz, 2011). Within this chapter there exist various references to 'knowledge', as writers have used the term with different nuances. For example, Ofsted refer to 'subject knowledge' when discussing what teachers need to know for effective teaching of curriculum PE. This is a term I later come to define as 'content knowledge', as it reflects a broader conceptualisation of PE beyond the English educational system (see chapter three).

University-based provision has been criticised for being highly theorised, with Feiman-Nemser (2001) claiming that teacher educators can often overload beginning teachers with far too much information. Ure (2010) explains that teaching candidates have reported becoming confused regarding what information is important as they find much of the initial learning is not directly useful when on teaching placement. Research in PE ITE also indicates that the majority of beginning teachers value their school-based training over the traditional taught course (Hobson et al., 2006; Velija et al., 2008). In this traditional model, it is considered that the teaching placement provides the beginning teacher with an opportunity to gain practical teaching experience where they can be totally immersed within a school environment (Meegan et al., 2013). Attard and Armour (2005) suggest that ITE courses should stress the usefulness of reflective practice to help bridge the gap between theory and practice. Such attitudes about the university could be avoided if teacher educators prioritise what it is that beginning teachers need to know (Darling-Hammond and Bransford, 2005). However, given the demands placed on beginning teachers during an ITE course, there is little time for in-depth academic reflection, or a danger that that reflection becomes just another box that needs ticking (Velija et al., 2008).

With accountability for teacher competence in ITE moving more towards school-based experiences, Haydn-Davies et al. (2010a) and Adams (2015) suggest its impact needs evaluating in order to understand what factors influence quality of provision. The preparation of beginning teachers in primary PE requires the development of a broad range of knowledge for individuals who have diverse beliefs and experiences. The historic challenge for ITE is to provide this development often within a limited number of hours (Blair and Capel, 2011a; Elliot et al., 2013; Harris et al., 2011; Morgan and Hansen, 2007; Petrie, 2008; Petrie and lisahunter, 2011). The time dedicated to primary PE during ITE varies across the United Kingdom (UK). Despite the collaborative nature of school-university partnership (Campbell et al., 2007), only limited time is allocated to teacher preparation in PE in the university setting (Caldecott et al., 2006; Talbot, 2007), which for many is further impacted by minimal opportunities to teach during the school-based placement. Many reasons for this are attributed to subject's apparent low status compared to other subjects in the curriculum (Morgan and Bourke, 2008; Shaughnessy and Price, 1995; Warburton, 2000), a large number of PE lessons being cancelled during placement (Pickup, 2006), a significant number of classroom teachers and mentors expressing a difficulty in teaching PE (Morgan and Bourke, 2008), pressures on the school timetable (Pickup, 2006), and limited space/facilities in schools to deliver regular PE programmes (Harris et al., 2011). Since the implementation of the Workforce Reform Act (DfES, 2003a) beginning teachers have undertaken their planning, preparation and assessment time (PAA) during the timetabled PE lesson, with lessons then being delivered by outside providers (Adams, 2015; Griggs, 2010; Griggs and Ward, 2012). These factors have resulted in many beginning teachers receiving inadequate opportunities to develop their professional knowledge in PE, resulting in low levels of confidence and competence to teach (Katene and Edmondson, 2004). Although it is not fully understood what knowledge beginning teachers acquire from engagement in various settings, Morgan and Bourke (2008) suggest that even when beginning teachers are exposed to PE in the primary school they will often experience a lack of variety, and a curriculum dominated by games. However, ITE alone cannot be responsible for containing all of the prepositional knowledge required for teaching and further professional development is required post-qualification for procedural 'know-how', which inevitably grows with practice (Knight, 2002).

The view that beginning teachers will acquire competence in primary PE by receiving both school and university inputs is problematic, as assumptions are made about who is responsible for developing various aspects of knowledge (Menzies and Jordan-Daus, 2012). In order for such a partnership to work, an understanding must be met regarding who is responsible for teachers' professional knowledge development and the meeting of professional standards. An ideal being where agreement exists between all stakeholders i.e. where the school, the university and beginning teacher has a clear understanding of their individual and collective responsibility. Haydn-Davies et al. (2010a) stress that if primary teachers are to develop into high quality educators then a partnered approach to their development must be based upon a shared philosophy and common goals. Both wider societal agendas and individual philosophies of education must also be mediated to avoid conflict in future practice.

Within my own institution, most of the teachers entering the teaching profession will only receive nine hours of contact time for PE with a tutor, compared to a small number of students on a specialism route (fewer than 10% of the cohort) who will receive 100 hours. Blair and Capel (2011a) have cited as little as five hours in other UK institutions. In a study conducted by Elliot et al. (2013), 45% of in-service teachers commented that their ITE had been inadequate for preparing them to teach PE. The reason given for this was attributed to a limited amount of time allocated to PE on their ITE course, which varied between 0 – 15 hours. Deciding what knowledge should be covered in such a minimal amount of time is a challenge for teacher educators, with questions raised about whether ITE programmes should emphasise pedagogical over content knowledge (Freer, 2011). The knowledge-base for the subject is diverse and requires beginning teachers to have a good understanding of subject content, pedagogy, wider professional issues and practice. Beginning teachers preparing to teach primary education in England are also required to be trained across two consecutive age phases, which could include the Early Years Foundation Stage (EYFS) and key stage one (KS1), or key stage two (KS2). ITE providers are therefore required to develop teachers' understanding of physical learning across both EYFS and NC frameworks. In a study exploring teachers' perceptions of transition, Rainer and Cropley (2015) found that little was known by teachers about their neighbouring age phases. In addition, negative perceptions were held about what was undertaken in the phase either prior to or following the one they taught in. This often resulted in limited knowledge of progression in PE, a limited understanding of

where the children were moving on to, or what had been previously taught (Rainer and Cropley, 2015).

With limited hours dedicated to non-core subjects in ITE programmes and minimal opportunity for many beginning teachers to engage in PE through school-based elements, primary PE ITE has been described as having systematic weaknesses and not fit for purpose (Talbot, 2007). Furthermore, with ITE being continually cited as a factor influencing primary teachers' future perceived confidence and competence to teach PE (Pickup, 2006; 2012a; Sidwell and Walls, 2014), it is necessary to consider how programmes can best support the development of professional knowledge. Hegarty explains that education has many social functions, but its 'core and distinctive purpose is concerned with learning' (2000b:451).

Teacher Confidence in Primary Physical Education

In England, primary education relates to the first seven years of compulsory schooling. During this time the subject aims for PE are typically met through the NC programme of study for Years 1 - 6, bringing together formal aspects of subject learning through two distinctive key stages during the primary phase; KS1 and KS2. Primary PE is therefore a statutory requirement and must be delivered as part of a broad and balanced curriculum. In a recent review of the primary NC, revised aims for children's learning in PE were stated:

- develop competence to excel in a broad range of physical activities

- are physically active for sustained periods of time

- engage in competitive sports and activities

- lead healthy, active lives. (DfE, 2013b:198)

Whilst the NC framework provides an overview for PE for children up to 11 years old, teachers are required to have a depth of understanding in order to interpret, plan and implement learning with minimal guidance.

The Office for Standards in Education (Ofsted) has identified through two separate reports that there exists a range of teaching quality in schools (Ofsted, 2009b; 2013), with further concern that the subject is failing to meet high quality outcomes for its learners (Griggs and Ward, 2012; 2015; Rainer et al., 2012). The challenges presented to

primary PE are ubiquitous (Pickup, 2012a) and have been discussed amongst the international research community at length. A central concern is that many primary educators lack sufficient professional knowledge to teach PE competently, with a widely held perception that it is a difficult subject to teach (Coulter and Woods, 2012; DeCorby et al., 2005; Garrett and Wrench, 2007; Harris et al., 2012; Morgan and Hansen, 2007). In many countries, generalist teachers are the core deliverers of PE in primary schools (Faulkner et al., 2004; Hardman, 2008; Petrie, 2010; Sloan, 2010; Tsangaridou, 2012b) and are therefore required to have the knowledge and skills to teach PE alongside a host of other curriculum subjects (Rainer and Cropley, 2015). In England this includes the three core subjects of Mathematics, English and Science, seven further foundation subjects and Religious Education. Despite teachers being able to work flexibly within a curriculum framework, there is concern that many are challenged in making sense of PE-specific content and pedagogy from a two-page articulation of the learning area (Petrie and lisahunter, 2011).This is in stark contrast to core subjects, where more curriculum documentation, support, resources, training and time has been more notably available (Harris et al., 2011; Petrie and lisahunter, 2011; Rainer and Cropley, 2015).

A substantial body of literature suggests that perceptions of practice are likely to be heavily influenced by personal prior experiences (Curtner-Smith, 2001; Dewar and Lawson, 1984; Lawson, 1983a; Lawson, 1983b; O'Bryant et al., 2000; Stroot and Williamson, 1993) and school-based learning (Hastie et al., 2005; Lawson, 1986; McMahon and MacPhail, 2007; Zeichner, 1985). Lawson (1986: 107) defined these experiences as a process of occupational socialisation, which are understood to include 'all kinds of socialization that initially influence persons to enter the field of physical education and later are responsible for their perceptions and actions as teacher educators and teachers'. In addition he observed that three distinct types: acculturation, professional socialisation and organisational socialisation (Lawson, 1983b) were likely to shape PE teachers' perspectives about the subject (Curtner-Smith, 2001). In short, occupational socialisation encourages us to examine how a beginning teacher's past and personal experience can influence and impact upon their future practice (McMahon and MacPhail, 2007). It is believed that the experiences beginning teachers have of PE as a child, and later through their professional programme of ITE, can have '…a distinct and traceable influence on an individual's future decisions, practices, and ideologies as a teacher' (Schempp and Graber, 1992: 333). Moreover, what they see being taught, who they see teaching and how they see learning being delivered will strongly influence a

beginning teacher's understanding of what makes high and poor quality teaching (Schempp, 1989). The place of prior experiences and the role of the school becomes a notable factor in this research. Beginning teachers must be dynamic and active change agents (Schempp, 1989) if they are to influence and ultimately determine their future behaviours and beliefs (Pajares, 1992; Templin and Schempp, 1989).

Morgan and Hansen (2008) have further considered the influence of the individual and the institution when looking at challenges that exist in implementing PE in primary schools (Figure 2.1).Confidence is considered to be a significant factor, with earlier studies indicating that negative teacher attitudes and limited preparation from ITE programmes also prevent the delivery of effective PE (Andrews, 1987; Faucette and Patterson, 1989; Howarth, 1987). The institution (the school), was considered the most significant inhibitor as teachers specifically expressed a lack of time, limited professional development and minimal resources dedicated to the subject (Morgan and Hansen, 2008).

Teacher-related	Institution-related
- Confidence teaching PE - Interest/enthusiasm - PE content knowledge - Personal school experiences in PE (*as learning in P*E[1]*)* - Attitudes in PE - Perceptions of value of PE - Expertise and qualifications	- Other teaching priorities - Amount of time - Equipment availability - Quality of facilities - Level of departmental assistance/professional development - School executive attitudes towards PE - Funds available - Class size

Figure 2.1: Factors challenging the implementation of primary PE programmes (Morgan and Hansen (2008: 508)

In Figure 2.2 I have a revised the Morgan and Hansen (2008) table. Here, three themes of policy, teacher socialisation and institution are now introduced to bring a more recent examination of the issues from research, current debates and political influences. However, it is noteworthy that evidence of accultural, professional and organisational socialisation (Lawson, 1983a; Lawson, 1983b) are still factors in articulating challenges for the delivery of PE in primary school, perpetuating an unconscious cycle of teacher beliefs about the subject (Stroot and Whipple, 2003).

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[1] I have inserted the additional text in italics to make a distinction between an individual's personal school experiences as child compared to that of a teacher.

Policy	Teacher Socialisation	Institution
Subject marginalisation ITE preparation Funding Political and cultural discourses	Prior experiences Self-efficacy Articulation of subject value Development of professional knowledge	Professional learning opportunities [Resources] Curriculum time Subject-level leadership Outsourcing and wider workforce

Figure 2.2: Revised overview of Morgan and Hansen (2008) challenges to the implementation of primary PE programmes

In England, PE currently enjoys a heightened profile at government level with increased funding and accountability in schools. Teachers are now expected to deliver lessons that are considered by Ofsted (2013) to be 'good' or better by accessing professional learning opportunities, resourcing subject materials and drawing upon expertise to support subject leadership and management. Although the issues now confronted in England are not in the short term determined by money or resourcing, as initially highlighted by Morgan and Hansen (2008), the changing political landscape has brought with it other factors that have affected the subject's status, the quality of provision and influenced teacher attitudes. The final section of this chapter will now present the current political changes to primary PE and some of the new challenges this has brought for the subject and the influence it has had on professional knowledge.

Primary Physical Education Policy and Outsourcing

The influence of Critical Theory in this research has added a political dimension in which to consider the challenges primary PE faces in developing teacher confidence and competence. This has been most notable when exploring the role of the government in institutional decision making. Not all primary schools in England are able to operate with independence from government policy, as they are state funded and positioned within a wider educational agenda. Therefore issues connected to the school in Figure 2.1 are now part of a broader national or international political narrative. This is currently seen through the allocation of funding and resourcing of PE to primary schools in England. State schools in England receive £8000 per year with an additional £5 per child, a total commitment of £450 million of government money until 2020 (DCMS and DfE, 2015). The funding is politically driven and ring-fenced, but schools are provided with an apparent freedom to address any issues they feel are inhibiting the progress, attainment and achievement of their children through PE and sport (Parnell et al., 2016). Guidance for the use of this funding has been signposted by the Government through:

- the hiring of specialist PE teachers or qualified sports coaches to work with teachers;
- providing existing staff with teaching resources to help them teach PE and sport;
- supporting and involving the least active children by running or extending school sports clubs;
- running sport competitions or increasing pupils' participation in the School Games competitions;
- running sports activities with other schools (DfE and EfA, 2014[online])

The 'guidance' offered by the DfE to Head Teachers and PE coordinators appears to have been taken literally, as recent reports indicates that in most schools the funding is being used exactly in ways as stated above (Callanan et al., 2015; Ofsted, 2014), with many schools favouring to spend the money on sports coaches than a primary PE specialist (Griggs, 2016). Although case studies indicate that some schools have used the money creatively to support teachers' and pupils' learning (Griggs, 2016), it is unclear exactly how many schools have followed the Government's initial guidance.

At present no other NC subject in England receives this level of funding to support teacher competence and pupil outcomes; however this is not the first time funding has been available to schools for professional learning, increasing resources and improved pupil participation in PE and school sport. A previous Labour Government invested in excess of £1 ½ billion through the PE and School Sport Club Links strategy (later named PE and School Sport Youth Strategy (PESSYP)) from 2002 – 2011 (Griggs, 2016; Griggs and Ward, 2012). Since the PESSYP funding, Ofsted (2009) have noted an improving trend in standards, achievement and increased opportunities for PE continued professional development (CPD) in primary schools, but regarded teacher subject knowledge as still limited. This has been evident in more recent reports by (Ofsted, 2013; 2014), where weaknesses in teachers' delivery of primary PE was also observed, including limited teacher subject knowledge, poor use of assessment, and superficial planning leading to insufficient challenge for pupils. This was identified as a key factor in determining teacher confidence and competence, especially in schools where the quality of teaching required improvement.

> Teachers' lack of detailed subject knowledge limited the quality of feedback given to pupils about what they needed to do to improve. They were unsure about the step-by-step stages in teaching skills, and were unaware of the standards that pupils should achieve by the end of each key stage (Ofsted, 2013:52)

In a report reviewing use of the current PE funding, further references to aspects of knowledge are made. The report indicates that in many of the schools visited, the Primary PE and Sport Premium is being spent to support the development of teachers' knowledge and improve the quality of teaching; although strategic planning and monitoring of the funding still needed consideration with professional development focusing more on the specific learning needs of the teacher (Ofsted 2014). With the PE and School Sport Premium funded from three government departments: the Department for Education (£80 million), Department for Health (£60 million) and the Department for Culture Media and Sport (£10 million) (DfE, 2013a), its use and impact has cross political interest (Griggs, 2016). Todd (2015) believes that so far a review of the premium has focused on the process, professional development and participation of staff in training events, but little consideration has been given to its impact. With the DfE funding the largest percentage of the premium, impact should arguably be considered through improvements in teacher learning and development and improved confidence levels, quality of lessons and pupil attainment.

Ofsted reports (Ofsted, 2013; 2014) highlight the need for teachers to be conceptualised as learners in their own right, with professional learning matching the specific needs of individuals. The impact of professional learning should therefore be measured through teacher and pupil outcomes. Keay and Lloyd (2011) caution that if professional development is to have a role in maintaining and extending teachers' professional knowledge, it must first be embedded within a culture that recognises the value of professional learning. This is a view also expressed by Morgan and Hansen (2007), whose research made recommendations to improve primary school PE through professional learning matched to teacher needs. Petrie (2010) suggests that teachers' confidence could be improved if professional learning is built upon their existing expertise as classroom teachers and their general pedagogical knowledge first; however this should be specifically balanced with developing content knowledge associated with PE. Developing content knowledge in this way can enable teachers to make stronger connections to learning in PE with other aspects of their practice (Petrie, 2010).

PE has been placed within a crowded and contested policy space (Griggs and Ward, 2013; Penney, 2008) and is consequently struggling to find its identity across competing sport, health and education discourses (Coulter and Ní Chróinín, 2013; Griggs and Ward, 2012; 2013). This has been further exacerbated in England through recent political diktats, including the post London Olympic and Paralympic legacy (Griggs and Ward, 2013); the aforementioned Government PE and Sport Premium for Primary Schools (Griggs and Petrie, 2016) and a revised new primary NC, which places competition in the subject's purpose of study, aims and content. The terms physical activity, sport and PE are often used interchangeably amongst teachers, who are unable to distinguish between them (Coulter and Ní Chróinín, 2013; Morgan and Hansen, 2007). As a result of these attractive political policies, it is argued that PE has been disconnected from a number of broader contexts including a wider movement culture, other subjects in the curriculum, progression of learning within the subject and training and teacher needs (Griggs and Ward, 2012). Writing in 2012, prior to the PE and Sport Premium funding for primary schools, Griggs (2012b) recognised a growing trend in the use of sports coaches to deliver curriculum PE. This has been echoed by other countries including Australia (Whipp et al., 2011) and New Zealand (Petrie and lisahunter, 2011), with Petrie and lisahunter (2011) stating that the outsourcing of PE to external companies has been considered a 'solution' to the teacher competency problem and remains a policy choice of teachers. Although the PE and Sport Premium was not intended to displace or replace teachers in primary PE (Davies, 2013), a growing trend in English schools is to use the funding in this way (Smith, 2015). Ofsted reported that in the 22 primary schools visited most of the funding was used to 'deploy new sports coaches and other personnel qualified in sport to teach pupils in PE lessons' (2014:6). Griggs (2012b) suggests that this trend is problematic for the physical development of young people as the use of sports coaches in the PE curriculum further reinforces a sporting discourse for the subject and a practice that amounts to repetitive learning of sporting techniques that do not reflect pupils' wider needs (Griggs and Ward, 2012).

The PE and Sport Premium funding for primary schools is not only intended to support teachers post-qualification, but also address the issue of inadequate preparation of primary teachers at an ITE level. Part of the £150 million-a-year boost to the subject has been allocated for a cohort of primary PE specialist teachers to improve standards of PE in the primary school, however the numbers allocated to this programme are limited,

with a maximum of 200 teachers to be trained for 2015-2016 (NCTL, 2015). A key feature of this specifically funded government route is an increased focus on content knowledge through the taught element of a Postgraduate Certificate in Education (PGCE), a specified percentage of time teaching PE through the school-based practice and delivery from specialist professional sporting bodies/associations. The distinction between a subject specialist and a generalist teacher is currently politically charged and determined by the direction of government funding and policy documentation. Sourcing an agreed definition of a primary PE specialist has been difficult. The DfE website promotes the primary PE specialist training route in England in the following way:

> As a PE primary specialist, you'll teach young pupils vital skills such as teamwork, collective responsibility, discipline, determination, or even simply how to enjoy and benefit from physical exercise. Your training will set you up to succeed as an exceptional PE teacher and authority in the subject within your school. This will cover a diverse range of physical activities and team sports as you help build confidence and enthusiasm in every child, regardless of their natural ability (DfE, 2015b[online]).

A specialist teacher of primary PE is therefore considered by the Government to be a person who is knowledgeable in physical activity, team sports, teamwork, discipline and determination. In the wider literature the meaning of 'specialist' is also difficult to determine. Whipp et al. (2011) simply define a PE specialist as a teacher who possesses a degree-level qualification or someone that focuses specifically on PE teaching. Petrie (2011) describes them as those who solely teach PE. Sloan (2010) however, indicates that a specialist can be considered as an outside provider, a secondary PE teacher, or even a primary teacher with a specialist background in the subject. The most recent research into the Primary PE and School Sport Premium was unable to determine exactly what a specialist was, despite stating that there had been a 50% increase in the number of specialist primary PE teachers since the funding was introduced (Callanan et al., 2015). In England, the government funded route is currently the only recognised specialist primary PE ITE programme, although several other ITE undergraduate routes have historically offer a PE 'specialism'. This has placed the term 'PE specialist' within a political discourse.

The benefits of deploying a 'specialist' to deliver curriculum PE is highly debated. In the United States it has been suggested that specialist teachers have better knowledge of movement skills, can enhance student performance, provide accurate feedback and are more likely to be successful at encouraging students to adopt a physically active lifestyle (DeCorby et al., 2005; Graber et al., 2008). Whilst these benefits are recognised, some

argue that this negates the principal purpose of primary education in providing young learners with a more holistic learning experience and can further disconnect PE from the broader curriculum (Griggs and Ward, 2012; Kirk, 2012; Morgan and Hansen, 2007). Blair and Capel (2011a) argue that although outsourced specialists may hold knowledge of activity areas, they do not have the broader knowledge, skills and understanding required to educate young people physically. There is a danger that the unique and individual identity of PE may be lost leading to a further notion of 'sportisation' (Green, 2008).

Chapter Summary

I began this chapter with an examination of literature for primary PE and ITE as the first stage of Ideology Critique (Morrison, 2001). Here a number of key considerations have emerged that have made research into primary PE ITE a complex task. The literature details the inherent challenges confronted by the PE community, in particular issues relating to teacher confidence and competence. Both institutional and teacher-related factors are central contributors to these issues (Morgan and Hansen, 2007); however, the changes to policy in primary PE ITE have re-conceptualised these issues in England. Through this research I hope to close this gap, examining the confidence of beginning teachers across the breadth of professional knowledge and locating how individuals believe their knowledge is sourced. Although research and political reform have identified a need for primary teachers to develop their knowledge-base as a means to improve confidence and competence, relatively little has been done to identify what knowledge teachers need to have and how they might acquire it (Tsangaridou, 2012b). In order for primary PE to be able to identify what a specialist is, who should be teaching and how political decisions regarding funding and ITE are informed, the subject must be able to clearly articulate what its professional knowledge-base is. The next chapter will aim to define professional knowledge and start to bring together a map of knowledge that is required to be an effective educator of young people in PE.

Professional Knowledge of Primary Physical Education

Introduction

In response to educational reform, teachers are expected to adapt and make a number of decisions about educating young people. This makes the practice of teaching and the knowledge required for it complex (Caena, 2014; Hegarty, 2000b; Jess et al., 2014; Musset, 2010). To ensure any agenda for change is carried through, teachers must be powerful change agents who make judgments and important decisions about knowledge, identity, civility, relationships that impact upon their pupils' lives (Biesta, 2012; Darling-Hammond, 2006a; Webb, 2002). Without embracing the autonomy of professionalism, teachers may be viewed as powerless subordinates at the bottom of the educational hierarchy, consisting of people who carry out tasks developed by more knowledgeable professionals or institutional governors. In essence, teachers will lose their professional identify (Datnow, 2000). This chapter brings together three existing concepts of professionalism, knowledge and ITE. A systematic review of the literature has identified what is to be known and understood about being a professional and the knowledge that underpins teaching primary PE. The chapter concludes by articulating a professional knowledge-base for teachers and a framework by which participants of this research are able to examine their subject confidence.

Teaching as a Profession

Educational reform in England, over a number of years, has presented teachers and teacher educators with policy documents aimed to improve teacher quality as both an activity and as a profession (Day, 2000). *The Importance of Teaching* White Paper (DfE, 2010) implied that a teacher's professional status should be met through greater authority and control, greater reward for graduates entering the profession and increased accountability for pupil learning. The utilitarian, practical and skills-based nature of such reform, reflects not only a marked changed in the theory/practice ratio of a teacher's knowledge, but a greater move towards a notion of what works (McNamara et al., 2008). The policy developments that were presented in chapter two are part of a long term shift that has placed teaching from a profession characterised by autonomy, to one that is managed and given strategic government significance (Furlong, 2001; Murray and Passy, 2014). The establishment of the Council for Accreditation of Teacher

Education (CATE) via the DES Circular 3/84, (DES, 1984) signified a key turning point in the historical development of ITE in this country, as it introduced the notion of teacher accreditation for the first time (Gilroy, 2014; McNamara et al., 2008). In attempting to directly influence the education system, successive governments have placed the training and development of teachers under increasing central control (Burnett, 2006). The focus for such a change is evident as the profession has moved from accreditation, to a set of teacher professional standards that had statutory implications, as outlined in Circular 4/98 (DfEE, 1998). The importance of these standards (given via the Teacher Training Agency at the time) was to ensure that the Government had greater control in how entry into the teaching profession was met (Murray and Passy, 2014).

> Successful completion of a course or programme of initial teacher training, including employment based provision, must require the trainee to achieve all these standards. All courses must involve the assessment of all trainees to make sure they meet all the standards specified (DfEE, 1997: 7).

Since the inception of Teacher Standards in the late nineties, subsequent revisions have been made (DES/TTA, 2002; DfE, 2012; DfES/TTA, 2007). Each manifestation has continued to place the period of becoming a teacher further into a training discourse, reflecting the Government's agenda of the time. The Qualifying to Teach Standards (DES/TTA, 2002) for example, reflected a shift from a detailed prescription of subject and pedagogy, to professional values and practice; whereas a later manifestation (DfES 2007) reflected the need for greater awareness of the child through the Every Child Matters (ECM) agenda (DfES, 2003b). Although revisions of the Teacher Standards were positively received (Simco and Wilson, 2002), government requirements that no longer necessitated subject specialisms, full curriculum coverage and a stronger emphasis on core subjects, were not (McNamara et al., 2008). Shulman (1987) reminds us that the professionalism of teaching should be based on a more fundamental premise of knowledge, than merely achieving a set of required standards.

The reform of ITE in England over the last five years (DfE, 2010; 2011; 2012) has suggested that a much sharper focus on teachers acquiring skills for the classroom is needed, with a diminished broader conceptualisation of teacher learning (Marshall, 2014). Hegarty (2000b)argues that standardising knowledge in this way has failed to consider pedagogy and the 'craft' of teaching as a knowledge-based activity. The nature of the language within government policy documents positions teacher education as a technical process (DfE 2010). In this discourse, a teacher is understood as a 'pedagogic

technician' (Alphonce, 1999), someone who can bring everything under their control through the accumulation of a set of skills. The Government's belief that the preparation of teachers does not focus sharply enough on techniques and skills by watching others, appears to ignore the complexities of teaching (Wadsworth, 2011). Giles (2010) regards the use of such language as alarming.

> This technicist concern reflects the dominance of the technocratic rationalist ideology and contrasts with humanistic and critical imperatives, which advocate for the holistic formation of pre-service and beginning teachers, which includes pathic knowledge; a knowledge, which feels atmosphere, reads faces, and feels the mood of different situations (2010: p.1512).

Viewing a teacher as an individual who is required to solve a number of challenging problems by the technical accumulation of skills, ignores a whole set of other processes that are required. The danger of learning being merely technical, ignores problem setting, the process by which we define the decision to be made (Schon, 1983).

The literature on reflective practice broadly recognises that there are different levels of reflection. Agyris and Schon (1978) noted three levels of reflection that moves a teacher from the assimilation of a situation to more fundamental changes in their practice. A focus on factual information about teaching provides only 'surface' level of learning (Harrison and Lee, 2011). In other words, there is no significant personal development, broader or increased educational awareness: it is the routine or practical/technical aspects of professional learning that are the focus of the reflection (van Manen, 1977).

In augmenting what is meant by educating, reflection is considered an essential characteristic that develops clarity, correctness and truth (Peters, 1977). Peters acknowledges that 'we distinguish educating people from training them because for us education is no longer compatible with any narrowly conceived enterprise' (1977:10) and specifies that knowledge plays an instrumental role in the development of an 'educated person'. It is not merely the accumulation of knowing something, but the ability to explain how and why we know what we do that makes us educated (MacAllister, 2013). Peters (1977) observation about the education of teachers is still relevant in contemporary debates about how the initial period of becoming a teacher is defined. In previous policy documents (DfE, 2010; 2011) the early stages of teaching are viewed as a period of 'training', where knowledge is acquired by 'observing the craftsman' and developing skills in 'behaviour management' (DfE, 2010). The academic literature offers broader perspectives more closely aligned to a discourse of 'educating'

(Darling-Hammond and Bransford, 2005) and 'professional preparation' (Ure, 2010). This subtle, but distinct change in language presents different ideological positions about how this stage of a teacher's career is regarded. Placing the initial stages of becoming a teacher within a training and skills rhetoric arguably reverts teaching back to a narrowly conceived enterprise (Peters, 1977).

Although the craft of teaching is an essential component of teacher knowledge, it cannot be the sole knowledge base. The role of theory, for example, can provide a frame of reference for the teacher's practice. Educational activities must be critical in providing more than just a functional or vocational purpose, but not be purely theoretical if teachers are to develop a depth and breadth of knowledge (MacAllister, 2013). Orchard and Foreman (2011) suggest that there may be certain routine procedures and role-specific skills which teachers need to acquire for which a workplace-based training, led by practitioners, might be suitable. However teachers also need to be educated in the context of education as an intellectual process (Orchard and Foreman, 2011), an ability which requires thinking space and engagement with support from educational research (Wadsworth 2011). Such activity requires time and support from well-qualified and experienced professionals, time which is now increasingly under pressure, even in traditional university programmes.

Defining Professional Knowledge

In understanding what is meant by professional knowledge, an examination of what is meant by being a teaching professional, the knowledge it requires and how competence to teach is received in England is first required. Despite the widespread use of the term, the concept of a 'professional' is deeply contested and difficult to determine (Furlong et al., 2000b). Hargreaves (2000) presents the development of a teacher through four distinct professional stages: the 'pre-professional', the 'autonomous professional', the 'collegial professional' and the 'post-professional'. All stages are in essence a reflection on how a teacher responds to the nature of their work, changes to government policy, perception of their agency and what they contest about curricular matters, assessment and pedagogy (Day, 2002). The 'pre-professional' stage is closely aligned to the beginning teacher and is considered to be 'technically simple' in terms of pedagogy and managerially demanding (Hargreaves, 2000). This indicates that the beginning teachers' knowledge of teaching is still in its infancy and lacks self-validation and autonomy.

Hoyle and John (1995) present three central issues of professionalism that are knowledge, autonomy and responsibility. Reform has subsequently changed each of these themes over time as teachers' work has been affected by prescriptive policy initiatives, reducing teacher autonomy and a diminished sense of agency (Gilroy and Day, 1993). An example of such change is visible through the government intervention of school curricular. Since the inception of a NC in England in 1989, the locus of control about what to teach in schools has shifted from the individual teacher to a national framework managed by curriculum leaders. Yet despite a reduction in teacher autonomy, there is still an expectation that a teacher retains their identity as a 'professional' (Day, 2002). A specialist body of knowledge is common to any definition of a professional and the application of knowledge that appears in contexts which may be unpredictable and require a level of judgment and decision making (Furlong et al., 2000b; Harrison and Lee, 2011; Schon, 1983). Darling-Hammond (2006a) stresses that the decisions teachers make must be in part moral and serve the interests of their students if they are to act in a professional way. The concept of knowledge will now be explored further as a component of teacher professionalism and from the perspective of Habermasian perspectives of knowing (Habermas, 1972); it will form the central definition for this thesis of how a teacher is defined. It will be argued that the uniqueness of teaching, and the relationship with its knowledge-base makes it a highly complex and expert activity (Hegarty, 2000b; Musset, 2010). Central to any discussion of teacher knowledge is a judgement about what teachers must be able to know, understand and do (Darling-Hammond, 2006a; Darling-Hammond and Bransford, 2005), to which the literature presents varying models and perspectives. In order to make sense of the term professional knowledge, I collated perspectives from a range of literary sources and contexts (Figure 3.1). Each reference to knowledge has been organised into professional knowledge categories which I have constructed as content knowledge (CK), subject pedagogy (SP), developing practice in context (DPC) and reflective and academic engagement (RAE) through professional discussions and an engagement in the literature. The references cited in Figure 3.1 are not an exhaustive account of knowledge models that exist in the literature, but broadly recognises knowledge that is required for ITE based upon theoretical foundations, practice and pedagogy (Darling-Hammond and Bransford, 2005).

	Content Knowledge	**Subject Pedagogy**	**Developing Practice in Context**	**Reflective and Academic Engagement**
Theories of Knowing (Habermas, 1972)	Technical	Practical/Technical	Practical/ Emancipatory	Emancipatory
(Shulman, 1987)	Knowledge of curriculum; Content knowledge Knowledge of learners;	General pedagogical knowledge; Pedagogical content knowledge	Knowledge of educational contexts	Knowledge of education
(Darling-Hammond, 2006a)	Subject matter; Learners and learning	Teaching strategies; Assessment and feedback	Curriculum design; Socio-cultural context; Professional collaboration	Reflective decision-making
(Turner-Bisset, 1999)	Substantive subject Knowledge; curriculum Knowledge	General pedagogical knowledge; Knowledge/models of teaching	Knowledge of learners-cognitive and empirical	Knowledge of beliefs; Syntactic subject knowledge; Knowledge of Self; Knowledge of educational contexts; Knowledge of educational ends
(Hegarty, 2000b)	Subject knowledge	Pedagogical knowledge; Skills	Other knowledge	Experience Research Theory
European Commission (2013)	Knowledge frameworks;	Classroom teaching skills and strategies; Positive attitudes towards professional development diversity and inclusion; Capabilities of adapting plans and practices to the contexts of students' needs Knowledge of how to teach specific subjects	Cooperative work in communities of practice	Critical actions towards their own professional actions; interpersonal, reflective research skills required for professional

Figure 3.1: Models of Teacher Knowledge

What sets education and teaching apart from other professional contexts is that the knowledge required must be geared towards learning and knowledge creation (Hegarty, 2000a). Habermas (1972) presents knowing through the components of technical, practical and emancipatory understanding. In the technical view he considers knowledge as objective, instrumental and scientific. Such theories of knowing can be seen in education influencing high stakes testing, criterion referenced exams and measuring behavioural competencies of pupils and teachers (Merriam et al., 2007), but these have been rejected by Habermas as the only form of worthwhile knowledge and alone presents knowledge as incomplete (Morrison, 2001). If technical knowledge is concerned with the 'what', (what physical skills do we need to develop in children?) then practical knowledge is concerned with the 'how' (how do teachers effectively engage learners and how do they use different activities to encourage healthy attitudes?) (Aber, 1991). Practical knowledge is considered to be a social and dialogic process, verified through communication with others and arriving at a consensus of truth (Habermas, 1984; Merriam et al., 2007). Practical knowledge in education must be considered in relation to the context of the educational setting and the interpersonal relations of those who inhabit that lifeworld (Ongstad, 2010). For example, a beginning teacher must be adaptable to the various school policies they work with. Habermas (1972) identifies a third knowledge component, one that lies in the human capacity to be self-reflective and self-determining. Transformative knowledge is associated the critique of societal forces, where knowledge is questioned and reflection is actively encouraged (Lovat, 2013; Mezirow, 2000). This form of knowledge is subjective within the educational setting and constantly questions whose interests are best served by professional actions (Merriam et al., 2007). Developing this third type of knowledge is perhaps more challenging for the beginning teacher compared to other forms, as it requires the individual to question what they see, what they are told and enact change in their practice as result of this critique. In Figure 3.1, emancipatory knowledge has been aligned to the RAE domain, where the beginning teacher engages in research, policy and questions over subject aims, but also in DPC, where change can occur in context and through practice.

Content Knowledge

Content knowledge is defined by Shulman (1987) as the nature of knowing in the field of study and the accumulation of studies in the content area. This category is considered to be the source of serious controversy in the field of PE (Siedentop, 2002), as academics continue to debate what the nature of knowing is and what the programmes of PE and ITE should be achieving (Green, 2010; Siedentop, 2002). The development of content knowledge in PE are related to the historical, social and cultural texts in which it takes place (Coulter and Ní Chróinín, 2013) and must reflect the knowledge of what children should know and the goals teachers should be working towards (Pascual, 2006). For that reason, knowledge of curricular frameworks, activity areas and knowledge of learners are also considered within this domain as they are situated in an education system where the subject is statutory. A person educated through PE can be understood as someone who, though engagement in a range of physical learning contexts, can achieve outcomes beyond the physical.

> …has improved his/her cognitive, motor, social, affective and other abilities in order to understand and act in the social and natural world and contribute to make a more humane (and civilized) society (Pascual, 2006: 73).

Content knowledge in primary PE, therefore, should include the breadth of subject incorporating knowledge of not only how to move, but how to learn through movement (Doherty and Brennan, 2014). For many primary beginning teachers, content knowledge is often lacking in ITE due to the limited time dedicated to developing subject content (Phillips and Faucette, 2013) and favouring technical knowledge over a focus of inquiry (Rovegno, 1993). This has subsequently led to low teacher confidence and an uncertainty about what to teach (Coulter and Woods, 2012).

Subject Pedagogy

Subject pedagogy has been organised by general or specific pedagogy that supports the teaching and learning of the content matter. In Shulman's (1987) presentation of teacher knowledge, he distinguishes general pedagogical knowledge from pedagogical content knowledge (PCK). The rationale for this is to provide an understanding of how particular topics, problems or issues are organised, represented and adapted to the diverse interests and abilities of learners within specific subject contexts (Turner-Bisset, 1999). In bringing together subject knowledge with pedagogical knowledge, Shulman (1987) strengthens the relationship between theory and practice (Keay and Lloyd, 2011),

suggesting that having knowledge of a subject is different from knowledge of how to engage learners in that subject. Whilst primary teachers may recognise Shulman's (1987) knowledge categories within their own general practice, such knowledge should be rigorously applied for beginning teachers within PE specifically. Shulman (1987) explains that anyone may hold knowledge that is yet unknown to someone else, but through performance skills, attitudes, pedagogical representations, it is the teacher who transforms that understanding into meaningful knowledge for the learner. Thus, a teacher must not only have knowledge-that (what is to be learnt) but knowledge-how, *how* it is to be taught. For a primary teacher, the seven domains of teacher knowledge presented by Shulman (1987) apply across the different curriculum subjects therefore a distinction for PCK is required, however in relating this category specifically to primary PE the application of the subject is already implied; therefore all references to pedagogy have been consumed within the broader category of subject pedagogy.

Reflective and Academic Engagement

This category relates to knowledge of, and through engagement in academia, research, policy and self. Dewey (1904) argues that the adequate professional instruction of teachers requires both a theoretical as well as a practical dimension. However, deconstructing knowledge from theory and practice can be problematic because what is valued depends largely upon different epistemological perspectives (Tom and Valli, 1990). Defining knowledge within the context of ITE requires an understanding of knowledge from professional, political and institutional perspectives including government, teachers, parents, wider-organisations and pupils. Tsangaridou (2006) suggests the phrase 'teacher knowledge' can conjure different meanings and influence discussions about what constitutes effective practice. This places decisions about the knowledge required for beginning teachers in a highly contentious space, but signifies the importance of the beginning teacher being aware of the broader context in which they work and developing a rationale for the place of the subject within the curriculum (Pascual, 2006). Shulman (1987) suggests there are four major sources of teacher knowledge: scholarship in content disciplines, materials and settings, research on social and cultural phenomena and the wisdom of practice. From these four sources, Shulman (1987) believes that the normative and theoretical aspects of knowledge are usually not valued by policy-makers and those involved in staff development compared to studies of teacher 'effectiveness'. This concern has also been shared by Marshall (2014: 269) who

advocates that access to educational theory is important for those at the ITE phase as it can help new teachers to avoid the adoption of 'blind routines' in their practice. However, in a recent review of ITE, Carter (DfE, 2015a) recommended that evidenced-informed teaching should play more of a central role in the future development of beginning teachers and form part of a core curriculum for ITE.

Developing Practice in Context

Grossman and Richert (1988) define teacher knowledge as knowledge that encompasses general pedagogic principles with the skills and knowledge of the subject matter to be taught. Within this definition the knowledge required to be a teacher is more than just having a sound understanding of subject matter, but also includes an understanding of how to present that knowledge effectively to learners. It is based on the premise that learning in context is essential for teacher improvement (Coulter and Woods, 2012). Ryle (1949) distinguishes knowledge between 'knowing that', the knowledge of facts, 'knowing how' and the skill of how to put knowledge of 'that' into practice. Ryle (1949) rejects Cartesian Dualism, the separation between the mind and body and the segregation of theoretical understanding from practice. He argues that knowing *how* to perform an act skilfully is not only a matter of being able to reason practically, but also a matter of being able to put practical reasoning into action. Knowledge of *what and how* becomes central to any philosophical discussion about what knowledge is (Ryle, 1945-1946). For teachers there is theoretical knowledge associated with theories of education and the curriculum (knowledge that), but there is also knowledge of *how* that knowledge is enacted in practice*.* For example, it is not enough for a primary physical educator to merely have the knowledge of the curriculum and the movement skills a child requires to become physically educated, if they are unable to apply that knowledge in a meaningful context with the child. The preparation of teachers must therefore include both theoretical understanding and practical knowledge application. Ryle (1949) explains that a failure to recognise the distinction between knowing-how, knowing-that and the interplay between the two can lead to a state of 'infinite regress'; an argument against cognitivist theories of behaviour, where the knowledge of rules and facts are on their own meaningless as they do not explain knowledge claims. A primary physical educator, not having the practical understanding of how learning is applied, can prevent further understanding from emerging and reinforce the notion of the teacher being a pedagogic technician (Alphonce, 1999).

With a trend in primary PE towards more outsourced providers delivering the curriculum, Adams (2015) is concerned about the impact this is having on the development of beginning teachers. She reports that the main reason beginning teachers from her institution were unable to plan, observe, or teach PE when on school experience was due to lessons being delivered by an outside agency. Adams (2015) further commented that her students felt less inclined to seek opportunities to teach, if PE was taken by someone external to the school. The domain of DPC not only sets the expectation that professional knowledge development requires engagement and application in the environment of where children learn, but teachers must also develop their knowledge of the wider-workforce too.

Articulating a Knowledge-Base for Primary Physical Education

A review of the literature has suggested a number of recommendations for improving the confidence and competence of teachers in primary PE, including increased time for PE within ITE (Carney and Armstrong, 1996; Harris et al., 2012; Morgan and Hansen, 2007), dedicated CPD that is matched to teacher and learner needs (Coulter and Woods, 2012; Keay and Lloyd, 2011; Todd, 2015), clear articulation of the subjects' purpose (Green, 2010; Pascual, 2006; Tsangaridou, 2006) and the use of 'specialists' who have knowledge to develop PE outcomes (DfE and EfA, 2014; Morgan and Hansen, 2007). Some of these recommendations have/will require enactment at a political level, but a proactive approach can still be taken by researchers and teacher educators to support the development of teachers in an applied context. The professional knowledge of teachers has emerged as a factor that connects all these issues, with Keay advocating that due to the very limited subject knowledge opportunities during ITT, or for CPD thereafter, teachers will tend to make few alterations to their practice and subsequently maintain 'a role with which they are comfortable' (2006b: 370).

The literature is limited on research that focuses on primary teachers and their potential to teach primary PE (Tsangaridou, 2012b), but even less is known about the stage prior to qualification. Researchers have started to tackle complex questions relating to the nature of knowledge in PE and what experiences favour the acquisition of content (Amade-Escot and O'Sullivan, 2007; Pascual, 2006), but this has tended to valorise children's learning over teacher learning. An understanding of what knowledge beginning teachers need for teaching primary PE and how they acquire this knowledge

has become essential in the current political landscape as routes into teaching become more diverse and the curriculum which is taught more streamlined.

After confronting difficulties in locating a comprehensive knowledge-base for beginning teachers, I started to make sense of what was already known through an engagement in the literature, policy documents, Ofsted reports and reflections from my own professional practice. A presentation I gave to colleagues at the Association for Physical Education (AfPE) PE ITE conference in 2013, entitled *Towards a Unified Approach to Primary Initial Teacher Training and Education (ITTE)* aimed to engage colleagues in this issue*.* During this workshop, aspects of knowledge in primary PE that had derived from the literature were discussed and then organised by workshop delegates into emerging, secure or aspirational categories. Feedback received from this presentation and the PE ESAG can be viewed in appendix 2, where knowledge congruence emerged for each stage of a teacher's learning.

Reflective & Academic Engagement (RAE)

7. Investigate an area of practice through research

6. Facilitate appropriate competition for in and beyond the curriculum

5. Be actively aware of current issues; including changes in policy & curriculum development

8. Set challenging targets for professional learning linked to pupil outcomes

4. Engage in academic reading and writing around PPE

2. Articulate the aims and a rationale for PE in the curriculum

3. Identify the characteristics of a physical educated child

10. Promote PE within your own school and local context

9. Accredit learning through qualifications

1 Identify self on a typology for teaching PE, reflecting upon prior experiences

Developing Practice in Context (DPC)

5. Give feedback to pupils, parents and to other colleagues on a child's progress in PE

8. Work with external agencies & other schools to create further opportunities in PE and sport outside of school

9. Effectively self-evaluate PE as a curriculum subject and set targets for improvement

2. Teach across different physical activity areas, key stages and settings

4. Receive feedback on teaching from subject tutor; teacher; PE specialist

7. Lead PE in school settings, undertaking curricular planning and subject development

1 Observe teachers; the wider-workforce and children in physical learning contexts

3. Evaluate teaching and learning and other related aspects of professional practice

6. Work with teaching assistants; sports coaches; parents and volunteers to enrich provision in school

Aspirational | Secure | Emerging | Secure | Aspirational

6. Understand and promote health, fitness and well-being in young people

3. Understand the developing child

1. Know the fundamental movement skill themes for skill learning

1. Plan for an individual and/or series of lessons

3. Set appropriate challenge within acceptable levels of risk- ensuring safe practice

6. Assess formatively and summatively

8. Know how to use PE to improve attainment in other areas of the curriculum including literacy and numeracy.

4. Understand a range of gymnastics; dance; games; swimming; outdoor adventurous & athletics activities

2. Recognise the stages of development a child moves through when learning a skill

2. Develop effective strategies to promote pupil learning

4. Use a range of teaching strategies to support a complex pedagogy

10. Mentor and support others in developing their own pedagogy; subject knowledge, and advanced approaches to teach PE

5. Adopt inclusive principles for all learners' needs

9. Understand and actively support transition of physical literacy across developmental stages

7. Engage with PE and school sport beyond the curriculum including; healthy schools; competition; school sport; volunteering and leadership

5. Know the statutory frameworks for PE including the Early Years Foundation Stage and the National Curriculum

7. Adapt existing resources and develop your own to support pupil learning

8. Use technology and media to support and advance learning in PE

Content Knowledge (CK)

Subject Pedagogy (SP)

Figure 3.2: Professional Knowledge Model for Primary PE

The Professional Knowledge Model (Model) in Figure 3.2 and appendix 1 is the outcome of this process and presents an initial attempt at drawing together the professional knowledge-base of primary PE through the four different domains already discussed. I realise that each of the concepts presented in the Model could be analysed further, but in keeping with a model that aids reflection and avoids becoming too prescriptive, I felt a more general overview would support the learner and help them not to lose sight of what was essential (Pascual, 2006). The Model reflects an understanding of professional knowledge at this point in time; however Bernstein (1996) suggests that disciplinary knowledge has, and will, continue to be reconfigured to keep in line with rapid growth and changing applications of knowledge. For primary PE ITE this might include future developments in areas such as pedagogy, sport, child development, health and policy.

The four domains presented in the Model collectively reflect the breadth of professional knowledge required to teach primary PE and have been built upon the seminal work of Shulman (1987) and others who have attempted to organise teacher knowledge in this way (Darling-Hammond, 2006a; Eraut, 1992; Hegarty, 2000a; Turner-Bisset, 1999). Through an understanding of content knowledge, pedagogical knowledge, developing practice in context and reflective and academic engagement, each domain is regarded as having equal importance, but consideration is given to the order in which knowledge is first developed and then progressed. Each stage of the Model will now be discussed in turn, signposting how knowledge from each domain has been organised under the emerging, secure and aspirational headings.

The Emerging Stage

The centre of the Professional Knowledge Model proposes an emerging knowledge-base for primary educators who are learning to teach PE from an initial starting point. The Model acknowledges that the emerging practitioner brings with them existing beliefs about PE and how the subject contributes to the primary curriculum (Capel and Blair, 2007; Elliot et al., 2013). At this stage of a teacher's learning perceived levels of confidence and competence may be identified, but development, reflection and application across a breadth of professional knowledge is needed in order to address 'teacher concerns' (appendix 2). If primary educators wish to truly understand the role of primary PE in the curriculum, a consideration of their own prior experiences must first be made as this can have a significant impact on their future practice as teachers (Curtner-Smith, 2001; Garrett and Wrench, 2007; Mezirow, 2000). Macdonald et al.

(2002) believe that ITE should reflect educational change through philosophical curricular and structural changes in policy and practice, therefore the domain of RAE is argued to be an important sub-section of a teachers' professional knowledge-base.

Haydn-Davies et al. (2010a) state that complex discussion surrounding beginning teachers' confidence and competence to undertake their role is strongly linked to both their knowledge of the subject and knowledge of how to teach children. Kay (2004) questions whether beginning teachers and their ITE tutors have a shared understanding of the terminology used in regards to content knowledge, as the term PE alone can conjure up varying thoughts and beliefs based upon people's prior experiences. Haydn-Davies et al (2010) feel the lack of clear understanding regarding what subject knowledge is and getting the balance right between knowledge and application of principles, is the crux of the dilemma faced by all those preparing teachers to educate primary-aged children; it can lead to beginning teachers relying on their prior experiences as a main source of their knowledge competence.

As previously mentioned in chapter two, the socialisation of primary physical educators is believed to be influenced from a broad understanding of prior experiences (Curtner-Smith, 1998; Curtner-Smith, 2001; Elliot et al., 2013; Garrett and Wrench, 2008; Lawson, 1986; McMahon and MacPhail, 2007; O'Bryant et al., 2000; Pearson, 2011; Pickup, 2012a). Beginning teachers bring with them beliefs about play, exercise, sport and activity that have developed from outside (Petrie, 2008) as well as inside the school context (Sidwell and Walls, 2014). Elliot et al. (2013) found that the professional socialisation of primary teachers from prior experiences became a more powerful determinant of confidence than any formal training they had received (Zeichner, 2010). Once developed, dispositions of beginning teachers' prior life experiences are highly resistant to change (Pickup, 2012a; Zeichner, 2010), therefore stressing that if negative underlying prior experiences are not addressed, it is likely this initial pattern of behaviour will continue and perpetuate throughout a teacher's career (Garrett and Wrench, 2007). ITE must therefore address issues around perceived confidence, with teachers first making sense of their prior experiences before addressing future professional learning needs (Elliot et al., 2013; Pickup, 2012a).

Mezirow (2000) explains that what we know and believe is embedded within the context of our biographical, historical and cultural experiences; however the

interpretations and explanations that worked for us as children often no longer work for us as adult learners. The dilemma for beginning teachers on an ITE programme is that they will carry beliefs about the subject from childhood that may well be contested under their new identity as an educator. It is the assessment of these earlier experiences, seeking agreement of their meaning and making decisions based upon these insights, that is central to the learning process as adults (Mezirow, 2000). Mezirow further explains that for adults learning is understood as 'the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience as a guide to future action' (2000:5). In an autobiographical account, Pearson (2011) came to better understand her role as an adult educator through deep reflection and engagement with her students. She observed that her students' prior experiences had placed them in a metaphoric 'mental straightjacket' where they felt disempowered about what they were capable of as future primary physical educators. Pearson (2011) commented that this not only had implications for her pedagogy as a teacher educator, but if the matter went un-addressed it could lead to dangerous and powerless decision-making by the students about their future perceived ability. Within this account, Pearson (2011) problematises the impact of her teaching on the future effectiveness of her students. If they are unable to make confident decisions about their own development, it raises the question of who will make these decisions on their behalf. For many beginning teachers, experiences from school can lead to alienating and narrow definitions of PE through dominant discourses of sport and competition (Garrett and Wrench, 2007). ITE has an essential role in the transition of an individual from a pupil to a teacher. It must also ensure negativity is not perpetuated, despite thinking that dominant beliefs are highly resistant to change (Rolfe, 2001).

Another key feature of the emerging stage is a foundational understanding of what to teach. Knowledge of movement skill development and knowledge of the developing child is placed on the Professional Knowledge Model ahead of specialised activity areas; as in order to develop competent performers, motor development must first be secure (Griggs, 2007). If a beginning teacher has not acquired this knowledge then a child's learning may become focused on the activity rather than the child's movement development. With the most significant periods of development in children taking place within primary years (Gallahue and Cleland-Donnelly, 2007; Gallahue and Ozmun, 2011), educators working in this age phase must support children in moving though a

'proficiency barrier' of fundamental movement competencies in order to be proficient in more specialised activities in later childhood (Gallahue and Ozmun, 2011; Graham et al., 2012; Griggs, 2007). The NC for primary PE specifically requires children to master basic movements and develop a broad range of skills (DfE, 2013b). Knowledge of the movement skills alone is not enough to progress on to the secure stage of the Model, as beginning teachers will need practical application of how to apply movement learning, in context and with consideration to a range of effective teaching approaches (Jess, 2011). Exposure to progressing knowledge in this way might help to avoid the state of infinite knowledge regress as previously discussed by Ryle (1949).

The Secure Stage

At the secure stage, the practitioner grows in confidence and competence to teach primary PE. They have had time to engage in the subject across a range of contexts and reflect upon wider perspectives. Elements of emergent professional knowledge may still require development, but specific expertise may start to form. At this stage there is a shift from teacher concerns to the specific needs of children, which will determine the future professional learning needs for the teacher (Keay and Lloyd, 2011).

The secure stage is associated with exploring complex issues surrounding teaching and learning and the contexts in which primary PE is experienced (Jess, 2011). Academics have argued in recent literature that pupil learning in primary PE should be understood through Complexity principles where individuals emerge in and through the learning process in unique and unpredictable ways (Atencio et al., 2014; Jess et al., 2014). Jess, Atencio et al. value that within the learning of PE 'uncertainty and diversity can underpin curriculum practices that provide for self-organisation, adaption and creativity' (2011:183). Therefore, teachers must understand what influences the unique experiences of their learners. Jess et al. (2014) feel Complexity is best explained by the way different systems work, consisting of parts that self-organise and interact with each other within their own structures and the external environments. They have drawn upon ecological thinking to identify and structure key components and present a framework that can be applied to primary PE.
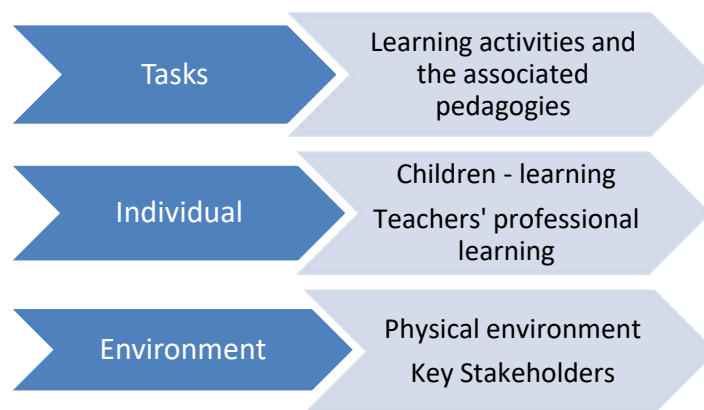
Figure 3.3: Primary PE Framework by Jess et al. (2014)

The primary PE framework in Figure 3.3 considers key ecological components of task, individual and environment have ever-changing relationships that can impact on the children's progress (Jess et al., 2014). The development of professional knowledge at the secure stage requires teachers to consider PE in more complex ways. The Professional Knowledge Model emphasises that knowledge at this stage is characterised by an understanding of tasks through activity areas, approaches to teaching and assessment; the individual through the context of challenge, safety, inclusion and health and the environment through political contexts, statutory frameworks, curriculum, beyond the curriculum and the wider-workforce. With an emphasis on the secure stage being about children's learning in ever changing contexts, beginning teachers will need to consider these knowledge areas with every new school, learning context or child they encounter.

The Aspirational Stage

The peripheral aspects of knowledge on the Professional Knowledge Model, places the beginning teachers' understanding at an aspirational level. At this stage they will demonstrate a high level of confidence and competence within the subject. They will recognise that personal development must be maintained across the four areas of professional knowledge (Content Knowledge, Pedagogical Knowledge, Developing Practice in Context and Reflective and Academic Engagement), which is on-going, not linear or time bound. Although some of time will be specifically dedicated to primary PE through training or development, they will also be involved in advancing understanding in more specialised areas of professional knowledge and advocating the subject to wider audiences e.g. developing research interests and disseminating good practice beyond their own educational setting.

This stage of professional knowledge development is situated with those individuals who are, or aim to be involved with subject leadership or advocacy. This stage also assumes that those considered to be a specialist in primary PE have an aspirational knowledge-base. When considering what a specialist teacher of primary PE should be, Price (2008) and Carney and Howells (2008) suggest that this should not be the teacher of all school PE, but rather an individual who is able to model good practice and support other teachers whilst maintaining an understanding of the education of primary-aged children. Although it is not necessarily expected that a teacher, let alone a beginning teacher must meet an aspirational stage of professional knowledge development, there may be aspects of their practice they wish to challenge or enhance; particularly for those aspiring to be future subject leaders.

Chapter Summary

The literature has provided a number of ways in which to organise teacher knowledge, with a general agreement that teachers require knowledge of content, pedagogy, reflective and academic engagement and understanding of how to apply knowledge in context (Darling-Hammond, 2006a; Hegarty, 2000a; Randall, 2015; Shulman, 1987; Turner-Bisset, 1999). Finally the literature has indicated that the development of teachers professional knowledge is an ongoing reflective process that cannot be considered linear or time-bound (Keay and Lloyd, 2011). In presenting a model for professional knowledge in primary PE the beginning teacher can consider their understanding in relation to the subject's wider professional context. A teacher is therefore considered as a professional by the knowledge they have, the autonomy they have in their work and the responsibility they have for their learners (Day, 2002; Hargreaves, 2000; Hoyle and John, 1995). The Professional Knowledge Model presented in this chapter has been informed by a wide engagement in the literature and critical discussions with colleagues in the field of primary PE. Chapters four and five will outline a methodology and set of methods in which beginning teachers' confidence will be examined against these knowledge areas. In these chapters the Professional Knowledge Model will be used as a reference for knowledge and as a tool to support beginning teachers in reflecting upon future professional targets.

CHAPTER FOUR

Towards a Critical Understanding of Knowledge

Introduction

The previous chapters have considered the historical and contemporary challenges inherent in primary PE, with beginning teachers characterised as having limited confidence and competence to teach the subject (Griggs, 2007; Harris et al., 2012; Morgan and Hansen, 2007; Morgan and Hansen, 2008; Morgan and Bourke, 2008; Murphy and O'Leary, 2012). Furthermore, ITE programmes in England are tasked with developing a breadth of professional knowledge in teachers, where prior experiences have influenced their perceived confidence to teach PE (Curtner-Smith, 1998; Pearson, 2011) and where opportunities are considered limited (Keay, 2006b). The iterative process of reviewing literature in chapters two and three has enabled me to consider beginning teachers as learners in their own right, reflect upon the nature of their knowing and explore their personal experiences as a homogenous group. This research has drawn on primary PE through the theoretical concepts of ITE, education policy and professional knowledge (see chapter one). These themes have led me to adopt Habermasian Critical Theory as a theoretical framework in which to examine the research questions. This chapter aims to discuss the role pf Critical Theory one and provide a rationale for its role within this research. It begins with a discussion of the theory me as a critical researcher and later how Ideology Critique, transformative learning, communicative action and rationality have been an underpinning for the thesis.

Critical Theory as a Theoretical Framework

The purpose of having an explicit theory to work with has been to provide me with a framework that can develop a philosophical stance, where assumptions about the world can be made. There exists an array of methodologies, methods and theoretical perspectives in the literature, with little consensus about what scholarship is or what it should look like (Donmoyer, 1996; Evans, 2002). This can mean that making sense of theory can be a challenging and arduous task (Gray, 2004). For example Smith (2010) refers to the paradigms of constructivism, Scott (1996) to positivism, post-positivism and interpretivism and Denzin and Lincoln (1998) to post-modernism and post-structuralism. Rather than entering into paradigm debate (Hammersley, 2008; Hargreaves, 1996; Pring,

2015; Whitty, 2006), I felt that it was important to recognise that 'paradigms are not provable...they are, essentially, matters of faith' (Esterberg, 2002: 9). As a teacher educator, I believe interaction and understanding is central to my work with adult learners, a factor that has ultimately shaped and developed my research approach. Throughout the doctoral journey I have come to acknowledge that although there are many angles from which to see reality, what concerns me most is that research has the potential to make a transformational change in practice (Brookfield, 2000; Mezirow, 2000). When it comes to judging whether a study warrants our attention, Denzin and Lincoln (1994) suggest that the values we use to make that decision are in part ideological, political, moral and personal. Researching within ITE has required me to consider all these dimensions at various stages and how they have influenced the theoretical framework I have subsequently used.

Critical Theory is associated with a group of philosophers from The Institute of Social Research in Frankfurt[2], with its origins connected to the intellectual work of Marx (Morris, 2011; Murphy and Flemming, 2009). It is best understood as a tradition of thought emerging in the 1930s, that has produced an innovative blend of radical philosophy with social science (McLaughlin, 1999; Morris, 2011). Any account of Critical Theory begins with a rejection of positivism, as both a world-view and as a methodology (Agger, 1991). Its commitment to social practice has led to an enduring analysis of societal issues concerned with structural relationships of power, control, discrimination mediated through language and the understanding of the activity and role of the knowing subject in these processes (Habermas, 1982; Poutanen and Kovalainen, 2010).

Jürgen Habermas is considered to be a leading figure of the second generation of Frankfurt School philosophers. He makes a move away from a 'Weberian-inspired' Frankfurt school (Murphy and Flemming, 2009: 5) and argues that a change of paradigm to the theory of Communicative Action "makes it possible to return to the undertaking that was interrupted with the critique of instrumental reasoning" (Habermas, 1984: 386). In other words, his critique offers a renewed perspective of Critical Theory that has

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[2] Some of the most prominent Critical Theorists associated with the first generation of The Frankfurt School are Max Horkheimer (1895-1973), Theodor Adorno (1903-1969), Herbert Marcuse (1898-1979), Walter Benjamin (1892-1940), Friedrich Pollock (1894-1970), Leo Lowenthal (1900-1993) and Eric Fromm (1900-1980)

Agger, B. (1991). 'Crticial theory, poststructuralism, postmodernism: their sociological relevance '. *Annual Review Social,* 17**,** 105-31.

, Morris, M. (2011). Communicative Action and Critical Theory. *In:* Jarvie, I. C. & Zamora-Bonilla, J. (eds.) *The Sage Handbook of the Philosophy of Social Sciences.* London: Sage..

emancipatory intent (Brookfield, 2000; Habermas, 1984; Lovat, 2013). Habermas (1972), more decisively than his earlier Frankfurt colleagues, found positivism to be more evident in Marx's work, with Marx failing to distinguish carefully enough between 'knowledge gained from casual analysis and knowledge gained from self-reflection and interaction' (Agger, 1991: 110). Little commentary exists on how Habermas' thinking can be applied to the field of education, which makes this thesis a unique contribution to the field of primary PE ITE. However, ideology critique and transformative learning are visible within the adult education sector, providing educators with a framework to help learners consciously challenge their existing assumptions (Brookfield, 2000; Mezirow, 2000; Murphy and Flemming, 2009). Although often described as a 'reluctant hero' of education (Lovat, 2013; Murphy and Flemming, 2009)), Habermas (1979) presents a practical-political social philosophy that considers social evolution as a learning process. It is Habermas' thinking around knowledge, society and communicative rationality that proffers an educational agenda and methodological design for my research that has the potential for transformative capacity (Brookfield, 2000; Habermas, 1972, 1984; Lovat, 2013a; Morris, 2011).

Political and ideological stances of ITE have been explored in the earlier chapters of this thesis, identifying systems that influence a dominant understanding of knowledge of primary PE, such as health, sport and competition (Coulter and Ní Chróinín, 2013; Griggs and Ward, 2012; 2013). The current political view that the training of beginning teachers in ITE should be school-led has driven research questions to find out what professional knowledge beginning teachers' are developing in primary PE and where it is sourced. This current view of ITE has also strengthened my rationale for adopting a Habermasian perspective of Critical Theory, as Habermas (1987) believes the university has a key role in the preparation of students for academic careers as well as participation in cultural self-understanding and public opinion formation. The development of my own professional practice and the learning needs of my students have been a significant motivation throughout the research, impelling a sense of moral purpose; whereas theory has provided a structure in which to make sense of the issues. Kuhn (1996) suggests that paradigmatic thinking enables us to portray the world through perceptions, understanding and interpretations. Using Critical Theory as a theoretical frame has led me to a set of methods that focus on transformation and interpretation enabling me to uncover the experiences and beliefs of beginning teachers and the dominant ideas that operate in ITE.

Habermasian epistemology (1972) explains that the structures of human knowledge are determined by interests which are deep-rooted in the social existence of humans and their lifeworld, therefore identifying what knowledge a teacher is developing and how, would require more than just a surface understanding of the situation. Habermas (1972) also argues that humans will have different constitutive interests in their social spheres which will shape what worthwhile knowledge is within the relationships they form and the contexts in which they interact. It is through this intricate balance of wider public control and self-determination that knowledge is understood (Daws, 1999). This is a challenge for ITE, as knowledge development requires the beginning teacher to engage with a range of political, social and institutional interests which change over time and institution. Habermas (1972) recognises that in seeking questions about knowledge, the wider spheres of power cannot be ignored; but nor too can the individual's own beliefs. Furthermore, Habermas (1972) considers self-reflection to be a critical component in the development and validation of knowledge. It is imperative the beginning teacher understands the self through an ongoing process of reflection, recognising that cognitive interests do not just exist within a generic social context, but also within themselves.

For critical theorists, the term 'critical' refers to ways in which knowledge is created within an understanding of social structures, power relationships and the agency of human beings (Bhavnani et al., 2014). Critical theorists work from a diverse range of backgrounds but are fundamentally concerned with transformation and emancipation of those who are underrepresented (Martens, 2005). In this view, knowledge is not considered to be a neutral construct, but influenced by human interests and the powerful social relationships within society (Martens, 2005). Therefore research questions typically focus on action, structure, culture, and power (Denzin and Lincoln, 2005) and seek to critique the formal structures that operate to disempower individuals within that society. Although my research does not seek to frame beginning teachers as an oppressed group, it does seek to give them a voice regarding the development of their professional knowledge and practice. The role of Critical Theory in this research is to adopt a dialogic approach in which beginning teachers have ownership of their professional learning and are able to make decisions about their future professional needs.

> The commitment to consider all individuals as potential participants in discourse presupposes a universalistic commitment to the potential, autonomy and rationality of individuals (Habermas, 1982:252).

Currently, beginning teachers' professional learning in primary PE ITE is limited by the lack of time for development and by disparate opportunities to develop competence (Blair and Capel, 2011a; Elliot et al., 2013; Harris et al., 2011). Furthermore the aims and purpose of primary PE are dominated by government and societal discourses of health, sport and competition, which may influence what knowledge a beginning teacher prioritises in their development. Government pronouncements now suggest that the teaching of the subject requires 'specialist' knowledge and practice as many teachers lack the confidence and are unable to teach the subject competently (Fletcher and Mandigo, 2012; Garrett and Wrench, 2007; Morgan and Bourke, 2008).This research seeks to support transformation in learning for a small number of beginning teachers (specialist and generalist), by placing them at the centre of discussions about their professional learning and experience.

Throughout the research design, I have considered my moral purpose as an educator, but also as a member of the community in which I live and work. I have aimed to reflect Habermas' commitment to 'social practice', which is characterised by a purposive and rational labour of individuals (beginning teachers) and the communication of interests within rule-governed institutions. Here I refer to 'labour' as the act of teaching, whereby a teacher must work within professional regulations and be governed by policy and professional standards. These expectations are made visible throughout various sources of communication, such as school, university, academic literature and government documentation. The production and reproduction of labour is visible in the formal process of becoming a teacher where the 'object' (the beginning teacher) engages socially through different forms of communicative action. This occurs between them and the class teacher/mentor, the teacher educator, colleagues, parents, children and wider organisations. Within these spheres of social interaction different interests exist and can influence decisions about knowledge. It is the effect these influences have on the beginning teacher, the responses they make, the beliefs they have and the knowledge they develop, which is of interest to me in this research. It is also my intention that the participants I work with are actively engaged in discussions about their practice and are able to set specific targets that support their next steps as a teacher. However, it is not my intention to ignore government guidance or wider societal discourses of primary PE ITE, but to consider them within a broader context of knowing. Through communicative action and rationality, Habermas builds on the role of critical reflection to conceive the

self-reflective knower (the beginning teacher) as someone who comes to understand their lifeworld and the professional context in which they work (Ongstad, 2010).

The Researcher

In adopting Critical Theory as a theoretical framework I recognise that truth is not value-free (Macfarlane, 2009). Working within a transformative paradigm has therefore required me to consider my own professional context and the assumptions I hold regarding primary PE ITE. Brookfield (2000) believes that adult educators researching within a critical framework must first acknowledge the considerable power that they exercise within their practice. Although it has never been my intention to influence or coerce participants (Macfarlane, 2009), it would be disingenuous to pretend that as a teacher educator I am at the same place of learning and share the same beliefs as them (Brookfield, 2000; Pascual, 2006). The literature has also made me aware that a lack of integrity may corrupt my research and I must maintain an openness with my supervisors and participants at all times (Newby, 2010). In doing so I invited ITE providers and beginning teachers to assess my motives and intentions before making a decision about their participation through telephone conversations, face to face discussions, emails and an information sheet (appendix 9). It was during the interview process in particular, that the participant and myself came together and where discussions about our beliefs and experiences led to a co-constructed understanding of reality (Hennick et al., 2011). Pascual (2006) protests that teacher education is full of contradictions; when we aim to develop reflection and autonomy, we actually promote a pedagogy of hierarchy and suppress dialogue. I have aimed to engage truthfully, but professionally, in any issues and discussions with participants. Whilst I have not shared the participants' experiences, I have aimed to maintain a respect for their beliefs and the decisions they have made about their practice. The process of data collection has led to moments of a power re-ordering between myself as the researcher/teacher educator and the participant/beginning teacher, to ensure the participants' contribution is valued regardless of the relative power differences that exist. Brookfield (2000) explains that when this re-ordering occurs learners can start to become transformative agents of their own education and become co-creators of knowledge. The ethical considerations and the nature of the communication I had with participants will be discussed further in chapter five.

Ideology Critique

A central concept of Critical Theory is the critique of ideology and a turn towards critical thinking and reflection (Brookfield, 2000). Critical theorists see 'ideology' as a broad set of false beliefs that justify the practice and structures of society where values, beliefs and myths are accepted (Brookfield, 2001). Ideology critique therefore, describes the process by which people learn how dominant ideologies are uncritically accepted and embedded in everyday practices (Brookfield, 2000) and seeks to question the existing order of things to examine how and why a particular situation has come to be (Palmer, 2001). It is an activity that requires adults to act on basic desires and instincts that are truly their own, rather than ideas that are imposed upon them (Brookfield, 2001). Reflection therefore, is inherent in the process of Ideology Critique but on its own does ensure critique has occurred. The intention to use Ideology Critique as a theoretical framework in this research is to help myself and other individuals understand how political ideas and social acts are permeated within the institutions in which we work and learn; it also helps to see how the constructs and categories we use to understand our daily lives are ideologically framed. Chapter five will consider the ethical and methodological implications of adopting this approach within my research, ensuring a critical reflection of beliefs are achieved by the participant.

With political stakes integral to public services like education, it is unsurprising that teachers and teacher educators become an interface between the public and the public sector (Murphy and Skillen, 2013). The space where the public and state meet often means the work of both is exposed. The success of educators in their work for example, can have implications for how governments and their policies are judged both at home and internationally. Educators become increasingly accountable for their competence and professional output (Murphy and Skillen, 2013). In ITE, this is framed by Teaching Standards (DfE, 2012) and tests that aim to evaluate teacher competency. The McKinsey Report (McKinsey, 2010) is another example of accountability and competence being exposed in the public sphere. In the most recent report, various education systems were judged against each other within a competing global market. England is currently ranked sixth on a scale that measures how school systems are effective in improving educational outcomes and where education reform is evaluated (McKinsey, 2010).

The argument for this research to be examined through Ideology Critique is two-fold. The first is that the professional knowledge-base of primary PE has arguably become an

increasing commodity within a neoliberal exchange economy and exposed through the public sphere. The most recent example of this is through the aforementioned government funded PE and Sport Premium for Primary Schools; where funding is intended to train and 'up-skill' the teaching workforce, improve teacher competency and raise standards for pupils attainment (Ofsted, 2014). The marketisation of teaching and learning in HE has also been made visible through changes to quality assurance, appraisal and reform of governance (Flemming, 2010). Brookfield (2001) argues that in a market economy it is not just products that acquire intrinsic worth but so too can labour, including the intellectual labour of teaching. In this view of learning as a commodity, the transaction of knowledge in primary PE and ITE is considered as having inherent value: e.g. *Will this specific knowledge make me more employable?,* or W*ill wider political organisations and systems see added value if the PE funding is used in this way?* Habermas (1987) describes this as an invasion of the lifeworld, where everyday consciousness is robbed of its power to synthesise.

The second justification for exploring issues in primary PE ITE through Ideology Critique is from a growing recognition in the literature of how prior experiences shape the future practice of primary physical educators. The role of critique is to ensure that powerful ideologies and prior experiences do not perpetuate the status quo and compromise what is best for the needs of the child and adult learner. The location of primary PE as a commodity in ITE has implications for how knowledge within the subject is legitimised. Habermas (1975) speaks of a 'legitimation crisis' where a decline or loss of confidence can occur within a society. This typically arises when advancement in technical knowledge is made but has not yet adapted its role and place within society. This disequilibrium can be experienced if the norms and expectations of the subject are not connected to the learning the beginning teacher is receiving. The loss of the subject's legitimacy can therefore lead to a loss of teacher confidence. Undertaking Ideology Critique in this research has enabled me to become more aware of embedded structures in primary PE ITE, the beliefs that beginning teachers hold about the subject and the inherent challenges they face developing their professional learning.

Transformative Learning

Mezirow (2000) explains that transformative learning refers to the process whereby we transform our taken-for-granted frames of reference and reflect so we may generate beliefs that prove more justified in our actions. Helping learners become more critically reflective of the assumptions they hold of others, their experiences and the systems they work is argued to be a central component of transformation (Mezirow, 2000).

Chapters two and three framed the development of professional knowledge of beginning teachers in Primary ITE as being dominated by political discourses and the individual's prior experiences. Pearson (2011) reflects that for a number of beginning teachers it is these contexts and experiences that have restricted them in moving their practice forward. Transformation in an adult's learning requires 'participation in constructive discourse to use the experiences of others to assess reasons justifying assumptions, and making an action decision based on the resulting insight' (Mezirow (2000:8). The implication for primary PE ITE therefore, is that beginning teachers should be supported through reflection, discussion and practice to formulate their own beliefs, values and feelings, in order to gain greater control and decision making ability. Placing transformative learning in an ITE context has both individual and social implications. It demands that beginning teachers become aware of how they come to know their knowledge, their values and perspectives but also recognise that socioeconomic structures involved in education, the varying ideologies of others and how the professional regulations in which they work can often impede development and a sense of agency (Mezirow, 2000). Taylor (2000) attests that transformation in learning is challenging and even if adult learners attend to all the learning experiences presented to them, transformation still may not be achieved. In order to bring about a truly transformative experience, Keegan (1994) explains that learners must go beyond merely increasing their funds of knowledge; the underlying form of their understanding most also change. If ITE perpetuates dominant discourses about primary PE that already exist in the beginning teachers' beliefs, without dialogue, reasoning or alternative perspectives, then it is unlikely that transformation will occur and the current situation will perpetuate. ITE will need to ensure that a fundamental reordering of assumptions takes place if the beginning teacher is to bring about transformation in their practice (Brookfield, 2001). Habermas (1989) emphasises the important role of democratic debate to reach a true understanding of needs and interests in learning transformation,

otherwise the needs and interests of individuals in the public sphere will be reduced to the activities and ideologies of politicians, media and general public relations (Flemming, 2010).

Communicative Action and Rationality

Communicative action refers to the 'interaction of at least two people who seek to reach an understanding about something so that they can coordinate their interpretation of a situation and their plans for action' (O'Donnell, 2010:170). Communicative action is central to the healthy functioning of the human lifeworld through a renewal of cultural knowledge, mutual respect and coordinated action (O'Donnell, 2010). This principle has been pivotal in the design of a methodology that places the beginning teacher at the forefront of the learning process. It recognises the active role they must have through various social encounters if they are to be successful in their quest for knowledge autonomy. Habermas (1984) explains that the role of human speech is instrumental in the process of reaching cognitive agreement. He argues that in order to achieve mutual understanding, the speaker must make a true statement that will be accepted by the hearer and with justification that gives credence to it. Thus, in every utterance made there is a practical orientation to seek agreement and understanding from others in making validity claims (Morris, 2011). In the current context for primary PE, where knowledge competence and confidence is regarded as a concern, a normative starting point for discussion may be problematic. The development of the Professional Knowledge Model, discussed in chapter three (appendix 1), has intended to provide a starting point in this research for the beginning teacher to frame their reflections. The specific interpretation and application of that knowledge would depend on the context in which it was being applied. As previously discussed, the Model has been devised in this way to give autonomy to users and to encourage them to think deeply about the breadth of his/her learning, without being overtly positivist about what knowledge should look like. Although Habermas' foundational belief critiques instrumental reasoning and positivism as the only worthwhile forms of knowledge (Morrison, 2001), he also respects the historical and political structures that provide normative experiences (Habermas, 1984). This is believed to foster a society where ideology and unequal power relations operate with the tacit consent of all participants, leading to an agreed acceptance of what constitutes as worthwhile knowledge (Morrison, 2001). For

teachers of primary PE, this relates to where dominant views of what they should know understand and do and where questions around epistemology are raised.

Meaning attributed to primary PE and what is considered worthwhile have long been considered important to success in a teacher's professional practice (Kretchmar, 2000), as long as the meaning has perceived value. The nature of meaning and who validates it has been a critical question raised within this research. The value of primary PE and what is worth knowing has been offered as a reinforcement of political discourses, such as health, sport and competition (Petrie and lisahunter, 2011; Ward and Quennerstedt, 2015); this has been communicated through policy texts and the individuals who are responsible for programme design. If the value placed on primary PE is instrumental in determining a teacher's professional practice, the ownership of this value must come from the beginning teacher, from the beliefs they have and ultimately from how they can influence the learning of their pupils. For example, beginning teachers may be able to rationalise the value of PE, although not possess any passion for it (Kretchmar, 2000).

Habermas (1984) presents a close relationship between the validation of knowledge, rationality and 'speech acts'. He argues that 'rationality has less to do with the possession of knowledge than with how speaking and acting subjects acquire and use knowledge' (Habermas, 1984:8). The role of speech acts and speech text are therefore significant in the processes by which humans construct their understanding of knowledge and how it is legitimised. Within the systems of ITE, the beginning teacher will experience a number of speech acts through spheres of lectures, seminars, directed readings, NC documents, policy papers, Ofsted reports and professional encounters. These speech acts all contribute to the formal or informal legitimisation of knowledge.

> What does it mean to say that persons behave 'rationally' in a certain situation or that their expressions can count as 'rational'? Knowledge can be criticised as unreliable. The close relationship between knowledge and rationality suggests that the rationality of expression depends upon the reliability of the knowledge embodied in it (Habermas, 1984:8).

Rational behaviour cannot be detached from a communicated understanding of knowledge. Being 'rational' is aligned with an agreed understanding of what is expected behaviour within a particular social context. For example a beginning teacher may have a rationale for the design and delivery of a PE lesson, but understanding with another professional depends on a shared intention if he/she is to be judged fairly. If the observer of the lesson has a different normative view about what the lesson is and how

it should be taught, the observer may consider the lesson to be irrational. Habermas (1984) argues that further clarification and communication would be needed to ensure congruence between the beginning teacher and the observer:

> In the context of communicative action, only those persons count as responsible who as members of a communication-community, can orient their actions to intersubjectively recognised validity claims (Habermas, 1984:14).

Habermas (1984) believes a greater degree of communicative rationality expands when consensual resolution exists. A broad conception of rationality indicates that emancipatory potential for communicative competence emanates when reasoned deliberate discourse is achieved (Collins, 2003). O'Donnell (2010) explains that when two or more people communicate using face to face speech acts, individuals can choose to either accept or reject validity claims. The beginning teacher must therefore engage in communicative action with the 'responsible person', if they wish to have ownership of their learning and contribute to decisions about what counts as worthwhile knowledge in their practice. A withdrawal from communicative action can lead to a passive learning process and a reinforced notion of the status quo, held by those who have power and authority within that social sphere. It is only when the beginning teacher has engagement in the community, through acts of communication and language, that emancipation of an individual's learning can occur (Collins 2003). An environment for communicative action must first be established if the beginning teacher is to rationalise their practice and contribute to the development of their own professional knowledge.

Chapter Summary

This chapter has presented primary PE ITE as a highly complex process, fraught with debate relating to meaning and knowledge claims. I have discussed the adoption of a theoretical framework for my research aligned to a philosophy of Critical Theory and the moral imperatives of Ideology Critique as a structure for the thesis. Positioning my research within this ontology has had implications for both the research design and the process of data collection. In identifying the key principles that underpin Critical Theory, I have adopted a methodological approach that remains sympathetic to its core ontological perspective; one which Willis (2007) argues must ask questions and be reflexively driven. Theoretical ideas about Ideology Critique have suggested that a loss of teacher confidence could be attributed to a legitimation crisis within the subject. Chapter five seeks to make sense of the current situation from the perspective of the

beginning teacher. The methods aim to engage the beginning teacher in a process of reflective and communicative action to support them in making decisions about their future professional knowledge development.

CHAPTER FIVE

Perspectives of the Beginning Teacher

Introduction

In this chapter I consider the practical implications of data collection through a critical theoretical framework and present a set of methods used. I outline a process that embraces the philosophical and ethical principles of chapter four, recognising the central role that teachers have in constructing their own understanding of primary PE. I adopt a mixed method approach for collecting data to generate an understanding of the context in which beginning teachers develop their knowledge (Arthur et al., 2012). The decision to generate both quantitative and qualitative data was determined by the aims of the research and the 'dictatorship of the research question' (Tashakkori and Teddlie, 1998:20). The research questions specifically ask for breadth as well as individual context by seeking:

- What breadth of professional knowledge do beginning teachers have?

- What professional knowledge for primary PE do beginning teachers have most/least confidence in?

- Where do beginning teachers source their professional knowledge of primary PE?

- What beliefs do beginning teachers have about their professional knowledge development?

The design of methods that position the beginning teacher at the heart of the process has been complex. In this chapter I present a rationale for developing methods with a communicative focus, the ethical considerations this entails and a critical discussion of the methods to enable me to answer the research questions. Consideration has been given to critical times of the academic year and the programme structures of participating institutions. An overview of this timeline and a summary of the notes I have developed during this period can be viewed in appendix 6.

Developing a Communicative Methodology

Poutanen and Kovalainen (2010) explain that the conceptual tools common to critical research relate to a centrality of language. Therefore a methodological focus drawing upon Critical Theory should involve a dialogic and dialectical understanding of truth that

arises through an interaction with the subject and the subject's environment (Guba and Lincoln, 2005). The environments in this study are the lifeworld of the beginning teacher and the spaces they occupy (Ongstad, 2010). Both the individual and their environment are visible at each stage of the data collection as questions are explicitly asked about where their professional knowledge has been sourced and how this has influenced them in their learning.

Decisions pertaining to access of participants and their involvement in the study are inextricably linked with questions of ethics (Mauthner et al., 2002). Framing the research around Habermasian Critical Theory has fashioned a harmony between the underlying ethics of the study and the research process itself, by placing the beginning teacher at the forefront. The framing of Critical Theory within this research has partly been about defending beginning teachers' freedom of speech, providing educational opportunity, while being conscious of various ideologies that influence his/her practice (Collins, 2003). Collins (2003) indicates that a purpose of working with Critical Theory is to examine how the distribution of knowledge is steered from supported institutions to private interests. The context for this research has had a strong bearing on the development of the sample, ensuring the voice of the beginning teacher is heard and communicated at every stage. Collins (2003) advises that a researcher working within this framework should be informed by the emancipatory aspiration of the study and possesses an action-orientated interest in its issues. Both qualitative and quantitative data have been collected to address any weaknesses of using a single approach (Punch and Oancea, 2014).

Data Collection

In a conventional approach to research, the process depicted in Figure 5.1 is typically adopted (Bergman, 2008); however this makes a number of assumptions about when the data will be collected and analysed.
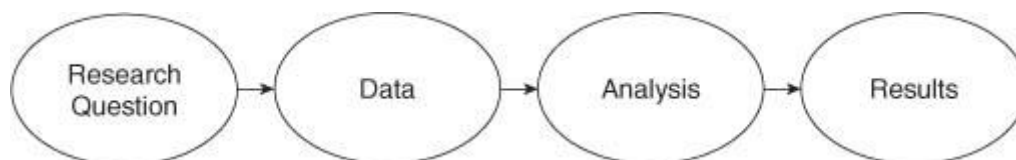
Figure 5.1: The conventional view of the research process

In terms of chronology, the model assumes a deductive approach where a single data collection point and analysis will produce results that answer the research questions. The linearity and inevitability of this model ignores different approaches to obtaining data at different stages of the research process (Bergman, 2008). In Figure 5.2 I have adapted this model to reflect my own research process for this thesis.
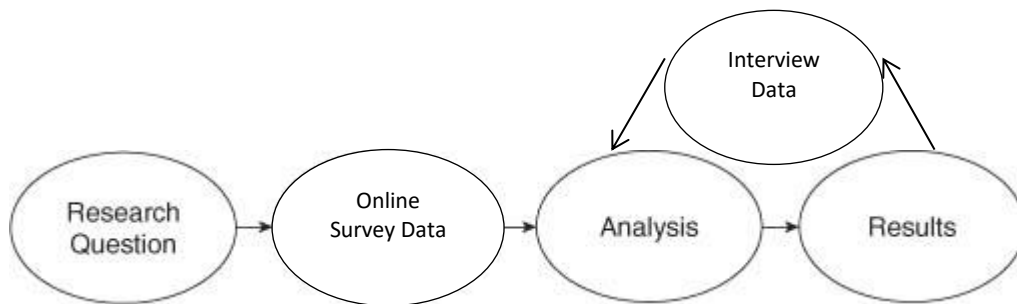
Figure 5.2: Model adapted from Bergman (2008)

Two points of data analysis occurred to support a process of triangulation. The basic idea was to obtain data from more than one method in answering the research questions (Arksey and Knight, 1999). Flick (1992: 4) suggests that the combination of multiple methods in a study is a 'strategy that adds rigor, breadth and depth to any investigation'.

The first stage of the process in Figure 5.2 was the formulation of the research aims and questions (see chapter one). Validity permeated each stage of the research, by checking that the methods used for data collection and analysis would directly help to answer the research questions (Jupp, 2006). Data from the online survey was generated first, with analysis of the responses following immediately after the survey closed (see chapter six). The main function of the survey was to answer the research questions; what breadth of professional knowledge do beginning teachers have; what professional knowledge of primary PE do beginning teachers have most/least confidence in; where do beginning teachers' source their professional knowledge of primary PE? Another function of the online survey was to identify participants for the interview stage. The final survey question invited all participants to leave an email address if they were happy for me to contact them. The data collated for prospective interviewed participants was analysed ahead of each interview. It was then used in the interviews to help each case identify specific areas of knowledge that would need to be prioritised in their first year of teaching. The case study reports in appendix 19, 21, 23 and 25 further illustrate the

targets that were made based upon the confidence that was communicated at the survey stage.

The second point of analysis occurred after the interviews has taken place and provided a more detailed account about each participant's individual beliefs and knowledge confidence. This stage supplemented the data collated from the online survey to give a more complete answer to the first three research questions, and to specifically address the research question of what beliefs do beginning teachers have about their professional knowledge development (see chapter eight). Interview data was analysed two-fold. Firstly, all interviews were transcribed from audio voice recordings within 2-3 weeks post interview. Ezzy (2002) cautions against leaving the transcription process too long after the interview, as meaning and context can get lost. I also made the choice to transcribe all interviews personally, despite this being a lengthy and time-consuming process. This helped me engage more fully with the data, listen to the expression, emotion and challenges the participants had (written transcripts for each case can be viewed in appendix 18, 20, 22 and 24). The interviews also produced repertory grids for each individual case. The literature points to an array of ways that repertory grids can be analysed which can combine a number of techniques utilising both quantitative and qualitative methods (Fransella et al., 2004; Isaksson Persson, 2012; Jankowicz, 2004). The interview transcripts were analysed descriptively in the first instance, to identify themes that were important to the participant. If a theme repeated throughout the interview, this was deemed to be of importance to the participant. Analysing each transcript in this way also allowed me to makes sense of how each of the participants understood the nature of the subject and the purpose of the research. Each case study can be viewed in appendices 19, 21, 23 and 25 and formed the basis of the discussion in chapter seven. Following a descriptive analysis of each transcript, the participant repertory grids were used to identify all elicited constructs and were categorised under clustered themes (see chapter six).

In summary, the two stages of data collection were undertaken in this study were as follows:

- Stage one: an online survey to a large sample, in which professional knowledge and confidence in primary PE could be measured and sources of confidence could be identified. The analysis of this data informed the second stage of data collection

- Stage two: four case-study interviews that explored in-depth sourcing of professional knowledge through a process of generating constructs about personal beliefs.

The use of both qualitative and quantitative analysis, as depicted in Figure 5.2, enabled me to explore the research phenomenon in greater detail (Day Ashley, 2012) and examine questions of why and how beginning teachers responded the way they did (Yin, 2009). Furthermore, by drawing upon a mixed method approach I have been able to broaden my skills of data collection and analysis for research that I may undertake later in the future (Punch and Oancea, 2014).

Ethical Considerations

Social research can have a powerful impact on people, therefore moral and ethical principles must be carefully considered (Mcneill and Chapman, 2005). Keeping an inquiry focused on Critical Theory has meant consciously placing ethical issues at the forefront of the research. Considering the needs of the beginning teacher and their academic priorities, time and interests has been challenging and at times conflicted with my own need to generate data. Hammack (1997) observes that this type of tension can often exist as teachers have a primary obligation to the students, whereas researchers have a primary obligation to their field of expertise. The good teacher will seek to maximise opportunities for learning and minimise factors that could impede the learner's progress; whilst the good researcher seeks ways in which to maximise participation, publications and data quality (Roberts and Allen, 2015).

Part of the ethical process has been to recognise this tension. As O'Leary (2004) explains, if researchers are blind to the power they have over their sample, they are not in a position to act responsibly. Ethical considerations have been considered throughout data gathering, as the beginning teacher cannot be separated from decisions made about their development and their involvement in study. However it has also been necessary to address some of the wider implications that have influenced my understanding of being an educational researcher and the desire to undertake future quality research (BERA, 2011). Although I was not a tutor to any of the participants at the interview stage, I had an ethical responsibility as a teacher educator towards their progress as primary teachers.

The research was planned and conducted in full compliance with ethical guidelines provided by my academic institution (University of Winchester), engagement with varying institutions where the research took place (anonymous) and reference to national guidelines (BERA, 2011). However, whatever the professional code, the ultimate arbiter of 'correct' moral decisions lies with the individual researcher (Iphofen, 2011). Whilst recognising there is a diversity of educational research and a range of methodologies, the underlying principles of ethical respect for people, knowledge, democratic values, quality of education research and academic freedom must at all times be considered (BERA, 2011). Of particular relevance to this study are BERA's (2011) guidelines relating to the researcher's responsibilities towards the participants (direct involvement) and the institutions that they are associated with (indirect involvement).

> Educational researchers should operate within an ethic of respect for any persons involved in the research they are undertaking. Individuals should be treated fairly, sensitively, with dignity, and within an ethic of respect and freedom from prejudice regardless of age, gender, sexuality, race, ethnicity, class, nationality, cultural identity, partnership status, faith, disability, political belief or any other significant difference. This ethic of respect should apply to both the researchers themselves and any individuals participating in the research either directly or indirectly (BERA, 2011:5).

Roberts and Allen (2015) explain that a basic standard of ethical research is that prospective participants are able to make informed voluntary choices about their participation. My main ethical concern was of obtaining informed voluntary consent, especially when working with a remote sample via an online environment. BERA acknowledges that online activities can present a number of challenges for consideration, but participants must be 'clearly informed that their participation and interactions are being monitored and analysed for research' (2011:5). Roberts and Allen (2015) advise that this can be addressed through waivers of consent when the research is of minimal risk and where consent cannot be practically completed in oral or written form.

I created an information sheet that could be sent to students prior to completing the online survey (appendix 9). The information sheet provided an overview of the study, the nature of participant involvement, a right to withdraw (BERA, 2011) and clarified issues pertaining to confidentiality. This also formed the survey introduction, ensuring those who had not read the information sheet prior to the survey were fully aware of their involvement (appendix 7). Participants were informed that submission of the

survey would act as their informed consent, but their right to withdraw would not be affected (BERA, 2011). Iphofen (2011) describes this as 'fluidity' within the consent process, where the initial consent to take part is not seen as a once-and-for-all act. My contact details were also made available to all participants if they later chose to withdraw from the study.

The Sample

The principal aim of this research has been to identify how beginning teachers perceive their confidence to teach primary PE and locate the sources of professional knowledge available to them. This had an immediate influence on who the sample would be. Newby (2010) makes reference to the sample being the right source of information, where any participant must first have knowledge of the issue and second be credible as a source. Participants invited to take part in this research were beginning teachers in their final year of ITE programmes leading to the recommendation of qualified teacher status (QTS). All participants were studying in the academic year 2013/2014 and were due to qualify in the summer of 2014. Participants were drawn from a number of ITE providers across England and from different programmes. Although it was not a requirement that the sample represented a diversity of programme routes, I did not want to exclude any institution or beginning teacher who wanted to take part. The decision to focus explicitly on beginning teachers at the end of their final year addressed the issue of 'credibility' (Newby, 2010) as they would have completed all component parts of their programme, including any taught input or school-based experience.

An initial large sample was required to reflect stage one of Habermas' Ideology Critique (Morrison, 2001). This is where a broader insight into the confidence and sourcing of professional knowledge could be made through the perspectives of the beginning teacher. Online surveys have been recognised by researchers as a way to gain rapid access to large, diverse, geographically disparate and otherwise difficult to reach samples (Roberts and Allen, 2015). Sapsford (2007) suggests that the role of a survey is to describe a population by counting and describing what is out there. However, accessing the entire population would not have been possible due to the timeframe I was working in and the access I had to ITE providers. Care was taken to ensure that data obtained from the survey would not be used in isolation to form generalisable claims about institutions, the programme route they offered or their geographical location. Coverage error is widely recognised as a shortcoming of internet-based surveys (Fricker

and Schonla, 2002) and has been considered as a limitation within this research. Therefore, combining the survey data with an understanding of the literature and case-study interviews aimed to address this issue by providing a more comprehensive overview of the landscape for primary PE.

The sample was considered when disseminating the online survey. Purposive sampling, or more specifically intensity sampling, was adopted to ensure that participants were appropriate subjects for the research and were the most information-rich cases (Bryman, 2012; Day Ashley, 2012). At first, initial contact was made with ITE providers and their identified 'gatekeeper' (Newby, 2010). This was typically with institutions where I had an existing professional contact, or from colleagues who had expressed an interest in the work I was undertaking through the PE ESAG. Using community gatekeepers to assist with participant recruitment is considered to be a common strategy more aligned to qualitative research (Hennick et al., 2011), as their influence within that community can have a significant impact on whether members choose to participate or not. However, the use of a gatekeeper was relevant for the quantitative focus of the study as access to participants was tightly controlled and had to be conducted through clearly defined 'channels' (Angrosino, 2012). The gatekeeper became a crucial mediator between me and the sample in the early stages of the research. It supported the legitimacy of the research and avoided forced participation, or the danger that the survey might be considered by the beginning teacher to be spam or an invasion of their privacy (Umbach, 2004).

Respecting the social hierarchy of the study remained an important requisite for me as a new researcher entering into an existing research community (Hennick, Hutter et al. 2011). Day Ashley (2012) suggest that the purpose of the initial contact is to build trust as it provides gatekeepers with an opportunity to ask questions about who you are, your research and the level of access that you require. It also became an opportunity for me to find out more about their institution, the students and the nature of their programme. The more I understood about the participants, the more I could consider them within the research process.

Through discussions with a range of gatekeepers, motivation to participate in the research was expressed in a number of ways. One programme leader thought it would enhance the development of their students in PE and was insistent that they all took part. Another programme leader thought it might provide increased evidence with

which to evaluate their programme; whilst others talked merely of 'a need' for this type of research (Tsangaridou, 2012a), and looked forward to reading any output and recommendation it provided. This type of expectation had to be mediated. Although some course providers wanted to use the survey data to inform their own course feedback, this had implications for transparency and anonymity with students about how the data would be used beyond the thesis. It was decided that for those institutions, I would send a final copy of the thesis and any subsequent publications; however individual institutional reports would not be disseminated as not to contravene the rights of the participant to remain anonymous (BERA, 2011).

At every stage of the survey design communication with the institutions, sensitivity to their professional context, partnership with schools and workload pressures had to be considered. In addition, decisions had to be made about the amount and type of contact I would have with each institution as the timeframe I was operating in was narrow. Initially I invited the gatekeepers to suggest how and when they would like a dialogue to take place, or if they welcomed one at all? Most correspondence occurred via email. This allowed providers to decide when they wanted to respond and if they would be interested in finding out more information about the research. If no response was received, no further communication was made. One provider asked for discussions about the research to take place over the phone as they did not want information about their institution communicated in written form. An email was sent to ITE providers in March 2013, thanking them for the interest and formally inviting their students to take part in the online survey (appendix 4). The email also included a letter for each gatekeeper to send to their beginning teachers inviting them to take part, with a hyperlink to the online survey and an information sheet detailing their involvement. Beginning teachers were informed within this letter, and again on the survey, that their responses would remain anonymous.

The communicative dialogue with the ITE providers was crucial in the development of the online survey, which took place over a period of twelve months (March 2013–March 2014). This involved maintaining an ongoing discussion around the structure, purpose and nature of the survey to ensure relevance to their students and the programme they were on. I wanted to maintain minimum contact with the sample to ensure any motivation for their participation was either driven by their own interests or their participating providers (O'Leary, 2004). However, I was also aware that in doing so,

additional time commitment and reliance was placed on the 'gatekeeper' as they would have to communicate with their students on my behalf. I invited the institution to make a number of independent decisions about the dissemination of the letter, as I felt they were best placed to know the needs of the students and their workload patterns.

In total, 175 students from thirteen institutions took part in the online survey. A low response rate was expected (Shih and Fan, 2008), as the population being surveyed were working towards the end of their ITE programme. Figure 5.3 presents the breakdown of the participants route they were on to obtain QTS.

ITE Programme Route (2013/2014)	Sample
PGCE Primary (postgraduate)	120
BA Primary (undergraduate)	34
B.Ed Primary (undergraduate)	7
PGCE Primary (postgraduate School Direct)	7
School Centred Initial Teacher Training (postgraduate PGCE Primary)	7
Total **5 ITE programme routes from 13 providers**	**Total** **175 final year beginning teachers**

Figure 5.3: Sample breakdown of ITE programme routes

Developing the Online Survey

Online surveys are recognised as a useful tool in educational research the methodological potential they offer (Fricker and Schonla, 2002). Advantages include cost effectiveness, quick administration, an absence of interviewer effect, convenience for respondents and no interviewer variability (Bryman, 2012; Fricker and Schonla, 2002). The Bristol Online (BOS) programme was used for constructing the online survey. My institution subscribes to BOS, so I had already engaged with its features, design and presentational layout. Bryman (2012) suggests that the online survey can be a useful tool when working with a population who have time pressures (such as beginning teachers), as many people already spend long periods of time online and this can remove the additional task of having to return a survey by post (Fricker and Schonla, 2002).

It is important to note that a number of limitations exist when using survey tools which can affect their design and implementation (Bryman, 2012). Non-response is a known issue (Bryman, 2012; Fricker and Schonla, 2002; Gomm, 2004; Keusch, 2010; Toepoel et al., 2009) particularly with online surveys (Roberts and Allen 2015). In an attempt to

address this, I designed the survey to ensure that it could be completed quickly and sent to the participants at a time that was most convenient to them.

Using the online environment to acquire new knowledge about behaviours and practices can create additional ethical dilemmas for researchers, as questions raised can lead to ambiguity, uncertainty and disagreement (James and Busher, 2015). A key feature of BOS is a function that allows the survey designer to add clarification for each question. This allowed another level of interaction with the respondent to help reduce any misunderstanding or ambiguity that could arise. Figure 5.4 illustrates some of the considerations I reflected upon in trying to minimise these and further ethical issues before the survey was administered. The size of the circles reflects the influence each consideration had on the overall survey design. For example the main consideration was the timing of the survey and how it should be disseminated to the sample. Denscombe (2009) recognises that within any self-completion questionnaire, the quality of data can be further jeopardised when respondents fail to fill in specific items. This can ultimately leave gaps in the data or reduce the volume of data generated from the sample. To avoid this, questions on the survey were compulsory and completion was required before moving on to the next page. Structure and content also played a critical role in the survey design to minimise any errors in response rates and help reduce completion time.
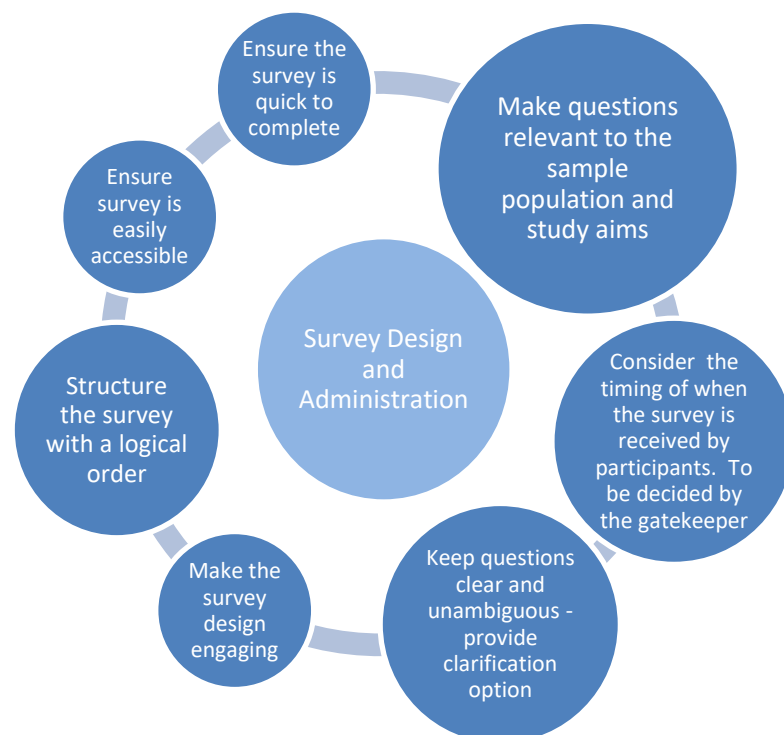
Figure 5.4: Considerations for the online survey design

The main structure and content of the survey derived from the key areas of knowledge outlined in the Professional Knowledge Model. The knowledge areas were written as statements to allow participants to make a numerical judgement about their confidence against each aspect of knowledge. For example, in the section *Developing Practice in Context*, the Model makes the statement 'teach across different physical activity areas, key stages and settings' but this was presented in the survey as 'I can teach physical activity areas across the key stages'. An additional sub-question was then asked to indicate the source of that knowledge.

The survey was created over eight pages, allowing for a detailed and structured design that explicitly linked to the Professional Knowledge Model (appendix 8). The participants had not been introduced to the Model at this stage of the research; therefore the layout, questions and structure of the survey would have been new to them. An advantage of a screen-by-screen design focuses the respondent on each single item, but can lead to a loss of context (Toepoel et al., 2009). To address this, PE appeared many times to remind the beginning teacher of the context in which the questions were being asked, with each page providing an additional context description. This approach took into consideration that many of the sample would be 'non- specialists' in PE (87%) and may therefore not make an immediate connection to the subject when reading the questions.

Constructing Beliefs about Professional Knowledge

In research that uncovers beliefs, Pajares (1992) highlights that appropriate methods should be chosen as distinguishing knowledge from beliefs is a daunting undertaking. The challenge in establishing a critical theoretical approach in an empirical setting is finding materials that link to wider societal issues, structures and power relations (Poutanen and Kovalainen, 2010). Often dogmatism, either political or philosophical, can be a barrier to further development within education (Pope and Denicolo, 2001) with existing views about professional knowledge and practice being reinforced.

Kelly's (1955) Personal Construct Theory (PCT) was used in this research as a means to structure the interviews with beginning teachers. Kelly's fundamental postulate states that 'a person's processes are psychologically channelised by the way in which he [she] anticipates events' (Fransella, 2005:6) and recognises that all theories are temporary constructs until another theory leads to a better prediction of those events. Within

Critical Theory, subjectivity is also a key epistemological component, focusing on the person(s) involved as they see things and truth telling (Kemmis, 2006). Facilitating a teacher to develop a personal theory can help break down barriers and structures (Pope and Denicolo, 2001), which according to Habermas can be viewed as political, social or even historical (Collins, 2003). Developing personal theories, allowing idiographic experiences to be communicated, can be used to predict the future orientation, nature of learning and teaching (Adams-Webber, 1979; Pope and Denicolo, 2001). A beginning teacher constructing a personal narrative with the researcher can act as a method of communicative action (Habermas, 1984) enabling them to share experiences and make sense of their professional knowledge with an informed other from that lifeworld.

Meaning-making is central to Kelly's (1955) position. It is therefore necessary to know the situations that are lived by individuals in order to understand the experiences that are construed (McQualter, 1986; Pope and Denicolo, 2001). Kelly (1955) argues that individuals may construe the same objective (in this context the development of their practice as a teacher) in a variety of ways, depending upon the context in which the stimulus in presented. A Kellyian viewpoint would state that 'Societies can wait' (Kelly, 1955:26) recognising that individuals undergoing the same experience may not necessarily view that experience in the same way. However, Kelly recognised that individuals can, and will, share some constructs with others (Pope and Denicolo, 2001). The individual is central to recognising how any meaning will be construed, structured and re-constructed to anticipate their future practice (Pope and Denicolo, 2001). Beattie emphasises the significance of this restructuring process within an educational process of professional knowledge development:

> In the telling and retelling of our stories we change, we learn, we grow, giving up the stories of ourselves that we hold when we can replace them with richer and more significant versions most suited to our current environment and to the future we foresee (1995:146).

A key aim of this research has been to locate sources of knowledge (events) that have influenced the development of beginning teachers in primary PE. Although Kelly (1955) does not make reference to critical theories within his work, PCT provides a conceptual similarity by way of uncovering beliefs from a deep reflection of self and experience. Adopting a PCT approach allowed me to develop an interview technique that channels the participants' thinking about key events and provide meaning to them (Kelly, 1955). Although beginning teachers will experience similar sources of knowledge development,

i.e. reading from academic literature, school-based experiences, university-based seminars, and professional discussions, individually they construe different meanings from them. It is the personal theories of individual cases that provide 'holistic and meaningful characteristics of real-life events' (Yin, 2009:4) that is of interest to me. The use of PCT as a method for interview design has also allowed me to retain the principles of Habermasian Critical Theory in two ways. Firstly there has been a conscious awareness that historical and political structures exist in ITE and directly influence the structure and experiences of individuals who participate on those programmes. Secondly, the process of construing meaning through a personal narrative allows the individual to give a voice to those experiences, respecting the individuality of the respondent in their development and making explicit their learning to inform the next stage of their journey. McQualter (1986) advocates PCT can be particularly useful for teacher self-evaluation and as a means for studying teacher thinking. Furthermore, he believes developing this understanding can provide a basis for improvement in practice and induction for those entering the profession (McQualter, 1986).

Repertory Grid Technique

The Repertory Grid Technique (RGT) has played an integral role in the development of PCT methodology (Adams-Webber, 1979). Bannister and Mair define a repertory grid as 'any form of sorting task which allows for the assessment of relationships between constructs and which yields these primary data in matrix form' (1968:136). This broad definition of what a repertory grid is, allows for highly flexible techniques to be adopted with variable application (Pope and Denicolo, 2001). Its use, therefore, is widespread across many social science research fields, including research in education (Caldwell and Coshall, 2002; Hinkle, 2009; McQualter, 1986; Zuber-Skerritt, 1987). A significant application of RGT has been made within the fields of clinical psychology and personality, but has since evolved (Adams-Webber and Mancuso, 1983) with many social science researchers now adopting RGT as a means of entering the phenomenological world (Pope and Denicolo, 2001).

Kelly's (1955) original Role Construct Repertory Test, from which all forms of RGT derive, was designed to elicit a representative sample of constructs to interpret and predict the behaviour of people (Adams-Webber, 1979). RGT methods have had limited application within the field of ITE (Pajares, 1992; Pope and Denicolo, 2001). However, due to its feedback and feedforward nature it can support the reflective process of becoming a

teacher (Adams-Webber and Mancuso, 1983). In the design of this research, careful consideration was given to how a RGT could be adopted for the purpose of working with beginning teachers. To ensure the validity of adopting RGT as a method, I have drawn upon the work of key authors in the field (Adams-Webber, 1979; Fransella et al., 2004; Fransella, 2005; Jankowicz, 2004; McQualter, 1986).

Following the completion of the online survey, participants were identified to take part in the next phase of the research. The final survey question invited participants to leave their name and email address if they would like to be contacted for interview. In total 62 participants out of 175 were contacted via email. After contacting each of the 62 participants, I received positive responses from five. Each interviewee was from different university-based providers. As one of the five respondents was a student from my own institution, I decided not to interview them as part of this study. Communication was established with each participant via email, with further information provided through an information sheet (appendix 10) and request for written consent (appendix 11) detailing the nature of any future involvement. From this point their involvement was as an individual participant and direct contact with their training institution was ceased.

All interviews were conducted during July and August 2014 to capture the time between completion of the participants' ITE programme and the commencement of their first employment. This was a critical time in methodological design as conducting interviews earlier would have meant closing the online survey early, therefore reducing the number of available responses from participating institutions. Once employed, professional knowledge of PE may have been influenced by further exposure to the subject in their setting.

All participants were registered on a postgraduate programme for ITE in the year 2013-2014 and were mature students (over 25 years of age). Three participants were registered on a full-time programme of study and one was on a part-time programme. All said that their motivation for taking part in the research was due to a positive attitude towards the subject. One had been on a programme specifically funded by the DfE to become a Primary PE Specialist teacher and had been appointed as a PE coordinator in his first teaching job in September.

The RGT provided a structured design for an in-depth interview with each individual case (appendix 12). This was characterised by a one-to-one process where the participant could explore the development of their professional knowledge (Hennick et al., 2011) through the elicitation of personal constructs. Hennick et al. (2011) explain that in-depth interviews are typically used by researchers when they are seeking information on individual and personal experiences and can help develop narratives about lived experiences (Wengraff, 2001).

Elements

The repertory grid has four components: a topic, elements, constructs and ratings (Jankowicz, 2004) (appendix 13). Despite this appearing to be a simple process for data collection, the use of a grid involves the researcher in a whole series of problems (Fransella et al., 2004). The researcher must consider the nature of the elements to be used, the form of construct elicitation, the format in which the subject is to respond, how the data could be analysed and what could be inferred from the data (Fransella et al., 2004).

Elements have been defined by Kelly (1955) as things or events which are abstracted by a construct and are seen as one of the formal aspects of a construct. Jankowicz (2004) explains that an element is an example of an instance of, sampling of, or occurrence within a particular topic. A question often raised is whether the interviewer should provide the choice of elements for construction, or whether these should be elicited from the individual (Pope and Denicolo, 2001). Despite the crucial role element selection plays in the research design process, little research has been undertaken regarding how this should be carried out (Bell, 2005). Pope and Denicolo (2001) suggest that the elicitation of elements for the grid may well depend on the initial purpose and model of application but elements must retain meaning and representation individual's life experiences (Kelly, 1955).

Elements can either be elicited by the participant, or the researcher in advance of the interview. Pope and Denicolo (2001) caution that if elements are self-elicited by the researcher extensive preliminary work will need to be undertaken prior to their selection. The elements for the repertory grid in this research have taken the form of knowledge sources. I drew upon the work in the literature review to identify key themes relating to sources of professional knowledge in PE. The main categories of knowledge

sources for the repertory grid were: prior experiences, forms of communication, speech acts and the formal activities involved in ITE programmes. These elements were already familiar to the participants as they had appeared throughout the online survey.

Construct Elicitation

Having defined a list of representative elements, the next step of the research process was construct elicitation through semi-structured interviews. Personal constructs have a bi-polar dimension, which a person has created and formed into a system through which they interpret their experiences of the world (Fransella et al., 2004). Jankowicz (2004) suggests that although the RGT method is a strange and peculiar method for interviewing, it provides a stable framework for eliciting an individual's construction of a lived experience, but is a technique that requires practice and skill. He explains that developing a narrative with the participant provides meaning behind the constructs and an understanding of how the participant construes the elements (sources of knowledge) through a rating against their own bi-polar constructs (Jankowicz, 2004). A pilot study was undertaken to develop the PCT interview technique (Level 8 assignment on appended CD). An outcome of the pilot was to use a triadic difference approach, instead of dyads for eliciting constructs. Although Fransella et al. (2004) state there is nothing sacrosanct about the triadic method and many studies have been carried out that use dyads, participants found it difficult to discuss how dyads were put together and required more support in making sense of the dyad pairings. A third element allowed them to explore patterns across all the elements. I also decided to allow participants to self-select the triads rather than pre-selecting them on their behalf. In the pilot study I found that the pre-selected approach reduced the participants' involvement and choice. In keeping with Kellyian tradition, the elicitation of constructs through a triadic process involves presenting three stimuli (elements) at the same time to the participant who must then identify two stimuli that share something in common (construct) and explain why the third is different (contrast) (Hinkle, 2009). Figure 5.5 is an example of a blank repertory grid that was used during the interview. The darker shaded cells across the top were the elements that the participant could select from. The response from the participant that describes how two elements are considered to be 'alike' is placed in the emergent pole, and a response that identifies the way an element is considered to be different is placed in the implicit pole (Jankowicz, 2004).

Interview 1											
Emergent Pole (1)	Prior Experiences	Module Assignments	Employment	Other Subjects	NGBs	Online Media	Literature	Professional Discussions	Personal Interest	School	University	**Implicit pole (7)**

Figure 5.5: An example repertory grid used at interview

On many occasions throughout the interview a process of 'laddering' was adopted whereby questions of why, how and in what way were presented as a means to gain constructs of a higher abstraction than just from the original triads (Fransella et al., 2004). This approach was used when participants found it difficult to articulate the criteria they needed to articulate to inform their decisions. Donaghue (2003) explains that the difficulty in eliciting beliefs lies in the fact that personal theories may be subconscious and teachers may be unable to articulate them fully. Care was taken that only constructs elicited from the participants were recorded, even though my own interpretation and thoughts were apparent throughout the interview. Participants were asked to review the completed gird to either agree their responses or change them according to their wishes.

The next stage of the interview required each participant to rank their elements against the constructs. This allowed participants to indicate the comparative degree to which their constructs of the topic stood in relation to the original elements (Jankowicz, 2004). A simple rating scale was adopted to rank each element, where 1 formed the construct pole and 7 the contrast pole (see Figure 5.6). According to Jankowicz (2004), the purpose of providing an odd number of ratings is to allow a neutral response to be given (for example the number 4 in the 7-point scale). The ranking process provided further opportunity for participants to review and reflect on their constructs allowing them to decide if they agreed with them or if they wanted them removed completely. Pope and Denicolo (2001:58) suggest that the investigator needs to recognise that there may be

times when the participant will also want to change the labels given to their constructs and further opportunity for this should be provided.

Emergent Pole (1)	Prior Experiences	Module Assignments	Employment	Other Subjects	NGBs	Online Media	Literature	Professional Discussions	Personal Interest	School	University	Implicit pole (7)
Doing in practice	2	2	2	3	6	7	7	3	2	1	4	Absorbing infomration
Deep refelction	2	2	2	5	3	3	3	3	1	1	2	Follow and copy
Challenge	7	3	7	5	4	6	3	6	7	6	4	Safety and familiarity
Formal qualifications	4	1	7	1	1	7	3	4	7	3	1	Experience

Figure 5.6: A completed repertory grid showing elicited constructs and rankings

The Beginning Teacher as a Self-Reflective Knower

In order to become an informed and reflective practitioner, Cale (2010) states that aspiring PE teachers must understand their values, beliefs and philosophies. This chapter has so far outlined a methodology which enables beginning teachers first to understand themselves (Fernandez-Balboa, 1997) through reflection on their confidence across a broad base of professional knowledge, and then to develop an in-depth construction of their beliefs in a RGT interview. Developed within a framework of Critical Theory, the purpose of this has been for the beginning teacher to gain the autonomy that is required to make judgements and decisions about their future professional development (Stidder, 2015; Zwodiak-Myers, 2013).

The final stage of the interview process required each participant to set key targets for their year as newly qualified teachers (NQTs) based on their confidence levels from the online survey and their construction of their beliefs in the interview process. Therefore the online survey provided the beginning teacher with *what* needs developing and the interview provided the *how.* When brought together, this data allowed each participant to create a personalised action plan in order to shape their future development (appendix 14). This process has been summarised in Figure 5.7.

step 1	•Identify 2 - 3 areas from the survey where confidence was perceived to be low
step 2	• Articulate these knowledge areas into targets set within the beginning teacher's own context
step 3	• Identify a knowledge source from the repertory grid as a means for the beginning teacher to support the development of that target
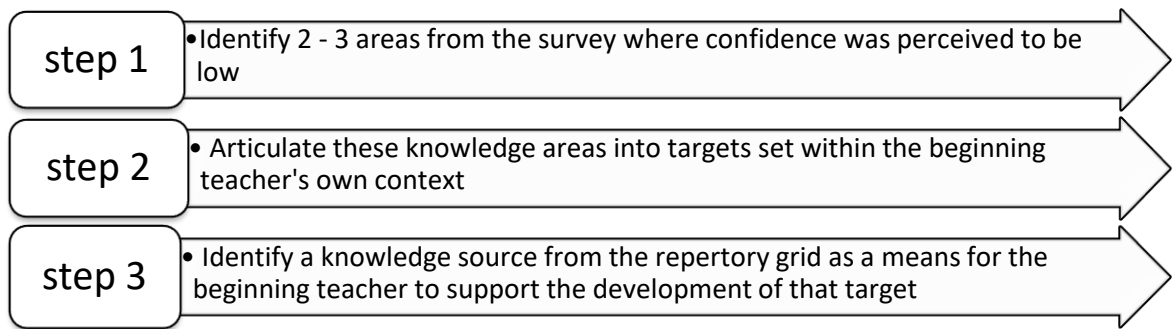
Figure 5.7: The development of an action plan

Chapter Summary

This chapter has discussed how the principles of Critical Theory have shaped the specific and practical methods for data collection. The research has considered the wider professional and ethical implications for conducting research with final year beginning teachers, taking into account their needs as individuals and the needs of their cooperating provider. Rather than focus on a single method approach that prioritises data over the needs of the participant, it has been my intention to draw upon a mixed method design that engages the individual through communicative action and dialogue. The next two chapters critically discuss the data from the online survey and the four interviewed repertory grid case studies. Each case-study will be examined in relation to the individual context and conclude with the presentation of individual action plans that have been constructed using the survey and interview data.

CHAPTER SIX

Surveying Primary Physical Education Initial Teacher Education

Introduction

In this chapter I present data from the online survey and four case-study interviews to - provide an overview of professional knowledge in primary PE ITE. I begin with data from the survey, highlighting the areas of professional knowledge where participants perceived their least and most confidence to be. The number of citations for each source of knowledge is also considered to identify patterns across the sample. The chapter concludes with data from case-study interviews of Amy, Ben, Charles and Daisy (pseudonyms). The individual and varied nature of their knowledge and the beliefs they hold about how their knowledge has developed over their ITE programme is explored.

Survey Responses

Data collected through the online survey provided insight into the confidence of the participants across a breadth of knowledge areas (taken from the Professional Knowledge Model). Questions (Q) 3-34 required participants to indicate a level of confidence against a statement and then highlight the source/s of that knowledge. A ranking of 0-10 was used to indicate confidence levels, with zero being the lowest and ten being the highest (Cramer and Howitt, 2004). The reason for using a ten point scale was to measure the intensity of individual responses across the sample (Newby, 2010) and to determine the range of variation. Responses collected from the survey were not considered to be a scientific measurement of confidence, but a 'pseudo-quantification' to enable participants to communicate their feelings in a recognisable form (Gorard and Taylor, 2011). Gorard and Taylor (2011) and Tymms (2012) further explain that a rank measurement scale can help participants communicate meaning of abstract and personal concepts. Respondents used the full range of the scale to indicate confidence levels across a breadth of professional knowledge in all but 3 of the 32 questions; this suggested that the respondents' experiences were varied and the development of confidence was unique to the individual. Using a numerical scale was helpful to extract and organise large amounts of data, despite only offering a coarse measurement of attitude (Newby, 2010).

The survey data relating to confidence was analysed using a descriptive statistical approach; more specifically central tendency measures were adopted to index where participant responses were grouped (Drew et al., 2008).

Professional Knowledge Area and Survey Question (high to low)	Response range	Mode	Median
Q34: I am able to use feedback from a subject tutor, class teacher or PE specialist to improve my practice	0 – 10	10 (n=35)	8
Q21: I can plan a series of lessons in PE	0 – 10	9 (n=29)	7
Q18: I have an understanding of health, fitness and well-being relating to young people	1 – 10	8 (n=49)	8
Q3: I can explain the aims of PE	2 – 10	8 (n=52)	7
Q8: I understand principles of child development and its importance within primary PE	0 & 2–10	8 (n=45)	7
Q23: I can manage risk in PE and plan lessons following safe practice guidelines	0 – 10	8 (n=42)	7
Q12: I am able to teach games activities	1 – 10	8 (n=39)	7
Q25: I provide inclusive learning opportunities for all pupils	0 – 10	8 (n=37)	7
Q30: I reflect on my teaching in PE to inform future planning	0 – 10	8 (n=37)	7
Q20: I am able to support whole school activities	0 – 10	8 (n=36)	7
Q22: I can use effective strategies to promote pupil learning in PE	0 – 10	8 (n=35)	7
Q26: I can assess pupils formatively	0 – 10	8 (n=32)	7
Q19: I know how to use PE to support other curriculum areas	0 – 10	8 (n=40)	6
Q24. I can use a range of different teaching styles to support learning in PE	0 – 10	8 (n=36)	6
Q32: I can work with teaching assistants and other adults in PE	0 – 10	8 (n=32)	6
Q31: I am able to facilitate appropriate competition for young people in and outside of the curriculum	0 – 10	8 (n=29)	6
Q29: I can teach different physical activity areas across the KS's	0 – 10	8 (n=28)	6
Q11: I am able to teach gymnastics activities	0 – 10	8 (n=27)	6
Q13: I am able to teach dance activities	0 – 10	8 (n=27)	6
Q4: I can describe and explain the characteristics of a physically educated child	0 – 10	7 (n=51)	7
Q28: I can use technology and media to support pupil learning in PE	0 – 10	7 (n=27)	6
Q16: I am able to teach athletic activities	0 – 10	6 (n=29)	6
Q6: I set challenging targets for myself in PE linked to the teachers' professional standards	0 – 10	6 (n=29)	6
Q15: I am able to teach outdoor and adventurous activities	0 – 10	6 (n=26)	5
Q9: I know the fundamental movement skill themes related to movement development	0 – 10	6 (n=26)	5
Q27: I can assess pupils summatively	0 – 10	6 (n=25)	5
Q10: I have knowledge of the stages within the skill themes to support children's physical development	0 – 10	6 (n=27)	4
Q17: I know the statutory frameworks for PE (KS 1 & 2) and physical development (the Early Years Foundation Stage)	0 – 10	5 (n=36)	6
Q5: I am aware of current issues, policy and changes relating to primary PE	0 – 10	4 (n=26)	6
Q7: I investigate aspects of practice in PE, through research and enquiry	0 – 10	0 (n=24) & 3 (n=24)	4
Q33: I am able to work with external agencies, community partners to create further opportunities in PE and school sport for young people	0 – 10	0 (n=42)	4
Q14: I am able to teach swimming activities	0 – 10	0 (n=49)	3

Figure 6.1: Survey responses from high to low confidence by mode and median value

Figure 6.1 presents the knowledge areas, survey questions, range of the scale used and number of the mode and median responses from the sample. The survey questions have been organised from high to low confidence by mode in the first instance. This method was adopted to describe the data and identify the most frequently occurring value across the sample (Hempel, 2007; Kwork, 2008b). However, Newby (2010) cautions that when a mode is presented, researchers must be careful not to provide a misleading interpretation of the data. Using the mode to organise confidence presented a challenge as the cohort showed great variation in their responses. Most of the modes from the survey were placed at the higher end of the confidence scale, with 19 out of the 32 questions having a mode of ≥8 out of 10 (Figure 6.2); however this only ever represented a maximum of 30% of the sample. Participants often used the full range of the scale, resulting in no overall consensus of confidence.

Confidence scale	Professional Knowledge Areas				Total
	Reflective and Academic Engagement	Content Knowledge	Subject Pedagogy	Developing Practice in Context	
0		1		1	2
1					0
2					0
3	1				1
4	1				1
5		1			1
6	1	4	1		6
7	1		1		2
8	1	7	5	4	17
9			1		1
10				1	1

Figure 6.2: Distribution of modes

The median was also considered (Figure 6.1) as it provided an additional central tendency measure for analysis from an uneven data set. Kwok (2008a) explains that the median value can be helpful in descriptive statistics, as it is not influenced by the outlying values. Figure 6.3 illustrates how the data from each of the survey questions were initially organised. This representation shows the proximity of the mode and median value, further reinforcing the overall placement of confidence for that question. There were only 4 out of the 32 occasions when the median and mode response produced the same value on the scale, although typically the median was placed close to the mode, creating a clustered average response (Bakker and Derry, 2011).

Confidence level	Responses
0	0
1	0
2	5
3	2
4	5
5	15
6	33
7 (median)	30
8 (mode)	52
9	24
10	9

Figure 6.3: Example of organised data from Q3 showing mode and median responses

A mode of 8 appeared 17 times out of the 32 questions and was the most frequent score across the domains of Content Knowledge, Subject Pedagogy and Developing Practice in Context. From an initial analysis of the survey data, confidence was perceived as high across the knowledge areas; however variations existed between participants and individual knowledge statements. A pattern of high confidence is also illustrated through the median value, although this data presents a perceived lower confidence, with 23 out of the 32 knowledge areas showing a median below the mode.

Figures 6.4 – 6.7 show the mode and median for each question across the four domains of knowledge. Each Figure orders the data from most to least confident, by first ascertaining the mode and then the median. Each Figure also shows the top three citations of where professional knowledge was sourced and the number of participants who responded with the option of 'no opportunity' for knowledge development.

Reflective and Academic Engagement
Within the domain of Reflective and Academic Engagement no overall confidence mode was identified, with responses distributed over a range from 3 to 8. It is noticeable from this data that confidence was mainly within the mid-high placement of the scale, with most confidence arising from Q3 (the aims of PE) and the least from Q7 (investigating aspects of practice).

Reflective and Academic Engagement				
Question	Mode	Median	Top 3 citations of knowledge sources	No opportunity
3. Aims of PE	8	7	University (132) School (107) Prior experiences (75) Professional discussions (75)	3
4. Physically educated child	7	7	University (112) School (93) Prior experiences (57)	19
6. Targets linked to the teachers' professional standards	6	6	School (85) University (65) Personal interests (37)	32
5. Current issues, policy and changes	4	6	University (95) School (58) Professional discussions (43)	16
7. Investigating aspects of practice	0 and 3	4	University (49) School (27) Module assignments (18)	16

Figure 6.4: Mode, median and top three citation responses for Reflective and Academic Engagement

The university was the most frequently cited source across this domain, closely followed by the school and professional discussions, indicating that the university was the main opportunity for development across these knowledge areas. A total 32/175 participants were unable to address professional targets linked to the teaching standards, with just over 50% (90/175) of the sample indicating that they were unable to do this whilst in a school setting. The data in Figure 6.4 shows that when the number of citations decreased for each question, the mode and median confidence value also decreased. This pattern indicated that when any form of opportunity arose, it led to a greater sense of confidence across the sample. Although Q6 (targets linked to the teachers' professional standards) received the highest response for 'no opportunity' to develop knowledge, confidence may have been higher than anticipated as beginning teachers may feel already comfortable working with the standards across the curriculum, even if they had not done so yet for PE.

Content Knowledge

The Content Knowledge domain held the majority of knowledge statements, due to the breadth of content required for teaching primary PE. In this domain, 8 was the most frequently occurring mode, indicating a high level of overall confidence from the sample. It is noticeable from this data that Q18 (knowledge of health, fitness and well-being) was the most confident area of knowledge, whereas Q14 (swimming activities) was the least. Furthermore, swimming received the highest incidence of a zero response, indicating this was the area of knowledge where participants had least overall confidence.

Content Knowledge				
Question	Mode	Median	Top 3 citations of knowledge sources	No opportunity
Q18 Health, fitness, well-being	8	8	University (103) School (87) Prior experience (84)	1
Q8 Principles of child development	8	7	University (127) School (79) Literature (44)	7
Q12 Games activities	8	7	School (119) University (100) Prior experiences (62)	3
Q20 Whole school activities	8	7	School (94) Prior experiences (61) University (52)	30
Q19 Other curriculum areas to support PE	8	6	University (101) School (92) Personal interests (50)	13
Q13 Dance activities	8	6	University (106) School (75) Prior experiences (52)	19
Q11 Gymnastic activities	8	6	University (73) Professional discussions (24) School (22)	27
Q16 Athletic activities	6	6	School (71) Prior experiences (58) University (54)	32
Q9 Fundamental movement skill themes	6	5	University (110) School (50) Prior experiences (29)	28
Q15 Outdoor adventurous activities	6	5	Prior experiences (56) School (53) Personal interests (41)	50
Q10 Stages within the skill themes	6	4	University (94) School (58) Prior experiences (20)	40
Q17 Statutory frameworks for PE	5	6	University (122) School (78) Literature (41)	13
Q14 Swimming activities	0	3	Prior experiences (52) School (33) Personal interests (31)	80

Figure 6.5: Mode, median and top three citation responses for Content Knowledge

The university was the most frequently cited source across the Content Knowledge domain, followed by school, prior experience and personal interests. As a source of knowledge, the university provided the most opportunity for knowledge development. In areas where knowledge confidence was low, higher numbers of participants cited 'no opportunity'. This was particularly the case for swimming (n-80), outdoor adventurous activities (n-50), athletic activities (n-28) and the stages of skill theme learning (n-40). Where confidence was higher, the converse was true, with only three participants citing 'no opportunity' to develop their knowledge; this can be seen in Q12 (games activities) where there were three responses and in Q18 (health, fitness and well-being) where

there was only one response. Other than the university and the school, personal interests and prior experience were frequently cited as a source of content knowledge. This indicated that beginning teachers were drawing upon experiences outside of their ITE programme to help support their knowledge of what to teach.

Subject Pedagogy

Knowledge relating to subject pedagogy had modes that were consistent with high levels of confidence. In this domain, 8 was the most frequently cited mode (Figure 6.6).

Subject Pedagogy				
Question	Mode	Median	Top 3 citations of knowledge sources	No opportunity
Q21 Planning	9	7	School (109) University (94) Prior experiences (30)	17
Q23 Managing risk in safe practice guideline	8	7	School (111) University (88) Prior experiences (36)	17
Q25 Inclusive learning	8	7	School (100) University (97) Professional discussion (41)	25
Q22 Effective strategies for learning	8	7	University (103) School (100) Prior experiences (30)	23
Q26. Formative assessment	8	7	School (107) University (85) Professional discussions (31)	25
Q24 Teaching styles to support learning	8	6	School (99) University (97) Prior experience (33)	31
Q28. Using technology to support pupil learning	7	6	School (80) University (68) Prior experience (25)	44
Q27 Summative assessment	6	5	School (75) University (61) Professional discussions (24)	60

Figure 6.6: Mode, median and top three citation responses for Subject Pedagogy

It is evident from Figure 6.6 that planning was considered the area of subject pedagogy where there was most confidence (scoring a mode of 9/10), but Q27 (summative assessment) obtained the lowest pedagogical confidence (scoring a mode of 6/10). The data infers that although beginning teachers were confident to plan and formatively assess in primary PE, they were less confident about how this led to a summative assessment of the child.

School was the most frequently cited source across the Subject Pedagogy domain, closely followed by the university. When the overall number of citations decreased across the knowledge sources in this domain, confidence also decreased. Prior

experiences and professional discussions appeared as regular sources of knowledge in this domain, but numbers of citations from the sample remained low throughout.

Developing Practice in Context

The knowledge domain of Developing Practice in Context related to professional knowledge that is required working with, and for children. The data obtained was as expected, with a majority of knowledge confidence being sourced from the school environment. No overall mode emerged within this domain, producing the greatest range of confidence across the survey, from the highest mode score of 10/10 to the lowest of 0/10. This data indicates a disparate range of experiences for learning in an applied context.

Developing Practice in Context				
Question	**Mode**	**Median**	**Top 3 citations of knowledge sources**	**No opportunity**
Q34 Using feedback to improve practice	10	8	School (120) University (56) Professional discussions (27)	21
Q30 Reflect to inform future planning	8	7	School (113) University (72) Professional discussion (27)	24
Q32 Working with other adults	8	6	School (106) University (36) Prior experience (35)	38
Q31 Appropriate competition in and outside of the curriculum	8	6	School (92) University (45) Prior experience (45)	44
Q29 Teaching activities across key stages	8	6	School (104) University (83) Prior experiences (36)	33
Q33 Working with extremal outside agencies and partners	0	4	School (47) Prior experience (42) Personal interests (14)	91

Figure 6.7: Mode, median and top three citation responses for Developing Practice in Context

Using feedback to inform future practice was the knowledge area where the sample not only indicated most confidence across Developing Practice in Context, but across the survey overall. Without obtaining further information from the sample about how many lessons they taught and observed it is not possible to know if responses to this question were based on actual experiences or a representation of how they would feel if that situation were to occur. Although the university may not provide the specific child-related experiences or context for primary PE, it was still frequently cited as a source of knowledge for this. This data implies that university experiences provide authentic opportunities for beginning teachers to develop their learning.

Emerging Professional Confidence

Figure 6.8 presents the top five overall areas of knowledge across the survey in which participants were most and least confident.

Most Confidence	Least Confidence
1. Use feedback to improve my practice 2. Plan a series of lessons in PE 3. Health, fitness and well-being relating to young people 4. Explain the aims of PE 5. Principles of child development and its importance within primary PE	1. Swimming activities 2. Working with external agencies and community partners to create further opportunities in PE and school sport 3. I investigate aspects of practice in PE, through research and enquiry 4. I am aware of current issues, policy and changes relating to primary PE 5. I know the statutory frameworks for PE (KS1 & 2) and physical development (the Early Years Foundation Stage)

Figure 6.8: Most and least areas of professional knowledge confidence

The Professional Knowledge Model was used as a tool to support the analysis of this data by identifying patterns in participant responses from the survey against the progression of knowledge on the model. The Model distinguishes knowledge that is central to development of an emerging practitioner, such as an understanding of the aims of primary PE (Blair and Capel, 2011a; Capel and Whitehead, 2012; Green, 2008), knowledge of fundamental movement skills (DeCorby et al., 2005; Gallahue and Cleland-Donnelly, 2007; Gallahue and Ozmun, 2011), observing movement (Gallahue and Ozmun, 2011; Graham et al., 2012; Pickup and Price, 2007), planning for learning (Pickup and Price, 2007), safe practice (AfPE, 2012; Severs, 2012) and child development (Gallahue and Ozmun, 2011; Haywood and Getchell, 2009), to knowledge that is more relevant to teachers with secure and aspirational levels.

The survey identified that beginning teachers were often developing knowledge beyond a secure or aspirational level before securing their knowledge at emerging first. For example, Q9 (fundamental movement skill themes) and Q10 (knowledge of the stages within the skill themes) were the sixth and eighth lowest areas of confidence overall, despite being considered the most central aspects of content knowledge for primary physical educators (Graham et al., 2012). This data also indicated that participants were more confident in activity areas such as games, than they were about the knowledge required to perform these activities successfully. Griggs (2009) observes that within primary PE there is often an unbalanced curriculum that is dominated by games, usually at the expense of other activity areas. The beginning teachers' responses in the survey showed parallels to this observation as confidence across the activity areas (apart from

swimming) was stronger than confidence in their knowledge of movement skills. All other activity areas were placed below games in terms of confidence, although the Model initially indicated each of these areas had equal importance and was consumed under one generic heading of 'activity areas':

- Games activities (Mode 8 n-49)

- Dance activities (Mode value 8 n-27)

- Gymnastics activities (Mode 8 n-27)

- Athletic activities (Mode 6 n-29)

- Outdoor and adventurous activities (Mode 6 n-26)

- Swimming activities (Mode 0 n-49)

The knowledge area of swimming (Q14) provided the most uniform response across the sample, with 57% of respondents identifying a low level of confidence at ≤4 (appendix 15). Swimming is currently the only area of the primary PE NC where children *must* meet a statutory target (DfE, 2013b), but it was the area of professional knowledge that beginning teachers had the least confidence in. Prior experiences and the socialisation of teachers may also account for this pattern of confidence (Green, 2010; Morgan and Hansen, 2008; Pearson, 2011; Pickup, 2012a) as teachers' own experience of taking part in sport and other physical activities such as swimming, can be influential in shaping their professional understanding.

Knowledge about working with external agencies (Q33) and investigating practice in PE (Q7) also produced modes of 0. The changing landscape of who delivers primary PE indicates that more sports coaches and external providers will be working with children in primary schools over the coming years (Callanan et al., 2015; DfE and EfA, 2014; Ofsted, 2014). The low confidence exhibited by the sample indicates that NQTs entering the profession may feel ill-equipped in understanding their role in school, or how to develop wider opportunities for children beyond the curriculum. This data also indicates that despite an increased presence of the wider-workforce in primary schools, beginning teachers may not be accessing opportunities to work with, or alongside them. The areas of the survey that identified high levels of confidence across the sample also coincided with dominant discourses relating to health, well-being, sport and the aims for PE (Capel and Whitehead, 2012; Green, 2010; Griggs and Ward, 2012; Morgan and Hansen, 2007). The remaining areas of high confidence, such as planning, responding to feedback and child development could be associated with a more generic understanding of primary

education obtained from wider professional preparation. As already mentioned, it has not been possible to infer from the survey data if responses to these questions were answered specifically with primary PE in mind, or as a more general application of their confidence to the knowledge area. This may have influenced participant responses.

Figure 6.9 indicates that each source of knowledge was considered to have a distinct level of contribution to the sample's professional knowledge development. Overall, school-based experience was the most cited source of knowledge, particularly for Subject Pedagogy and Developing Practice in Context, as it was cited 2644 times overall. This figure was just ahead of the university, with 95 fewer citations than school, but with an overall shared percentage rating of 23%. The numbers of citations however, only indicate the exposure of that source, rather than its value of worth held by the participant. For example, it is unclear from a descriptive analysis of the data if a high number of citations equals to a perceived high value of that source on the development of knowledge.

Knowledge Sources	Reflective and Academic Engagement	Content Knowledge	Subject Pedagogy	Developing Practice in Context	Total	Overall %
School-based experience	370	911	781	582	2644	23%
University seminars/lectures	453	1098	693	305	2549	23%
Prior experience	175	580	238	200	1193	11%
I have had no opportunity	81	343	242	251	917	8%
Personal interest	168	397	178	137	880	8%
Professional discussions	201	308	214	126	849	8%
Literature	94	262	132	46	534	5%
Previous employment	61	195	96	82	434	4%
Module assignment	131	164	101	27	423	4%
Online media	92	148	89	31	360	3%
Other curriculum subjects	49	92	119	43	303	3%
NGB & coaching awards	48	74	27	25	174	2%

Figure 6.9: Raw data showing the total number of citations of sources across the knowledge domains

The high number of citations for the university in Figure 6.9 could be attributed to the number of participants that were from university-based programmes (96%). This was a much higher proportion than current national figures, where the percentage of teacher recruitment for university-led institutions stands at approximately 69% (DfE, 2015a). A bias is thus present in this research in favour of the university; however, in recent years there has been an increase in the time students are expected to spend in school as part of a university-based course, with a strategic shift towards school-based training (Adams, 2015; DfE, 2011; Haydn-Davies et al., 2010a). Beginning teachers studying through a postgraduate university-based programme (68.5% of the survey sample) are

required to spend 120 days in school as a minimum expectation (DfE, 2015c). Undergraduate students made up 23% of the sample, and are also required to spend a minimum of 160 days in school-based settings (DfE, 2015c).

In all four professional knowledge areas, the university appeared as either the first or second most prominent knowledge source ahead of prior experiences and personal interests (Figures 6.10-6.13). This may have be due to the timing of the survey, as this could have coincided with the completion of the participants university-based input, their final school experience or undertaking of compulsory module assignments.
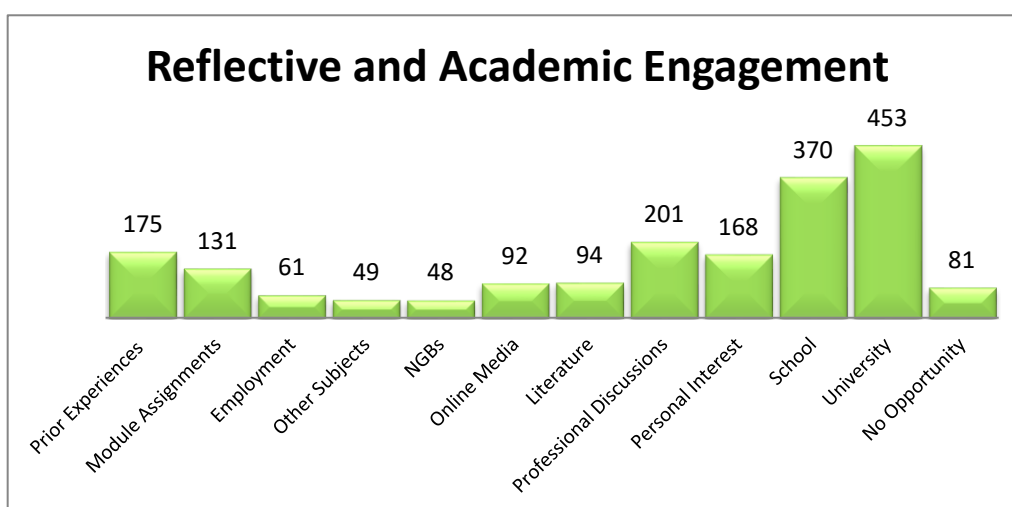
Figure 6.10: Total number of citations of each source of knowledge in the domain of Reflective and Academic Engagement

Under the domain of Reflective and Academic Engagement, all sources were identified as influencing the development of the beginning teachers' knowledge of primary PE; however, the contribution of each source varied greatly. This domain comprised 5 out of the 32 knowledge areas and presented the university as the most prominent of these sources; whereas NGBs were considered to have the least influence. For the majority of participants, there was little evidence of PE being an assessed element of their programme, with only 4% identifying module assignments as having any contribution to the sources of their knowledge.

Figure 6.11: Total number of citations of each source of knowledge in the domain of Content Knowledge

The largest of the professional knowledge domains from the survey was Content Knowledge, with the university being the most prominent source overall. NGBs and coaching awards were considered as having the least influence on the participants' development. Previous research into teacher confidence has identified prior experiences as a central factor in the development of professional knowledge for teachers of primary PE (Morgan and Bourke, 2008; Pearson, 2011; Pickup, 2006); this source of knowledge was identified as the third most cited source of this domain. Morgan and Bourke (2008) identified that when teachers entered the profession they would often revert to their own schooling experiences. Their own dislikes or apprehensions about a particular subject would be reflected in their perceptions of their own competence and confidence to teach. During the ITE phase, if areas of concern are not addressed resulting in a change of attitude, there is a risk that negative views will continue to impact on their teaching and ultimately the experience of their pupils (Haydn-Davies et al., 2010a). The reverse can also be said for positive experiences, thus illustrating a perpetual cycle of experience (Sidwell and Walls, 2014). For the sample in this research, the data presented in Figure 6.11 would indicate that final year beginning teachers, at the end of their ITE programme, still drew upon prior experiences in order to develop their confidence of the subject's content.

Subject Pedagogy

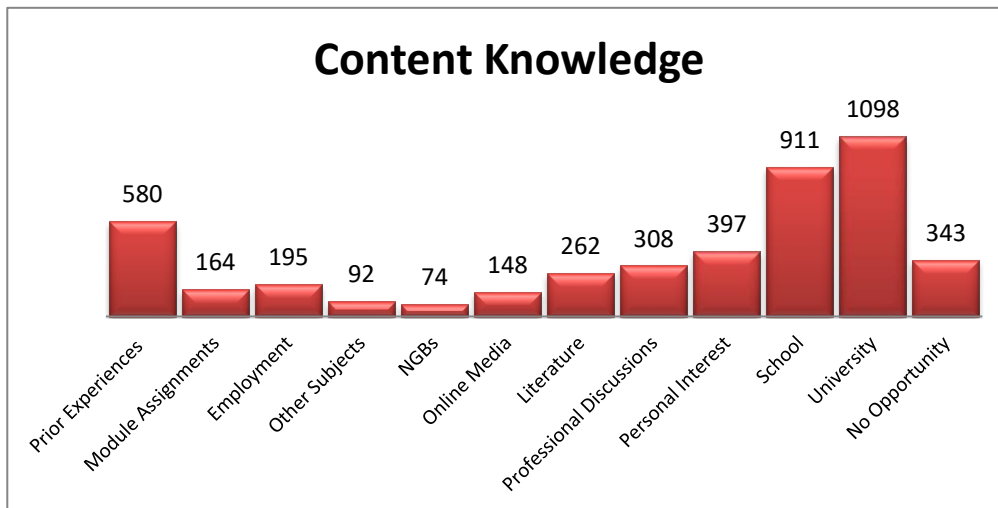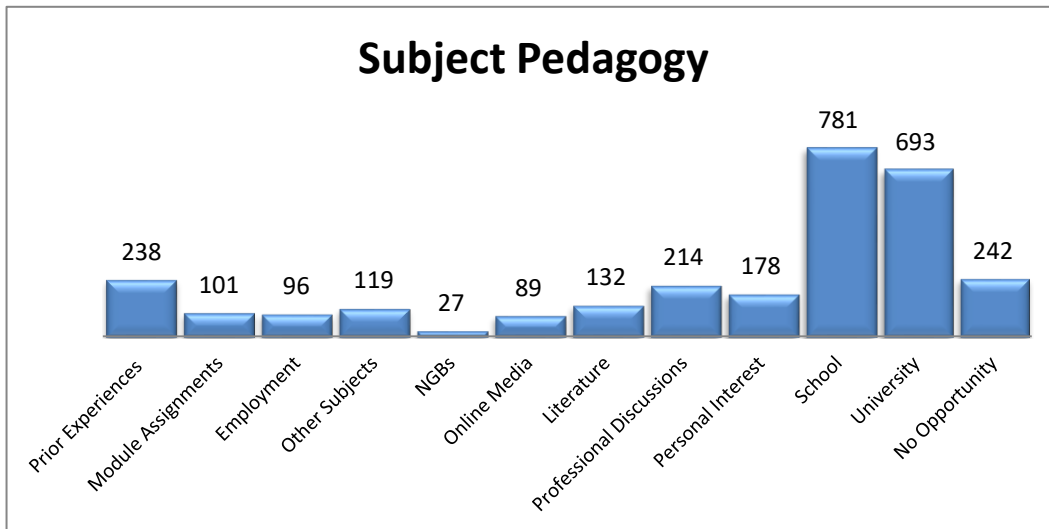Figure 6.12: Total number of citations of each source of knowledge in the domain of Subject Pedagogy

In the domain of Subject Pedagogy, all sources of knowledge were identified as influencing the sample's development of knowledge of primary PE. This domain included 8 out of the 32 knowledge areas and identified the school as the most prominent of these sources. NGBs were again considered to have the least influence on the sample. The 'no opportunity' response was the third most frequent citation for this domain. Although aspects of pedagogy such as planning, assessment and behaviour management would have been experienced in general pedagogical terms (Ofsted, 2015), the responses from this survey indicate that many participants were unable to apply pedagogical principles specifically to a PE context (n-242 citations).

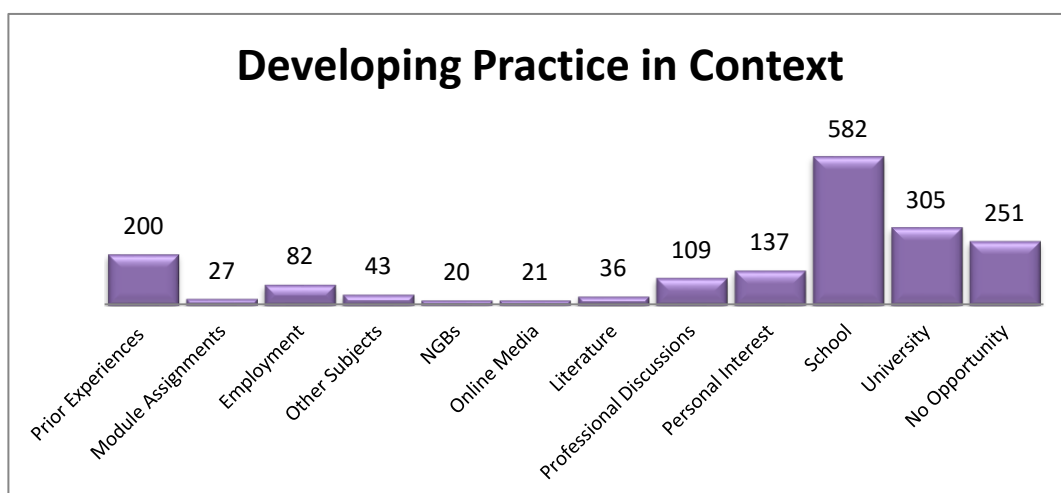## Developing Practice in Context

Figure 6.13: Total number of citations of each source of knowledge in the domain of Developing Practice in Context

In the domain of Developing Practice in Context, responses to the six questions identified the school as the most prominent source of knowledge. This response was

expected as the knowledge areas in this domain related specifically to working with children, teachers and others in professional contexts. The literature also indicates that it is the school-based context that student teachers most value (Darling-Hammond, 2006a; Velija et al., 2008). NGBs were once again the source of professional knowledge that had the least influence on beginning teachers' development. A high number of citations were made where no opportunity had arisen to develop knowledge in this domain (n-251). The lack of time and in some cases opportunity to apply knowledge in the school environment in PE has been argued as the fault of the PE profession (Wright, 2002; Lee, 2003; Kay, 2004; Evans and Penney, 2008). A failure in being able to clearly articulate what the subject is trying to achieve has ultimately led to many misconceptions about the subject's aims, values and purposes and how the subject is prioritised as part of the wider educational experience. If a positive experience of teaching PE in school is an essential component of improving confidence and competence, it is somewhat worrying that there is currently no guarantee that during a school placement a beginning teacher will be able to acquire and apply new learning, through sustained progressive teaching episodes, accompanied by quality mentoring and feedback (Van Berlo, 2007). For someone to enter the teaching profession, the national teaching standards state that they should have developed to a satisfactory level in all subjects that they have been trained to teach (DfE, 2012); therefore learning in context, through experience and gaining feedback, is an essential part of meeting these standards (Haydn-Davies et al., 2010a). Furthermore the AfPE state that beginning teachers should 'teach a sequence of PE lessons during their training and working alongside teachers with good knowledge of high quality PE' (2015b: 11); an expectation that all teachers training to teach PE do so as part of their qualification.

The remainder of this chapter will focus on four case-study participants in order to provide a deeper insight into knowledge confidence and knowledge sourcing. In particular, the interviews aimed to uncover the beliefs that beginning teachers held about their professional knowledge development.

Case-Study Interviews

Amy (appendix 19)

Amy was a female student on a two-year part-time PGCE programme at a university provider in the South of England. She was 40 years old and the mother of two children

of primary school age. Prior to undertaking her PGCE course Amy had worked within a government health establishment part-time. She had received seven hours of taught input for PE at the very start of her ITE programme, which she deemed to be a limited amount. Amy had medium to high levels of confidence across the breadth of knowledge, scoring ≥ 5/10 for all but one area. She attributed placing her confidence at the higher end of the scale to her 'love of sport' and the importance she held for primary PE. Amy's responses to the online survey also indicated that her future development was spread across all the four knowledge domains, but in particular the area of Content Knowledge. The themes that dominated Amy's interview were about 1) being up-to-date 2) doing things correctly 3) understanding PE from a different perspective and 4) sport and competition.

Ben (appendix 21)

Ben was a male student on a one-year full-time PGCE programme at a university provider in the South East of England. He was 27 years old and had prior experience of sport through his personal interests. Although Ben had only just finished his PGCE at the time of interview, he had already taken up his teaching post and was currently teaching in a local school. Ben was on a pilot programme for a new Primary PGCE specialist PE route (chapter two). He felt the amount of time dedicated to PE on his course was too much to quantify, but believed it to be over 20 hours. Prior to undertaking the PGCE Ben worked in sports coaching and development. He was not interested in pursuing a career down these paths, but felt compelled to teach as it seemed the next step for him. The themes that dominated Ben's discussions in the interview were 1) reflection and 2) knowledge validation. The online survey identified that Ben had placed most of his confidence in the higher end of the scale, where all (apart from swimming) were considered to be ≥5/10. Ben used the score of 8/10 and 10/10 the most (10 times each) indicating that overall he had high perceived levels of confidence. Ben's areas for development were spread across the domains of Content Knowledge, Subject Pedagogy and Developing Practice in Context, particularly in areas that related to the development and progression of learning for the child.

Charles (appendix 23)

Charles was a male student on a one-year full-time PGCE programme at a university provider in the Midlands. He was 29 years old and had prior experiences of fitness, coaching, lifeguarding and sport through his own personal interests and from previously

working as a personal trainer. Charles explained that he was able to select PE as a subject specialism on his PGCE course, but he did not see himself as a PE specialist. Charles received 15 hours of additional taught input compared to his other student colleagues who received only 1.5 hours over the duration of their course. The themes that dominated Charles' discussion in the interview were 1) teacher confidence, 2) validation of knowledge and 3) personal choice. Charles had the highest level of confidence across all four case-study participants, with all responses ≥5/10 and only three responses were ≤7/10. Charles' areas for development were predominantly in the Content Knowledge domain, specifically gymnastics, outdoor adventurous activities and swimming. He was also starting to consider the role of subject leader and more aspirational levels of knowledge in the domain of Developing Practice in Context.

Daisy (appendix 25)

Daisy was a female full-time student on a one-year PGCE programme at a London university provider. She was 39 years old and was a mother to two children of primary school age. She previously had a career in drama and musical theatre prior to commencing her PGCE and described herself as having many diverse interests across the curriculum. Daisy talked extensively about her personal context, prior experiences and school-based placements. The themes that dominated Daisy's discussions were 1) the children (their learning, motivation and participation), 2) sport, health and fitness and 3) the specialist nature of teaching primary PE. The online survey identified that Daisy had placed her confidence in the higher levels of the scale with 25/34 responses scoring ≥7/10 and from that 21/34 were considered to be 10/10. The lowest score in confidence was 3/10 for the knowledge area relating to movement skill themes. Daisy's areas of development were primarily around Reflective and Academic Engagement and Content Knowledge domains, particularly knowledge relating to the current context for PE and fundamental movement skill learning.

Professional Knowledge Confidence

The online survey indicated that the sample of 175 participants had a broad professional knowledge base across the scale's range of confidence; however each individual participant varied greatly. The four interviewed cases also presented this response. Figure 6.14 shows knowledge of the interviewed participants from most to least confidence.

	Highest	Lowest
Online survey (by mode)	Q34 Using feedback to improve practice Q21 Planning a series of lessons Q3 Understanding the aims of PE Q8 Child development Q18 Health, fitness and well-being	Q14: Swimming activities Q33: Work with the wider workforce in PE and sport Q7: Investigate aspects of practice
Amy	Q32 Work with adults other than teachers Q33 Work with the wider workforce in PE and sport Q34 Use feedback to improve practice Q7 Investigate aspects of practice Q26 Assess pupils formatively Q18 Health, fitness and well-being Q19 Use PE to support other curriculum areas Q20 Whole school activities	Q14. Swimming activities
Ben	Q6. Set challenging targets for myself Q12. Games activities Q13. Dance activities Q16. Athletic activities Q20. Whole school activities including: healthy Q21. Planning a series of lessons Q23. Manage risk – safe practice Q31. Appropriate competition Q33. Work with the wider workforce in PE and sport Q34. Use feedback to improve practice	Q14. Swimming activities
Charles	Q9. Fundamental movement skill theme Q12. Games activities Q21. Planning a series of lessons Q23. Manage risk – safe practice	Q14. Swimming activities Q15. Outdoor and adventurous activities Q11. Gymnastic activities
Daisy	Q6. Set challenging targets Q11. Gymnastics activities Q12. Games activities Q13. Dance activities Q16. Athletic activities Q18. Health, fitness and well-being Q19. Use PE to support other curriculum areas Q20. Whole school activities including Q21. Planning a series of lessons Q22. Effective strategies to promote pupil learning Q23. Manage risk - safe practice Q24. Use a range of different teaching styles Q25. Inclusive learning opportunities for all pupils Q26. Assess pupils formatively Q27. Assess pupils summatively Q29. Teach different activity areas/across KS's Q30. Reflect on my teaching Q31. Facilitate appropriate competition Q32. I can work with adults other than teachers Q34. I am able to use feedback to improve my practice	Q10. Stages within the skill themes

Figure 6.14: Survey responses showing most/least confident areas for case-study participants

Although all four cases showed some agreement with the online survey responses, this was only in relation to swimming (as least confident) and planning/feedback/health and fitness (most confident). Amy and Ben identified areas of high confidence that the online survey had depicted as low overall (working with the wider-workforce and investigating aspects of practice in PE). The comparison between the survey and the context of the case-study interviews further presents the development of knowledge as a varied and individual process. Ben's previous role in sports coaching and development and his access to wider NGB awards from his PE specialist route, enabled him to work confidently in schools with a wider-workforce. He was also required to undertake research into primary PE as part of his programme, whereas many of the survey's participants had not been able to. Although Amy had never undertaken a NGB coaching award, or coached, she expressed a love of sport and competition that were life-long and that enabled her to work confidently with sport organisations in and out of school.

> *I think that's because I enjoy sport myself so wouldn't necessarily fear it, so I am quite willing to give it a go!* (Amy, appendix p.220)

Lesson planning and using feedback to inform future practice were two areas that were considered high in confidence from the survey and in three out of the four case-study interviews. For Amy, Ben, Charles and Daisy, high confidence in planning was attributed to opportunities to teach when on school experience. Ben referred to planning on a number of occasions. He shared insights into the various stimuli that supported him 'from a spark of an idea' when attending a course or talking about the importance of 'evaluating and reflecting' on practice to inform future lessons.

> *I understand it [evaluating] is a basic process talking about it, dissecting it and really fitting it into how you do something in school. If you haven't got an hour after every lesson then you need to do it quickly and do it well…Having done a lesson once, I feel much better about it… (*Ben, appendix p.263)

Charles also had many opportunities to teach PE on placement. Although he referred to his colleagues as having low confidence levels and would often have to be proactive in taking the lead with future planning.

> *Although she [the class teacher] wasn't hugely confident, she knew protocol and I could adapt it myself. After the first week doing it with her I sort of took over and did the lessons myself* (Charles, appendix p.296).

Daisy made sense of how she went about planning using a flexible structure for progression provided by her university taught sessions. She used this approach even when she had little prior experience of the area she was teaching.

> *Having a structure where [tutor's name] said the first thing you are doing are getting them up and let them have a go. Then you add an extra degree of skill and an extra degree of structure. There's your progression…so for me that is your lesson plan…on my first placement they asked me to do basketball. Having never played basketball in my life! Having had that I could say okay this is what we need to be doing, these are the skills. We will do it on our own, now in pairs then as a group and there we go! I felt fine with it and I really enjoyed it* (Daisy, appendix p.344-345).

Amy assessed her confidence for planning as 7/10 and talked on several times about the lessons she had planned when on school experience. She even brought example lesson plans to the interview, but after a further discussion it was clear that her confidence in this area was due to a reliance on pre-determined planning from the class teacher, resource files and example lesson ideas. The focus of Amy's planning appeared to be about the activity rather than the children's learning needs.

> *…so I was fortunate enough that the teacher said you can lead this. This is the medium term planner. We want to cover athletics and in athletics we want to do discus throwing, sprint, vortex, relay. She kinda gave me them and said away you go! So I went away and found this….* [Shows the interviewer a file of resources] (Amy, appendix p.219)

With reference to planning, confidence was discussed in a variety of ways. Regardless of how the beginning teacher went about planning and gaining confidence, the ability to plan was set by having the opportunity to do it in practice, rather than from a merely theoretical standpoint. This presents a similar pattern to the survey data. When participants cited sources of knowledge a high number of times, confidence improved. Planning was also conceptualised by all four interviewees around activities. Charles talked about planning for gymnastics and OAA, Amy about athletics, Ben about basketball and dance and Daisy about sport in general. Closely associated to discussions around planning and teaching was the beginning teacher's ability to self-reflect and act on any guidance/feedback they received. This area of knowledge development was also presented with high confidence levels in both the survey and the interviews. Charles was the only one of the four participants who did not rate this area within his highest confidence. Although he had many opportunities to plan and teach PE, he spoke of a lack of opportunity to gain feedback from his lessons and at times he would often be the one offering guidance to more experienced colleagues.

> *Actually I felt like I was leading the conversations and suggesting ideas to them to take the school forward.* (Charles, appendix p.315)

Receiving feedback to improve practice was closely associated with beginning teachers' interactions with their peers, professional tutors and colleagues in school. The impact of such feedback depended upon the nature of the communication and how the beginning teacher participated in that form of dialogue. Habermas considers mutual engagement in discourse essential to making sense of learning through coordinated actions, which is central to the healthy functioning of the human lifeworld (O'Donnell, 2010). Furthermore, Habermas suggests that a commitment to see all individuals as potential participants in discourse is necessary if they [the beginning teacher] wish to reach autonomy and rationality (Habermas, 1982). The ability in this was varied across participants. The opportunity to teach PE was initially determined by the school (what, how long and when), but future opportunities were then driven by the beginning teacher; initiating dialogue with colleagues and children, leading on planning and offering support to less confident colleagues. With each participant reporting a lack of teacher confidence in school, there were minimal opportunities for communicative discussions about PE to take place. For Ben, he felt this was further compounded by only seeing examples of what <u>not</u> to do.

> *I didn't feel there were many opportunities where I could observe many teachers teaching PE. I saw a lot of what not to do. Watching queues of ten kids standing in lines, with only one kid doing anything and all this kind of stuff. (*Ben, appendix p.269)

The professional knowledge area of 'health, fitness and well-being' is widely perceived to be how PE is valued (DfE, 2013a; 2013b; Harris and Cale, 2015; Ofsted, 2013; 2014). Two of the interviewed participants (Amy and Daisy) presented high levels of confidence in this area, as did the participants from the survey (n-49 mode of 8). Furthermore the terms of PE, sport, activity and heath were used synonymously throughout the interviews supporting the view that the teachers often find it difficult to differentiate between what these areas mean (Coulter and Ní Chróinín, 2013; Morgan and Hansen, 2007). An example of this appears in an extract from Daisy's transcript.

> *I think the fact that I have a lot of prior experience of <u>physical activity</u> and <u>physical</u> <u>education</u> because I have also participated in <u>sport</u> and always been interested in it. And particularly because I see that there is a really big deal, I want to keep <u>fit</u> and <u>healthy</u>. That feeds into my home life in particular. Wanting to make sure I have active and <u>healthy</u> children* (Daisy, appendix p.349).

Daisy strengthens her values in the following extract, which epitomised for her why knowledge of this area is so important in the primary curriculum.

> *In our culture it is unacceptable to not add two and two together or read, but if you're physically illiterate that's okay!?* (Daisy, appendix p.355)

Sourcing Professional Knowledge

Figure 6.15 presents the overall survey, Amy, Ben, Charles and Daisy's most cited sources of knowledge.

	Highest three citations across the survey			Least Cited
	1	2	3	
Amy	University	School	Personal interests	Prior experiences Module assignments Employment NGBs
Ben	University	Literature	Professional discussions	Other subjects NGBs
Charles	Personal interests	School	Prior experiences	Other Subjects NGBs
Daisy	Personal interests	School	Prior experiences	NGBs Online media
Online survey	School	University	Prior experiences	Online media Other subjects NGBs

Figure 6.15: Table showing the overall survey and case-study's findings for most/least cited knowledge sources

Whilst the school, university and prior experiences featured in all the case-study responses, the school was cited less than the university. This presents a different picture to the survey data and academic literature, where school-based opportunities were considered ahead of the school as a source of knowledge (Hastie et al., 2005; Zeichner, 1985) (see Figure 6.9). Personal interests were also cited more than prior experiences, with Ben rarely citing it and Amy considering it to have the least influence on her knowledge development. All four participant interviews made specific reference to sport, health and physical activity as a characteristic of personal interests and their confidence to teach PE. This category was conceptualised differently to prior experiences, as personal interests were not just considered as being historical, but as still having a current influence on their practice. Ben was a keen runner and he explained how this was still an influence on his thinking.

> *If I can give you an example? Something I do in my spare time is the parkrun. So the guy who set it up lives around the corner. So I spoke to him about setting up that model and applying it to the school community* (Ben, appendix p. 268).

In this short extract, Ben refers to the Content Knowledge domain through engagement in school sport beyond the curriculum and how his personal interest had given him a unique idea for organising a club in his school. He spoke with passion about his idea and connected other areas of PE and school sport with it.

> *So I would get the Year 6s to volunteer and get it set up…volunteering, and rewarding those who have attended the most runs etc.* (Ben, appendix p.268)

Daisy also discussed her personal interests in the present tense and how they influenced her professional knowledge. This source of knowledge characterised Daisy's discussions throughout the interview, referring to her sporting hobbies (netball, running, cycling and rounders), family interests or beliefs about fitness and health of young people.

> *Now I do quite a bit of running. I have done a number of triathlons which I really enjoy but with two children it's really hard fitting it all in… have started playing netball again which I am loving. And rounders as well.* (Daisy, appendix p.343)

Charles drew upon his personal interests as a form of choice. He was secure in his convictions that any decisions he had made had been a personal choice and have ultimately led him into teaching and his beliefs about the subject.

> *I think that is where a lot of it can come through personal interests… my opinions, my beliefs and my viewpoints about a particular aspect of PE...my personal interests have led me on to different experiences throughout my life.* (Charles, appendix p.302)

Where prior experiences could have acted as an historical influence on the beginning teachers' professional knowledge, personal interests continued to dominate even after they had completed their ITE programme.

The school featured consistently throughout the four interviews, but in contrast to the survey it was not considered the main source of knowledge by any of the case-study teachers. In Ben's case it did not feature in his top three at all and was only cited seven times in total throughout the whole of his survey responses. After an analysis of the transcripts, all four interviewees made reference to teachers having limited confidence to teach PE in their placement schools, or lessons were externally outsourced. This implies that whilst the Government funded Primary PE and School Sport Premium has

been used to increase the presence of outsider providers to support in-service teacher confidence, this has resulted in reduced opportunities for beginning teachers to access PE as part of their assessed school experience. Ben and Charles said that although the school provided them with the opportunity to teach and reflect, there was limited feedback to improve practice due to lack of opportunity to access the more knowledgeable practitioners in school. Charles, Ben and Daisy believed themselves to be more confident in the subject than the teachers they were working with.

Amy, with just seven hours of taught input and Ben with over 20 hours, found it was the university that influenced their professional confidence most. Ben believed that the sessions he received as part of his university course were 'dynamic', 'fun', 'practical' and 'engaging' and all students on the course appeared to get a lot from them. Amy felt the university 'challenged' her thinking and moved her away from perceiving PE to be just about competition. Moreover, she found her experiences in school confirmed her previously held views about PE, that it was about 'sport', 'fitness' and 'competition'.

In responses from both the online survey and interviews, NGBs, online media and wider curriculum subjects were considered as having the least influence on beginning teachers' knowledge. Despite the literature and the Professional Knowledge Model identifying the role PE has to play in developing and enhancing learning in other subjects (through literacy, science, numeracy, and mathematics) (Haydn-Davies et al., 2010l; Paine, 2014; Pickard and Maude, 2014), limited knowledge of PE was developed by other curriculum areas. Amy made reference to topic work in science, but no connection was made to any explicit aims of the PE NC or subject goals. This may be due to limited knowledge of the NC documents, as indicated in the survey.

Despite NGBs, external companies and sports coaches playing a larger role in curriculum time, as an outcome of the Workforce Reform Act and the Primary PE and School Sport Premium (Callanan et al., 2015; Davies, 2013; Griggs, 2012b), they were a minimal source of knowledge development for the case-study participants and the online survey population. Ben and Charles had obtained sport and fitness/health industry qualifications, with Ben gaining a number of NGB awards as part of his PGCE specialism course. However, they both rated this source of knowledge as having the least amount of influence on their professional knowledge to teach primary PE. In his discussions about the NGB input he had received, Ben found the courses variable in usefulness; some had been matched to teachers' needs, whereas others had been more focused on

the tutor and the activity. Furthermore, over the course of the PGCE year Ben shifted in his identity from a sports coach to a teacher with the guidance of tutors at the university.

> *I had really enjoyed [tutor's name] lectures as they really got you from the coach mind-set to the teacher mind-set. How do you teach someone to throw? Well everyone can throw? But no, not everyone can throw, especially if they're, you know, 4 and 5 years old!* (Ben, appendix p.257)

Ben started to break down his understanding of the difference between PE and sport and believed that to teach primary PE in the curriculum requires a knowledgeable, well qualified and expert teacher.

> *It's also where I intend to go as I want to do my MEd and I have a desire, at some point, I don't know, to go down the PhD route. So yeah, that's where I see my knowledge coming from in the future.* (Ben, appendix p.275)

For Ben and Charles, removing the university as a source of knowledge from their preparation, and potential future preparation, would limit their understanding of teaching PE and the credibility of their role. In comparing his NGB experiences to the university, Charles expressed:

> *Yeah and that is exactly what it is like. Tick the boxes to prove that you can do what they want you to do. Whereas the university assignment was different. At level seven you have more freedom.* (Charles, appendix p.305)

Charles also felt the university allowed him to develop into his own teacher and not just a 'clone' of someone else in school:

> *I have been unbelievably impressed with the university in everything they have done throughout the whole course, not just with PE, but the whole programme. I think although at the time you think this is hard, but looking back and reflect you can see the reasons for every single aspect and I do feel like I have had ownership of that.* (Charles, appendix p.308)

The category of 'no opportunity' appeared on the online survey as an option for respondents to select if they had perceived no opportunity was available to them. Out of the 11 options available, this category was the fourth most frequent response from the survey sample and was most cited in the domains of Content Knowledge (343 times) and Developing Practice in Context (251 times). The four interviews only selected 'no opportunity' on five occasions with Amy citing it twice, Ben once, Charles twice and Daisy none. For these beginning teachers, it would appear they engaged in opportunities

to develop their breadth of knowledge. This indicated that opportunity to develop knowledge led to an increased level of confidence to teach the subject.

Beliefs about Professional Knowledge Development

The interviews aimed to identify the beliefs that each of the four beginning teachers had about their professional knowledge development. Constructs were elicited through the use of repertory grids (Kelly, 1955) and expressed how the participant formed systems by which they interpreted their experiences (Fransella, Bell et al. 2004). Completed repertory grids for Amy, Ben, Charles and Daisy can be viewed in the case studies located in appendix 19, 21, 23 and 25. All four participants accommodated quickly to the process of construct elicitation, despite it being a deeply reflective process. Due to the limited time available for each interview only 16 constructs in total were generated by the interviewees. These constructs were personal to the individual who elicited them, their experiences and their unique belief systems. Results from the repertory grid interviews cannot be generalised across the population of beginning teachers, but offer an insight into how beginning teachers came to value what they know about primary PE. Figure 6.16 presents the elicited constructs from each interviewed participant and their beliefs about developing knowledge in primary PE.

Elicited Constructs	
Amy	**Ben**
Competitive/Inclusive Same vision/Challenged thinking Broader perspective/Narrow focus	Learning by doing/Absorbing Making mistakes/Passive New ideas/Same ideas Reflect/Copy Challenge/Familiarity Formal qualifications/Experience
Charles	**Daisy**
Expert opinions/Own views Confidence/Challenge Choice/Imposed	Proactive/Reactive Stimulus/Specific Theoretical/Practical Abstract/Lived-in

Figure 6.16: Elicited constructs from case-study interviews

Amy

Amy's first construct of 'Competitive/Inclusive emerged as she had considered PE and sport as synonymous prior to undertaking her ITE programme. Amy commented that

although the similarities between personal interests and school had given her confidence to teach PE, by reducing the 'fear' element, they had not provided her with the knowledge required to teach the subject competently. Amy said *'…it [the university] made me think that it is not all about, you know, the competitive nature. There is another element that I now need to look at'.*

When considering the role of the university as a source of knowledge in her development, 'inclusive' emerged as the implicit pole of 'competitive', something Amy admitted to requiring further understanding of. Amy's perception was that competition was aligned to children's learning in KS2, whereas being inclusive was more associated with KS1. A further elicited construct recognised that the university had challenged her thinking about the subject, whereas the school and her personal experiences were perceived to be similar and reinforced her previously held assumption that PE and sport were the same. Amy recognised that being challenged was a positive experience and was important in moving her knowledge forward.

When Amy reflected upon her third and final construct of Broader Perspective/Narrow Focus, she started to indicate why she felt undertaking a programme for ITE was important to her knowledge development. Amy believed that her prior experiences were narrowly conceived and did not give her the breadth of perspective that was needed for teaching. In referring to the sources of online media and literature she stated that:

> *It gives you that overall broader perspective of things, it's not just a right or a wrong. There's always someone going "Ah well have you thought about such and such...?* (Amy, appendix p.227)

Amy felt that her own personal experiences were very narrow and, if she did not engage in broader perspectives of learning in teaching primary PE, she would repeat herself and offer limited experiences for her children to learn. She also commented that being open to broader perspectives challenged pre-conceived ideas and misconceptions.

Ben

Ben connected the school and his prior experiences to the construct of Learning by doing/Absorbing. He felt these situations enabled him to learn by his mistakes, develop his reflection and have a level of ownership about what he learns and how he learns it. He believed the role of the NGBs was identified as 'different' in the development of his knowledge as these experiences were about 'absorbing information' rather than

'actively making mistakes'. The NGB courses Ben had undertaken as part of his programme were, for him, about getting a 'spark' of an idea, 'copy and paste activities' or to acquire the 'nuts and bolts' of specific Content Knowledge. Ben felt that teachers would need the basics of planning and lesson structure in PE first, before attending these courses; then new ideas could be taken and adapted into individual planning.

Ben drew on prior experiences, the school and university to elicit the construct of Change/Familiarity. Ben felt that the university was similar to the school as he referred to certain aspects of knowledge in these contexts as a 'necessity' (i.e. the NC). He stated that *'you need to be able to teach these things'*. Ben viewed this understanding of knowledge as different to his strengths that were gained from prior experiences. Teaching what you know, based on your prior experiences, 'is safe'. The school and university settings were considered by Ben to take him out of his comfort zone in terms of his knowledge of the subject. He recognised that he was not able to teach just what he knows all the time.

> *You are with Year Two and you are doing your placement. You can't do basketball so you have to get in there and do dance. I can't just do invasion games for the rest of my professional career!* (Ben, appendix p.271)

The broader discussion of Ben's learning revealed his understanding that development of knowledge was a positive thing. He wanted to be challenged in his learning. He also thought the validation of knowledge was made through formal accreditation and academic qualifications. Ben stated that *'You think right, I am a teacher now and that's it. You should keep reading and keep finding what's interesting'.* This view led Ben to arriving at the constructs of Formal qualifications/Experience. Ben perceived knowledge and understanding through a 'stamp of approval', that it was not just a person or individual who validated his knowledge but something that was bigger than that, an organisation or external body. With a focus on qualifications and experience Ben drew on the elements of NGBs, the university and personal interests. He presented a construct where experience and qualifications were considered polar, but both necessary as part of his professional learning.

Charles

At the start of his interview, Charles first discussed the sources of literature, university and personal interests. Immediately Charles connected the university and literature as similar, as he felt these went 'hand-in-hand'. He further reflected:

> *Everything at the university has always got to be backed up by literature. So no matter what you say it's not good enough to say it on your own opinion. Which is what I think comes from your personal interest.* (Charles, appendix p.302)

The role of personal interests was identified as 'different' in the development of Charles' knowledge because he felt that this was just about him and his views. Charles did not view either end of this construct in a pejorative way, but valued both poles. He often referred to opportunities to have his own view, but he felt the university and literature was about academia and the expert. He reflected further by questioning how much of his own view was really his anyway.

> *I guess the thing is when you are studying and you are doing wider reading all the time, that literature that you read becomes your own opinion. In a way. Do you know what I mean?* (Charles, appendix p.305)

Charles also referred to the 'expert' opinion in areas of knowledge where he was less confident. He valued the university's role in this and explained that this is why he had chosen the PGCE route over the school-based routes, expressing *'Yeah exactly, that is why you come to the university'*. Despite having high confidence in many areas of primary PE, Charles did not see himself as an expert; he explained that he wanted *'to build confidence… because to be honest I don't really have a view on it [specific knowledge] yet'* (appendix p.336).

The construct of 'choice' became a key theme for Charles in developing his knowledge. He recognised that there are times when he had no choice during his ITE programme, for example teaching certain curriculum subjects or undertaking module assignments, but felt there was always a level of choice even when something was imposed. Charles also felt that the ultimate choice to become a primary teacher was his so although some things were imposed on him, it was his choice to join the teaching profession in the first place.

Daisy

Daisy initially reflected upon prior experiences, literature and personal interests in her interview. She immediately connected prior experiences and personal interests as alike and in doing so returned to one of her dominant themes of health, activity and sport to help connect these two together. After a process of laddering (Fransella et al., 2004), Daisy felt that her prior experiences and personal interests were all about choice. Her learning had emerged from taking part in things that she had chosen to do. However her learning through the literature was not by choice and directed to her from her reading lists.

Daisy later reflected on NGBs, online media and literature as sources of knowledge. She considered that NGBs were about doing something specific. She argued that you would attend a NGB course for a particular reason, in order to obtain a coaching qualification or specific knowledge of an activity. However the knowledge gained from the online environment and literature were about her creating a stimulus in her thinking. She referred to reading online and how those made her consider ideas for lessons.

When reflecting upon a combination of literature, personal interests and module assignments, Daisy generated two constructs that were about Theoretical/Practical and knowledge that was Abstract/Lived-in. Daisy also felt these constructs were not just relevant to her learning, but also to the learning of the children. She considered that competition should be experienced and practically explored, not just talked about. These two constructs were considered alike when ranked against the sources, with theory being perceived as abstract and practice being perceived as lived-in. The source of knowledge generated different contributions to these constructs. For example the university was predominantly considered to be theoretical, the school practical and discussions with colleagues could be both.

Chapter Summary

Whilst the online survey presented a generally high level of professional knowledge confidence, a closer examination of the data showed that confidence varied across the knowledge areas. The knowledge that beginning teachers were most confident in related to principles of child development, health and well-being, aims of the subject, planning and using feedback for professional learning. The areas that demonstrated the least areas of confidence were in relation to swimming, working with external agencies,

research-informed practice, current issues and knowledge of the statutory frameworks. When comparing the survey responses to the Professional Knowledge Model, beginning teachers were developing aspirational and secure levels of knowledge prior to gaining an understanding of more fundamental areas. In identifying the sources of knowledge that were most dominant in the development of beginning teachers, the school and the university were the most cited. The data from four case-study interviews identified 16 constructs that dominated participants' beliefs about how s/he developed knowledge. Each case provided a unique discussion about their experiences, with no two participants presenting identical constructs or topics for discussion. However, the interviews did reveal that personal beliefs about primary PE and how knowledge was sourced was integral to the process of professional learning.

CHAPTER SEVEN

Constructing Knowledge of Primary Physical Education

Introduction

In this chapter I discuss central ideas that have arisen from the data; specifically how beginning teachers constructed their knowledge of primary PE and their perceived confidence to teach. In doing so, I will draw upon the literature of Ideology Critique (Brookfield 2000, Brookfield 2001), theories of knowing (Habermas 1972), the lifeworld of the beginning teacher (Ongstad 2010) and communicative action (Habermas 1987) to consider the data within a critical theoretical perspective. Four themes have arisen from the survey and interview data which have helped me to make sense of the tensions that exist in beginning teachers' development, asking what knowledge do teachers need, how it should be applied, in what context and from whose perspective? This chapter will explore each of these themes in turn and the implications they have for the development and sourcing of knowledge in primary PE.

Knowledge Perspectives

Habermasian epistemology (1972) explains that the structures of human knowledge are determined by interests that are deep-rooted in the social existence of humans and their lifeworld. In a PE context for primary ITE, it is further believed that when teachers construct their knowledge they do so from a cognitive understanding of it (Rovegno, 1993). All four interviewed participants in this research made reference to sport, physical activity, health and fitness through recalling their personal interests, prior experiences and school-based contexts (Lawson, 1983a; Lawson, 1986; O'Bryant et al., 2000; Zeichner, 1985), thus perpetuating existing ideologies of the subject (Coulter and Ní Chróinín, 2013; Green, 2008). The theme of Knowledge Perspectives refers to how the beginning teachers' beliefs were challenged, reinforced, broadened or closed down. At the time of this research, all participants had finished their ITE programme and were indicating that changing perspectives were starting to emerge. Although specific reference to PE as an educational area of the curriculum was not explicitly made, there was a growing awareness that children's needs should be considered ahead of the activity. In practice however, the activity often drove the lesson which became apparent in the interviews from discussions about planning and teaching.

Amy and Charles referred to how their ITE experience had challenged their previously held views. In her interview, Amy illustrated the many positive experiences of sport she had as a child and how this was reinforced on school experience, but the university offered something different, a more inclusive understanding of movement. Charles also enjoyed the 'challenge' of his ITE programme and loved learning about new perspectives - dance was an example of an activity area that broadened his knowledge of PE. Ben also commented that the debates that had arisen with his peers and tutors on his university-based PGCE course had helped move his understanding on. This was in particular reference to difference between coaching and teaching children. This way of thinking has been described by Mezirow (2000) as transformative, where previous taken-for-granted frames of reference (the practice of sports coaching or the participation in competitive sport) are changed to ensure beliefs become more justified (e.g. the practice of teaching or physical education as inclusion). Being able to reflect on personal biographies and seeking agreement of these experiences with 'knowledgeable' others is a key process in transformative learning (Mezirow, 2000). It enabled the beginning teachers from this study to not only reflect, but start to question if their previous experiences were relevant in their new role as educators. Alongside challenge and familiarity were constructs that considered knowledge to be 'new' or 'the same'. Ben and Charles were conscious of the danger of becoming stagnant in their teaching and were keen to be involved in continuous professional learning to ensure they embraced new ideas. For Ben, this was illustrated in a move from teaching children through games (in particular basketball) to teaching children through dance.

The survey and interview data indicated that beginning teachers had developed knowledge at secure and aspirational levels ahead of more emerging forms of knowledge. For example Amy had high levels of confidence in content knowledge associated with school sport, ahead of knowledge of fundamental movement skills and the NC. The survey responses showed that typically knowledge of activity areas (secure stage) was placed ahead of knowledge of fundamental movement skills (emerging stage), but this had led to a gap in understanding of how to assess or progress learning. Developing knowledge of activities ahead of knowledge of the movement that underpins them pervades a discourse of PE as doing rather than learning. This can lead to a narrow understanding of the subject and one that places the activity ahead of the child's needs (Garrett and Wrench, 2007). What knowledge should appear on the Professional Knowledge Model and where is debateable and will depend largely upon

different epistemological perspectives about what the subject aims should be (Green, 2008; Tom and Valli, 1990). This will arguably change over time and be subject to national and local priorities.

Knowledge Validation

The theme of Knowledge Validation refers to the people and processes that validate knowledge of primary PE from the both the survey and interviewed participants' perspective. An objective of this research was to place the beginning teacher at the centre of the professional learning process so they could identify their individual learning needs and be valid contributors to their lifeworld (Ongstad, 2010). Habermas (1982) proffers a commitment to consider all individuals in this way as participants of discourse where potential, autonomy and rationality is achieved. The findings from this research have indicated that the beginning teachers did not conceptualise themselves as being knowledge validators, but they welcomed a communicative process with another person about their learning. The interview was considered to be an example of this, where opportunities to ask questions and seek greater clarification arose. Charles expressed that the interview had helped him 'know himself better as a teacher', whereas Amy used it as an opportunity to learn more about the subject.

The concept of developing through an imposed system was not viewed negatively. In fact it was considered by the participants to be an important and welcomed component of their ITE programme as they felt it gave validity to their qualification. In particular, Charles felt there were always levels of choice, even when something was imposed; choice through his assignments, choice in how he taught and ultimately it was his choice to be a teacher. Daws (1999) states that it is this intricate balance of wider public control and self-determination that knowledge is best understood. Arguably at this stage of a teacher's career it would be expected that such a belief in the ITE system exists. Little confidence emerged from each of the participants to validate their own knowledge. At this stage of their learning, they relied upon institutional systems, such as the school and university, to ensure that what they knew and understood about PE had credence (Hastie et al., 2005; McMahon and MacPhail, 2007; Zeichner, 1985)

Across the sample, the sourcing of knowledge to develop confidence was personal to the individual. The process for knowledge development was not standardised across the programmes that were represented. Many drew knowledge from school and the

university, but a large number expressed that they had 'no opportunity' to develop aspects of knowledge at all; particularly in regards to content knowledge (Rovegno, 1993). Hastie et al. (2005) contests that beginning teachers, who are provided with a variety of opportunities and experience to teach PE, are more likely to continue to do so after graduation, placing this stage of professional socialisation (Lawson, 1986) as a crucial period in the transformation of the beginning teacher's learning. The beginning teacher is therefore a pivotal link in the varying processes of professional learning, connecting what was experienced before the ITE programme (through prior experiences and personal interests) (Capel and Blair, 2007; Dewar and Lawson, 1984; Elliot et al., 2013; Garrett and Wrench, 2007; Lawson, 1983a; O'Bryant et al., 2000; Stroot and Williamson, 1993), what was experienced during (McMahon and MacPhail, 2007; Ni Chróinín and Coulter, 2012) and what would be required in the future. The four case-study interviews from this research suggested that knowledge was validated through both the formal undertaking of qualifications as well as personal experience; although one was not considered to be more valuable than the other. Knowledge validation was also constructed as something that could be 'authoritative', 'imposed', or left up to the individual through 'choice'. Imposed knowledge was conceptualised through the NC, school-based planning and aspects of academic work.

In the survey, the school and university shared the top percentage of citations of where knowledge was frequently sourced. The interviewees made specific reference to university tutors being theoretical experts (Feiman-Nemser, 2001), whereas school knowledge was considered to be more practical (Capel and Blair, 2007). Previous studies have tended to suggest that university input is washed out by the school experience during a beginning teachers training (Velija et al., 2008; Zeichner, 1985), however the school and university were placed with a joint percentage of citations of where knowledge was sourced. Moreover, the case-study participants cited the university over the school, as they felt school provided limited opportunity to offer feedback and guidance. Amy also felt the knowledge she acquired at the university was different from that which she had obtained from school and her own beliefs; this created a tension in making sense of what knowledge was perceived as 'correct'. Throughout her interview Amy often checked if she was doing things right, drawing upon her own beliefs about PE, conversations with her class teacher, pre-determined planning and reflections from university lectures. A response such as this reflects what Moore (2004) describes as a difficulty in 'positioning', where varying discourses and ideologies can lead to a

'cacophony of calls' for that individual. Ben particularly valued reflection and was striving to be the 'expert', learning from other 'experts'. Ben viewed that being expert came from research and the university environment, however experience and practice could also constitute to the formation of an expert teacher in primary PE. The Professional Knowledge Model has proffered what an aspirational knowledge-base of an expert teacher might look like for primary PE, recognising knowledge from the theory, practice and context domains.

The participants' emphasis on reflection and choice suggests that formal structures in society and the influences of policy in education can be subject to layers of reworking, where teachers can, if they chose resist educational change or official knowledge (Apple 2000, Scott 2008). However, not all beginning teachers may feel confident making such decisions in PE and may get caught between their previously held beliefs and their new ways of knowing (Mezirow and Associates 1990, Mezirow 2000). In relation to this tension, Moore (2004) explains that there is often a 'pragmatic turn', where a professional suspends their beliefs in light of wider trends in order to connect to current classroom practice and a 'reflexive turn,' which is more concerned with developing critical pedagogies and deeper understanding. Amy was trying to avoid resorting to personal interests and prior experiences and used her action plan (see Figure 5.5 in chapter five) to draw upon her university-based sessions to develop more inclusive practice (appendix p.255-256). The constructs elicited from the participants present a complex picture for primary PE ITE. Whilst there was evidence in this study that both pragmatic and reflexive turns existed, these turns were juxtaposed against each other. During the interview, participants frequently asked questions of 'how do I respond' and 'is that ok', as they found themselves trapped between the reflexive and pragmatic (Moore, 2004). The Model provided a starting point for Amy, Ben, Charles and Daisy to reflect upon their knowledge from a normative starting point. This allowed them to see where gaps emerged in their understanding. From a perspective of Critical Theory, the process of communicative action between myself and the participant helped the beginning teacher see where knowledge could be validated, or where it had been freely accepted without question (Brookfield, 2000).

The interview data presented a number of barriers to knowledge development. Firstly, participants experienced knowledge in school that was different to the university and it was often the school that determined what was taught (Amy, Ben and Charles).

Secondly, all four beginning teachers mentioned that class teachers and mentors reported low levels of confidence in PE (Coulter and Woods, 2012; DeCorby et al., 2005; Garrett and Wrench, 2007; Harris et al., 2012; Morgan and Hansen, 2007; Morgan and Bourke, 2008), leading to minimal opportunities for discussion, feedback or observation of practice. The immediate challenge for ITE arising from these findings is the consideration of how professional knowledge is developed and applied consistently across school and university partnerships. Although experiences were available for developing knowledge of primary PE they were at best not joined up, and at worst contradictory. Habermas (1984) explains that it is productive knowledge that steers social processes. If contradictions or difference arise between the knowledge learnt from the university and the school, Habermas' (1984) indicates that it will be the productive knowledge (i.e. school-based knowledge) that will be most powerful and therefore perpetuating. For transformation to occur, it is important that beginning teachers feel able to critique and challenge practice in order to make changes that they feel are necessary. However, creating capacity for this to happen in ITE will be challenging (Sparkes, 1987) as it will rely upon a shared understanding across partnership and confident beginning teachers with a secure knowledge-base (Haydn-Davies et al., 2010a). If transformation is considered to be an important outcome of a beginning teacher's development, ITE must strive to move beyond preparing reflective practitioners (Mezirow, 2000), but critical thinkers who have the confidence and skill to validate their own knowledge.

Knowledge Context

Knowledge Context refers to where the beginning teachers developed their understanding of PE. Throughout a university course a beginning teacher may receive as little as five hours of input for primary PE (Caldecott et al., 2006; Carney and Armstrong, 1996), with an expectation that they will access other knowledge sources to supplement their understanding. This time allocation appears largely unchanged from the providers represented in this sample. Survey responses indicated that despite a minimal contact time, the university was still a key source of knowledge for the participants. Furthermore, only a few participants were using other sources of knowledge beyond the school and university contexts to develop their knowledge.

Despite prior experiences being viewed in the literature as a main determinant of teachers' confidence and knowledge in primary PE (Elliot et al., 2013; Garrett and Wrench, 2008; Pickup, 2012a) this only accounted for 11% of the overall number of citations across the survey. Amy, Ben and Charles commented that although their prior experiences may have given them confidence to teach PE, it did not provide them with knowledge competence. Ben expressed that his previous role of coaching was very different teaching, whereas Amy felt her prior experiences had led to her think PE was about sport and competition. The data from this research suggests that prior experiences remained influential mainly in the Content Knowledge domain, but a greater influence emerged from more recent experiences on their ITE programme (the school and university. The repertory grid interviews constructed personal interests in a similar way to prior experiences, however a distinction was made that prior experiences were historical, whereas personal interests may be of current or future influence. The ITE programme therefore becomes a hugely important factor for developing beginning teacher's knowledge in primary PE), thus challenging a widely held view that professional socialisation (Lawson, 1986) is generally considered to be the weakest form of socialisation experienced by teachers (Hastie et al., 2005) and can influence a beginning teachers' understanding of the subject. This research also showed that the ITE phase can start to challenge previously held beliefs, provide new forms of knowledge and increase confidence. The case-study interviews suggested that learning was not about a location or object, but whether the context for developing knowledge was 'theoretical' or 'practical', 'experienced' or 'abstract'. Daisy believed that it was up to her as the beginning teacher to make the connections between how something she was taught or read or wrote and her teaching in practice. Module assignments and academic literature were examples of this, as she was able to discuss these sources hypothetically. Amy also said she had learnt a lot from placing primary PE within the inclusive context as this had given her knowledge of young learners and movement skills; however this remained theoretical until she was able to apply this learning in practice.

Knowledge Application

The theme of Knowledge Application relates to the type of opportunities experienced by the participants. Participants elicited constructs that considered this to be about 'learning by doing', 'learning passively', 'making mistakes' and 'copying practice'.

Constructs were not viewed as negative or positive, but a range of experiences were needed for professional learning to occur.

Overall, the survey sample presented a varied but mainly high confidence level across the subject's professional knowledge-base. This was in contrast to recent reports from Ofsted (2009; 2009b; 2013) and comments from the interviewed participants that suggest in-service primary educators have low subject knowledge and confidence. An emerging question from this research asks what is happening between ITE, when confidence is perceived to be high and post-qualification where confidence appears to decrease. Overall 'no opportunity' was the fourth most selected option for questions about where knowledge was sourced. This high number of citations was not expected and if prolonged, could indicate the root cause for low confidence over time. In England (Adams, 2015; Blair and Capel, 2011h; Griggs, 2010; 2012b) and in other countries (Petrie, 2011; Whipp et al., 2011), there is a growing trend to use a wider-workforce to deliver PE in primary schools. Adams (2015) argues that whilst beginning teachers are confident and willing to teach PE in her institution, they have become de-skilled by not being given the opportunity to apply their learning due to specialist teachers, sports coaches and external agencies in charge of the subject's delivery. Whilst the survey data from this study cannot be generalisable to an entire population, it appears sympathetic with this issue (Adams, 2015; Blair and Capel, 2011h; Griggs, 2007; 2010; 2012b). The data from the online survey identified that 23% of the participants' knowledge-base was derived from the school setting, despite all participants having completed a minimum of 120 days in school. Furthermore, only 2% came from NGBs and the wider-workforce. Despite an increased presence of sports coaches in schools, only a small number of beginning teachers seemed to be benefiting from them. Q33 (I am able to work with external agencies and community partners), was the second lowest area of confidence from the sample, indicating that there was limited opportunity to engage with these organisations, but not necessarily suggesting they devalued any potential contribution that they could have. Case-study interviews also echoed this issue, with teachers expressing a limited confidence to teach PE due to a number of outsourced providers delivering lessons. The impact of the PE and School Sport Premium over the last three years has contributed to further outsourcing of PE in primary schools (Callanan et al., 2015); however the impact of this funding on teachers confidence and competence to teach PE has yet to be researched (Todd 2015).

The data for the survey indicated that when 'no opportunity' existed, professional knowledge confidence decreased. Anomalies were present, however this was typically in areas where participants may have accessed knowledge from a broader context of their training, or from other subject areas e.g. in Q6 (where targets were linked to the teachers' professional standards). Although it is not possible to state if the sample of 175 beginning teachers from this research will lose confidence to teach PE post qualification, further research would be needed to track them beyond the ITE phase.

The individual and varied nature of confidence across the sample has presented challenges for ITE. The first is around what knowledge should be prioritised at the ITE phase and within the time available. The Professional Knowledge Model was developed to address these issues, by considering the knowledge required for beginning teachers at the 'Emerging Stage'. For example, if a provider only has nine hours available on a university-based programme for PE, what knowledge should be considered as essential? I have proposed that emerging knowledge consists of areas such as fundamental skill learning, observing practice, a reflection on prior experiences and planning to ensure the knowledge of movement and the child precedes knowledge of the activity (appendix 1). However, further consideration as to how knowledge competence would be met across ITE would still be required, as the Model does not distinguish variation across programme routes. The survey data recognised that the university was a highly cited source of knowledge for the domains of Reflective and Academic Engagement and Content Knowledge, whereas the school was dominant for areas of Subject Pedagogy and Developing Practice in Context. Undisputedly, the knowledge of learning in context is essential for developing a teacher's understanding (Coulter and Woods, 2012). If the initial preparation of teachers becomes more school-led, consideration of how *all* knowledge will be developed may be required. Through existing partnerships, schools could continue to work with universities to maintain a vibrant reflective and research driven environment, that also offers support in broader areas of content knowledge and pedagogy if required.

The question of who teaches PE may also influence what is taught and applied at the ITE phase. Across the survey and interviews, swimming was the area which received consistently the lowest level of confidence. As a statutory activity of the NC, it is arguably an area teachers *must* have knowledge about. The omission of swimming from ITE might impact upon a teacher's overall understanding of a child's progression through

the subject. With 1,300 (6%) of primary schools still not offering swimming to their pupils (ASA, 2015), the use of classroom teachers trained to deliver swimming, either independently or alongside class teachers may provide a solution to the problem. The ASA (2013) further state that where schools were achieving high attainment rates amongst their pupils, this was attributed to better pupil-to-teacher ratios, longer lesson times and a higher number of lessons offered. If swimming remains an outsourced activity area of the curriculum, taught and assessed by swimming teachers alone, then low confidence will have little implication for ITE. This would also cause a displacement of activity areas on the Professional Knowledge Model, as swimming would be considered more 'specialist' than dance, games, gymnastics, athletics and OAA (Wallis and Binney, 2011).

Chapter Summary

Regardless of the complexities of primary PE ITE, the process of becoming a teacher relates to developing a broad professional knowledge-base (Cochran-Smith and Lytle, 2001; Darling-Hammond and Bransford, 2005). This chapter has discussed the individual nature of knowledge confidence and how it has been sourced by beginning teachers at the end of their ITE programme. Participants constructed knowledge through the following four themes: Knowledge Perspectives, Knowledge Validation, Knowledge Context and Knowledge Application. Within these themes, they recognised that constructs were neither negative nor positive, but different. Implications for the future of ITE have also been raised, particularly if provision is moved out of the university and more into school-based contexts, there is an opportunity for the profession to discuss how a breadth of knowledge will be addressed in the future. The school-led agenda may help to address the historical issues of limited time allocation to primary PE on programmes of ITE (Blair and Capel, 2011h; Griggs, 2009; Harris et al., 2011; Morgan and Bourke, 2008). However the knowledge from school-based settings is considered different from that of the university, suggesting a form of partnership may still be required. Finally, beginning teachers who took part in the interviews indicated that knowledge validity came from academic and the educational systems they worked in. Despite some knowledge being imposed, there perceived there was a perception of choice within these systems; although few opportunities were presented to them for engagement in communicative action about knowledge in PE.

CHAPTER EIGHT

Towards Utopia

Introduction

This research has examined the development of professional knowledge in primary PE at the end of the ITE phase and sought to answer the following questions:

- What breadth of professional knowledge do beginning teachers have?

- What professional knowledge of primary PE do beginning teachers have most/least confidence in?

- Where do beginning teachers source their professional knowledge of primary PE?

- What beliefs do beginning teachers have about their professional knowledge development?

Throughout this study, Critical Theory has played an important role in identifying key theoretical concepts, principles underpinning the research and decisions about data collection. Habermas' perspectives on ideology have provided a staged approach in which to examine the current situation for primary PE ITE (Habermas, 1989; Palmer, 2001) and enabled me to explore the development of professional knowledge from the perspective of the beginning teacher and the systems that they are influenced by.

> When action takes place, the historical context changes and we must critique our assumptions again. Critical Theory is a continuous process. Its goal is Utopia and its reality is that although Utopia may not be possible, our struggle to achieve it will at least create something better than our current existence.(Kilgore, 1998: page unknown)

In this concluding chapter, I aim to address the research questions and make recommendations for the development of professional knowledge and confidence in primary ITE. Finally I will address the limitations of the study, what I have learned from the research process and consider future research.

What breadth of professional knowledge do beginning teachers have?

A significant amount of literature over the last decade suggests that both experienced and beginning teachers lack sufficient knowledge of primary PE, with a widely held perception that it is a difficult subject to teach (Blair and Capel, 2011a; Fletcher et al., 2013; Garrett and Wrench, 2007; Harris et al., 2011; Morgan and Bourke, 2008). Professional knowledge remains a contemporary and political issue, with recent reports

stating that subject knowledge is a key factor in determining teacher effectiveness (Ofsted, 2009b; 2013).

This study revealed that variations of confidence occurred across the four professional knowledge domains and while students were often confident, this did not indicate that they felt competent. Subject Pedagogy produced the highest modes of confidence, Content Knowledge the most distributed, Developing Practice in Context the most polar and Reflective and Academic Engagement produced the widest ranging. The findings from both the survey and interviews indicated that beginning teachers were not always developing their professional knowledge in a progressive way across the domains, as areas of 'secure' and 'aspirational' knowledge were understood ahead of more 'emerging' forms of knowing. For those who had perceived high knowledge confidence, opportunities to develop knowledge in school-based contexts were limited as this placed them as more knowledgeable than their less confident school-based mentors. In these situations, the university became a crucial source of knowledge in which to develop higher levels of confidence.

Despite the interviewed sample of beginning teachers indicating high levels of confidence across the professional knowledge domains, only one identified themselves as having 'specialist' knowledge of the subject. This has suggested that having high perceived confidence alone does not claim an individual to be a specialist in the subject; however, knowledge could be used as a distinguishable indicator. The term is also contended in the literature as different opinions are offered about what it means to be a specialist primary physical educator (Petrie, 2011; Sloan, 2010; Whipp et al., 2011). The DfE identify this person to be someone who has been on a specific government-funded ITE programme (DfE, 2015b), but it is not clear what knowledge they have or will gain. A recent report by Callanan, Fry et al claim that there has been a 50% increase in specialist PE teachers in primary schools since the introduction of the PE and Sport Premium, but the report also stated that the term 'specialist teacher' could not be precisely defined (2015: 13). This thesis has highlighted that further clarification is required about who a specialist is in primary PE and what professional knowledge they require. Although it is acknowledged that a wider-workforce other than teachers now contributes to the delivery of primary PE, I have argued that the knowledge required remains the same. The development and use of the Professional Knowledge Model has enabled me to proffer a definition of a subject specialist on the basis that having a specific knowledge-

base is part of being a teaching professional (HEA, 2006; Hegarty, 2000b; Hoyle and John, 1995; Shulman, 1987; Turner-Bisset, 1999). It should be noted this definition (Figure 8.1) does not consider the wider professional role, qualifications or personal characteristics that may also be deemed necessary in claiming this status.

> *The subject specialist in primary physical education has 'aspirational' levels of professional knowledge and high levels of confidence to teach the subject. They recognise that their development is ongoing across four areas of professional knowledge of subject pedagogy, reflective and academic engagement, content knowledge and knowledge of practice in context. They dedicate proportionally higher amounts of time to physical education to advance their knowledge base, ensure their understanding is current and reflects the needs of their learners. They actively promote physical education and lifelong physical activity to a wide audience, both in and beyond their own settings.*

Figure 8.1: Defining a subject specialist primary physical educator based upon the Professional Knowledge Model

At the conclusion of their ITE programmes, the case-study participants identified knowledge from the Professional Knowledge Model that they required future development in. This varied from knowledge of being a subject leader at an aspirational stage, to more emerging forms of knowing (i.e. knowledge of activity areas, inclusive practice and planning across key stages) (appendix 19, 21, 23 and 25). The domain of Reflective and Academic Engagement was also viewed as important in progressing towards a specialist knowledge-base, such as obtaining a higher degree qualification. This research has concluded that for the beginning teachers in this study the progression and breadth of knowledge was a personal and individual process, indicating a complexity in addressing what understanding is required at the ITE phase and beyond (Ni Chróinín and Coulter, 2012).

What Professional Knowledge do Beginning Teachers have Most/Least Confidence in?

This research drew upon the Professional Knowledge Model to investigate the confidence of final year beginning teachers across arrange of knowledge areas. The survey indicated that overall confidence was high across the knowledge-base, however individual responses varied greatly. The case-study interviews reinforced this further, highlighting that although confidence was high amongst the four participants, the areas that they were confident in varied, as did the reasons offered for their confidence. This study reflects Adam's (2015) findings, that beginning teachers perceived themselves to

be confident and willing to engage in PE, but that over the course of their ITE programme it was not confidence, but 'other factors' that prevented them from further engagement and development in the subject. It is likely that the participants in this research were motivated towards PE, due to their willingness to take part in the study. Therefore responses may not represent those individuals who were more typically unconfident. The data from this thesis has denoted that the more beginning teachers from this sample engaged with knowledge sources, the more confidence existed.

The online survey and interview data presented a varied response in regard to what was deemed most and least confident knowledge areas. This presents a central issue for teacher educators. With a limited number of hours and varying levels of confidence across the knowledge-base, what should be covered, how it should be accessed and by whom requires consideration. The findings from this research have indicated that it was aspects of content knowledge that appeared most problematic. Not only did it cover the greatest amount of knowledge across the four domains, it could not be applied generically to others areas of teacher learning. The highest confidence responses from the survey included using feedback to develop future practice and planning; suggesting that when participants were likely to develop knowledge from elsewhere (i.e. Maths or English teaching), confidence also increased. The survey was unable to determine whether participant responses were based upon actual experiences in a primary PE context, or a general ability. An assumption that certain areas of knowledge might be developed more generically could have been made by participants.

The knowledge area relating to working with external agencies was an area from Developing Practice in Context that also depicted low confidence. With increasing numbers of outside agencies working in curricular and extra-curricular settings (Callanan et al., 2015), beginning teachers will need to be knowledgeable about the professional context in which they will be working and who they will be working with. With the Primary PE and School Sport Premium set to continue beyond 2016 and an expectation that some of this funding is used to support teachers' professional learning by working with outsourced colleagues (DfE, 2013a; DfE and EfA, 2014; Ofsted, 2014), this area of knowledge also has financial accountability at both local and national level. Furthermore, if teachers do not have a clear understanding of the distinction between coaching and teaching, there is a danger that primary PE will become an outsourced subject of the curriculum through a perpetuating discourse of sport, competition and

physical activity. Whilst coaches may have good knowledge of specific activities and may be highly motivated to lead physical activity and sport, I have argued in this thesis that the knowledge required to teach primary PE goes beyond just knowledge of an activity. The Professional Knowledge Model also indicates that anyone teaching primary PE should have knowledge of the chid, movement skill development, pedagogy, the curriculum, the broader aims of PE, observing and assessing children moving to ensure learning needs of the child is met ahead of the needs of the activity.

Findings from this research offer that knowledge during the ITE phase should have a sharp focus on 'emerging' content knowledge to help increase confidence and reflect current national priorities.

Where do beginning teachers source their professional knowledge of primary PE?

A key aim of this research was to locate sources of professional knowledge in primary PE, to better understand how a breadth of knowledge can be developed. The findings show that despite only a small amount of time allocated on ITE programmes (0 - 15hours) (Blair and Capel, 2011a; Caldecott et al., 2006; Elliot et al., 2013), the university was considered as influential in the development of knowledge as 120-160 days spent in school. This suggests that beginning teachers not only found their university-based input valuable, but school-based experience for PE was minimal. The findings from the interviews also indicated that although the school offered opportunities to teach, this had limited contribution to the development of professional knowledge. This was particularly visible when class teachers were considered to be less confident than the beginning teacher they were supporting. The survey data showed that the university was mostly influential in areas relating to Content Knowledge and Reflective and Academic Engagement and the school in areas relating to Developing Practice in Context and Subject Pedagogy. Furthermore survey and interview respondents' prior experiences were also deemed to be a key factor in developing confidence, with prior experiences considered to be broader than just their own experiences of school PE (Elliot et al., 2013; Garrett and Wrench, 2008; Sidwell and Walls, 2014). For each case, personal interests relating to sport, physical activity and health had shaped an understanding of what PE was, but it was the ITE programme that was now more of an influence in their development of the subject (Ni Chróinín and Coulter, 2012). The findings further indicated that it was not the number of sources that influenced

confidence, but whether any opportunity had been sourced at all. For many knowledge areas, respondents claimed to have had 'no opportunity' to develop professional knowledge with the highest number of citations appearing in Content Knowledge and Developing Practice in Context. In order for teachers to meet at least a 'good' standard of teaching in primary PE (Ofsted, 2013), it is imperative that access to information is sourced in order to develop a breath of professional knowledge (Shulman, 1987; 1998). Specifically, the opportunity to develop content knowledge (DfE, 2015a) and apply that learning in practice is believed to be central to the practice of becoming a teacher (AfPE, 2015b; Phillips and Faucette, 2013).

What beliefs do beginning teachers have about their professional knowledge development?

Kelly's (1955) fundamental postulate states that a person's processes are psychologically channelized by the ways in which he or she anticipates events (Fransella, 2005). It has been recognised that many beliefs about PE have emerged from individual experiences and prior experiences related to the subject (Garrett and Wrench, 2007; Pickup, 2006; Sidwell and Walls, 2014). ITE must therefore help the beginning teacher to build upon, challenge or create new theories of knowledge. Four themes emerged from the research that recognised beliefs about knowledge from the point of validation, context, perspectives and application. The interviewed participants did not view these categories as negative or positive, but different in helping shape their understanding of the subject. Each participant illuminated in some way how each of the themes had featured in their experience of ITE and how this had helped their beliefs about the subject. The findings from this thesis continue to support the importance of active partnership between the school and university (Feiman-Nemser, 2001; Haydn-Davies et al., 2010a), suggesting that neither can be removed from the process of knowledge development as they contribute to different aspects of knowledge. When comparing each of the knowledge sources, participants developed constructs that were not about location, but how each source was represented; therefore ITE should be considered more through knowledge constructs and what they offer (i.e. theory/ practice), not where they are situated. If current government policy continues to place ITE more within a school-based context, this may have notable implications for beginning teachers' future development of professional knowledge, particularly if these institutions are continued to be viewed as a place. Furthermore, the individual

(beginning teacher) and not the programme route, would appear to be a crucial factor in decision making about future needs, due to the complexity and personalised nature of professional knowledge development.

The following section of this chapter will deal with recommendations that have arisen from these findings and identify the limitations of the research.

Recommendations

The findings from this research have led me to make a number of recommendations for primary PE ITE. These recommendations are based upon beginning teachers developing a breadth of professional knowledge and improving their confidence to teach the subject. Through the presentation of the Professional Knowledge Model, I have attempted to put forward key considerations for how knowledge competence might be achieved. Firstly, despite political and cultural discourses (Penney, 2008) the knowledge-base for primary PE must go beyond just an understanding of dominant discourses of content knowledge (sport and activity), to include pedagogy, context and reflective and academic engagement. Secondly, anyone involved in the teaching of primary PE must be committed to continuous development across professional knowledge areas and finally, regardless of the route into teaching, ITE providers have a responsibility to ensure beginning teachers have access to a breadth of professional knowledge, not just knowledge that is more readily sourced from singular, narrow or locational contexts.

Recommendation 1: Beginning teachers should develop competence in primary PE to at least a secure level of professional knowledge.

The first recommendation is for programmes of ITE to ensure that beginning teachers are aware and actively working towards a secure professional knowledge-base for PE. Throughout this study determining exactly what knowledge is required to be competent in teaching primary PE has been a challenge. Various models exist in the literature to organise teachers' professional knowledge (Darling-Hammond, 2006a; Hegarty, 2000a; Shulman, 1987; Turner-Bisset, 1999), but none have attempted to relate this specially to a primary PE context (Green, 2008; Tsangaridou, 2012b). The findings for this research have suggested that the development of teacher knowledge is complex and on-going. Practitioners must therefore ask questions about the breadth and depth of their knowledge-base, the processes by which their professional learning needs are identified

and the way in which they access professional learning. The data gathered from the survey and interviews have indicated that the beginning teachers were often developing knowledge beyond the relative stage of their development, which later created gaps in their understanding.

The Professional Knowledge Model was developed in order to provide beginning teachers and teacher educators with a normative starting point for discussion about professional knowledge. Each knowledge domain on the Model is regarded as having equal importance and considers the order and progression of knowledge through developmental stages. If primary educators wish to truly understand PE in the primary curriculum and become competent teachers with a breadth of knowledge, then knowledge should be developed across the four professional knowledge domains.

As a recommendation for practice, the Model could be used in the following ways to engage encourage a process of critical reflection:

- Provide an overview of professional knowledge for preparing beginning teachers in primary PE;

- Help beginning teachers identify their current stage of learning;

- Identify areas of strength and areas in need of further professional development;

- Form a curricular outline for ITE;

- Offer a process for institutions to review professional programmes, ensuring a breadth of knowledge and opportunities are available for their learners.

For colleagues working within ITE programmes the Model could also be used to ask the following questions:

- Do professional programmes provide opportunities for development across all four knowledge areas?

- (if applicable) Does a subject specialism route move students towards an aspirational level of professional knowledge?

- What strengths of the programme could be shared with other providers, or disseminated through local partnerships?

- What aspects of the programme require further development?

The need for opportunities that encourage beginning teacher's reflection on personal experiences and practice in PE during primary ITE has been previously documented (Curtner-Smith, 1998; Curtner-Smith, 2001; Pickup, 2012a) yet this still seems to be lacking within ITE practices. With the recently published White Paper *Educational, Excellence, Everywhere* (DfE, 2016)*,* which continues to place ITE more in a school-led context, there is an opportunity to create dialogue amongst the profession about the nature of knowing in primary PE and how knowledge is developed. Despite the range of routes to become a teacher, the knowledge-base for the subject arguably should be the same. The findings from this research would also support a core content curriculum for ITE (DfE, 2015a), to ensure appropriate and essential knowledge is developed ahead of a teacher obtaining accreditation.

Recommendation 2: Responsibility for knowledge development in primary PE is explicitly identified through professional partnerships

A second recommendation from this research is to embed a variety of knowledge sources into programmes of ITE ensuring the university and school-based experiences remain central partners within programmes. In particular, ITE programmes should avoid making assumptions about where beginning teachers' source their knowledge from based upon the traditional and historical concepts of partnership (Campbell et al., 2007; Haydn-Davies et al., 2010a). In this research, participants drew upon very few knowledge sources in which to develop their knowledge, with many stating that there were 'no opportunities' provided at all. It was not the intention of this research to state how the sources of knowledge should be used, as the value and contribution of each source requires further examination, but it is recommended that beginning teachers are exposed to opportunities to enable existing beliefs and assumptions to be challenged (Hastie et al., 2005). It has been identified in this research, that when teachers are not provided with opportunities to develop knowledge, confidence will decrease or practice will often resort to prior experiences. This can often result in negative experiences for pupils (Garrett and Wrench, 2007; Keay, 2006a). Findings from this research have also indicated that the school and university were the most dominant sources of knowledge in the beginning teacher's development, with the university in particular developing knowledge around content knowledge and reflective and academic engagement, and the school, knowledge of pedagogy and practice in context. To further support recommendations from Pickup (2012a), subject development cannot take place solely in

the university or school setting, but should be informed by theoretical deliberation and practical application.

The recent Carter Review (DfE, 2015a) raised a number of concerns with the content of ITE. Clear recommendations have been made from this review to include subject knowledge, subject-specific pedagogy, evidenced-based teaching, assessment, child development, pupil behaviour management and specific additional needs for a future framework for ITE. Evidence-based teaching was also shared by the participants in this study. The move to locate ITE in schools rather than HE (DfE, 2010; 2011) could threaten the role of research to inform practice (Orchard and Foreman, 2011). If beginning teachers are to be encouraged to engage in evidence-based teaching, then providers of ITE will need to have a clear understanding of what is required: are teachers expected to be active researchers, be informed by research or be taught by those who have researched? The university is the home of research (Habermas, 1987) and here it interplays with the preparation of students for academic careers, participation in general education, cultural self-understanding and public opinion formation. All of which are essential components of ITE.

> The university learning processes do not simply stand in an inner connection to the reproductive functions of the lifeworld…Going beyond the acquisition of expert knowledge, they [the university] contribute to *intellectual enlightenment* by offering informed interpretations and diagnoses of contemporary events, and by taking concrete political stands (Habermas, 1987:175).

The university is viewed by Habermas (1987) as place where freedom of research is fostered. However, these values do not necessarily need to be seen as a location. In meeting Carter's future priorities for ITE, encouraging more evidenced-informed teaching (DfE, 2015a), alongside the government's intention for school-based preparation (DfE, 2010; 2011), the role of research in ITE will need to be more clearly defined. A diminished place of the university in preparing teachers may create a gap in the development of knowledge-based practice. The transformation of knowledge production belongs at the core of academic life and is the central role of the university (Branco Sousa, 2011). The implication of moving to more school-based training will require further examination to see if new pedagogies and practice in primary education continue to be shared and critiqued and for professional knowledge to be developed.

Recommendation 3: ITE programmes to focus on the beginning teacher as a transformative learner

Mezirow (2000) contests that in order for an adult to truly transform their learning then taken-for-granted references must be critically reflected upon. Previously held beliefs about PE are believed to be influential in a beginning teacher's future professional practice (Capel and Blair, 2007; Curtner-Smith, 2001; Lawson, 1986; Pearson, 2011; Pickup, 2012a; Sidwell and Walls, 2014; Zeichner, 1985). This was evident in the four case-study interviews where personal interests characterised the nature of discussions. Participants' beliefs were focused around the validation, context, perspectives and application of knowledge. These beliefs were central to their framing of the ITE experience and became points of reference throughout their interview. To develop autonomous adult learners, teacher educators must embed pedagogy that supports the beginning teacher in a process of communicative action (Habermas, 1984), where they are able to reflect on practice and validate their professional knowledge. Participants in this research found the method of communicative action during their interviews a useful process where they could co-construct action plans for their future professional learning; however this was rarely experienced during their ITE programme due to the lack of confidence exhibited by teacher colleagues in school (Morgan and Bourke, 2008).

Considering the limited amount of time for primary PE in ITE (Blair and Capel, 2011a; Elliot et al., 2013; Harris et al., 2011; Morgan and Hansen, 2007; Petrie, 2008; Petrie and lisahunter, 2011), an hour dedicated to talking to each individual beginning teacher would be highly time consuming. However, adapted approaches could be used that follow the same principles of the methods adopted from this research. This might involve a simple process of communicating peer-peer, beginning teacher-experienced mentor or beginning teacher-academic tutor abut professional knowledge and practice. The Professional Knowledge Audit and Action Plan have been developed from his research (appendix 14) and could be used to support reflection and communicative dialogue.

Limitations of the Study and Future Research

Although this study presented a detailed analysis of confidence and sources of professional knowledge across the sample, a number of limitations can be identified. These limitations serve as reference for future research design. The research used simple descriptive claims to achieve interpretive validity (Arthur et al., 2012). However,

the online survey yielded a large data harvest, where further analysis and the use of inferential statistics could be used to present the research phenomenon from alternative perspectives. Further research might consider the relationship between the knowledge areas and the knowledge sources at various career stages and at different perceived confidence levels.

The first limitation is in regard to the context, sample and scope of the research. Whilst maintaining an ethical approach to obtaining data and not wishing to encroach on beginning teachers' time, the responses I received typically represented participants who were motivated to take part and from university-based providers. This was also reflected in the case-study interviews where participants expressed a specific interest towards the subject. Generalisations therefore, cannot be made across the wider demographic of beginning teachers, their individual contexts and varying programme experiences. In future research, I would review the online survey to incorporate a questions that refers to Pickup's (2012a) typology, so the range of confidence levels can be ascertained across the sample. I would also aim to minimise the non-response rate by continuing to build upon the relationships with partnering ITE institutions to better understand the context in which they are working and the nature of their programme. I believe the survey could be used to capture confidence levels across other cohorts of beginning teachers to present a more complete picture of primary PE within ITE. The length of the survey could also be reduced, by considering how to capture the essence of each professional knowledge domain, but from fewer survey statements aiming to reduce non-response rate (Denscombe, 2009; Roberts and Allen, 2015). Questions would also need to include definitions for key subject-specific references to ensure the researcher and participant had a common understanding of what the question was addressing and answers were given based on PE specifically, not a general or hypothetical standpoint. Shulman's (1987) categories of teacher knowledge consider PCK as a type of knowledge that is unique to teachers, based on the manner in which teachers relate their pedagogical knowledge (what they know about teaching) and to subject matter knowledge (what they know about what they teach). As new teachers to primary PE, the ability to separate out these forms of knowing may have been challenging - a consideration I had not made during the initial design of the survey.

The development of the Professional Knowledge Model throughout this research has led to proposed changes in design for the online survey. Findings from the case-study

interviews highlighted a high number of beginning teachers engaged with aspirational levels of professional knowledge that was not expected. In the initial development of the survey tool, many of the aspirational areas were excluded to reflect the beginning teachers' stage of learning. A revised survey should incorporate the full breadth of professional knowledge areas for more comprehensive and detailed evaluation of confidence. Further consideration will also need to be made in regards to where current knowledge is positioned on the model, for example the placement of swimming could be argued as aspirational in relation to other activity areas.

In undertaking research for this thesis, a number of future research directions have started to emerge. Firstly, the survey identified a large number of participants who perceived there to be 'no opportunity' to develop aspects of knowledge during their ITE programme. In order to understand why this response was given, it is necessary to identify the factors that have led to it. Furthermore, in the current political landscape where a shift to more school-led ITE provision is proposed, an increase in funding for Primary PE and School Sport and a wider work-force delivering the curriculum, the impact of this on beginning teachers' knowledge development is not yet known. Both survey participants and interviewed respondents identified the important role of the university in the development of their PE professional knowledge, particularly in the areas of Content Knowledge and Reflective and Academic Engagement. The further removal of the university in ITE will have implications for how schools address the areas of knowledge, which have been traditionally the responsibility of the HE sector. Although this research predominantly focused on university-based ITE programmes, and therefore offers a bias towards this route, a study adopting the methods outlined in this thesis could be used to examine the professional knowledge development of beginning teachers on school-based routes.

Contribution to Knowledge

From the outset of this research I have wanted to make a positive contribution to the professional community in which I work, through making sense of what professional knowledge is for ITE. As an outcome of this thesis, I believe my core contribution to knowledge has been through the development of the Professional Knowledge Model (see chapter three). More specifically, the process of developing this model has enabled me to:

- Organise a knowledge-base that has derived from professional reflection, discussion with colleagues in the sector and an engagement of the academic literature (chapter three and CD of supplementary material);

- Develop a tool that can support beginning teachers and in-service teachers to self-reflect and take ownership of their learning (chapter six and appended CD of supplementary material);

- For ITE programmes to plan and map modules/taught input, despite the varying routes that exist into teaching.

- An online survey design that can assess teachers' knowledge confidence in primary PE (chapter five).

In addition, I believe this study has made additional peripheral contributions to the subject by:

- Proffering a working definition of a specialist in primary PE through a knowledge lens (chapter eight);

- Adapting a method for interviewing using PCT that can be applied into primary PE ITE to uncover beliefs about professional knowledge development (chapter five);

- Suggesting that knowledge in primary PE is located more conceptually rather than as a location or object, thus contributing to future discussions about how and where the initial preparation of teachers in primary education should be (chapter seven).

Finally I have begun to challenge my own previously held perceptions that the problems confronting ITE are due to negative attitudes and low subject confidence (Coulter and Woods, 2012; DeCorby et al., 2005; Garrett and Wrench, 2007; Harris et al., 2012; Morgan and Hansen, 2007). I wish to contribute to a future body of knowledge that presents primary PE ITE positively and where beginning teachers are confident and willing to teach the subject (Adams, 2015).

My Personal Learning

When I started the EdD I was new to teacher education and to research. Having moved from a secondary PE context I was grappling with what knowledge was needed to be a competent teacher of primary PE and how best to prepare beginning teachers so they felt confident in their practice. Through the undertaking of this study I have developed a deeper understanding of primary PE within a changing landscape. I have been able articulate what a professional knowledge-base for primary PE might look like and developed a model that can be used as a tool to support the development of knowledge for tho-se I teach. Although the various routes into primary teaching are many, I have come to understand that the knowledge required for teaching remains the same.

As a result of this study I have been privileged to communicate with a network of passionate and committed teacher educators from a wide number of ITE providers. Discussions with each provider has deepened my understanding of ITE and highlighted the intricate balance that exists between ethical research and professional practice. In particular I have better come to understand the complexities of managing programmes of ITE, the unique way beginning teachers develop their professional knowledge and the challenges they face. I have started to share my research with colleagues in the field through the PE ESAG website, various conferences and publications (appended CD). I have also started to hear how the Professional Knowledge Model and audit tool have been used to support beginning and in-service teacher development beyond my own institution, which has motivated me to continue researching in this area. What appealed to me most about undertaking a professional doctorate was its focus on bringing about a change in professional practice, while deepening an understanding of theory and research; maintaining my professional identity as a senior lecturer and as a teacher (Gregory, 1997).

Chapter Summary

The aim of this research has been to identify sources of professional knowledge and confidence of beginning teachers in primary PE. The findings have indicated that beginning teachers exhibited a varied, but mainly high perceived level of confidence across the knowledge areas and sourced their knowledge from predominantly university and school-based settings. A proportion of beginning teachers still received no opportunity to source knowledge at all, or relied upon their prior experiences and

personal interests to make sense of the subject matter. From the case-study interviews, individual beliefs formed a central component of how beginning teachers constructed their understanding of knowledge and were organised as constructs about validation, context, application and perspectives, but ITE programmes were considered to have a changing impact on these beliefs. It has been an understanding of these belief systems that offered a way to transform previously held assumptions about primary PE and encourage greater critical reflection for future practice.

Three recommendations have arisen from this thesis as a contribution to transforming beginning teachers' learning in primary PE. The first is for all beginning teachers to develop a broad professional knowledge-base for primary PE to a secure level through a core curriculum for ITE; the second is for the responsibility of knowledge development to be explicitly identified through professional partnerships, maintaining the university as a key source of knowledge; finally, all ITE programmes should focus on the beginning teacher as a transformative learner, where they play a central role in validating their professional knowledge for the future. This thesis has offered that further research into the development of professional knowledge in primary PE is required to critically discuss the subject's professional knowledge-base, better understand what a subject specialist is in primary PE and the implication of school-led ITE on beginning teachers' professional knowledge confidence and competence.

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