Adopting a new model for Health-Based Physical Education: The impact of a professional development programme on teachers’ pedagogical practice

by

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A Doctoral Thesis
Submitted in partial fulfilment of the requirements for the award of

Doctor of Philosophy of Loughborough University

May 2019

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ABSTRACT

This study explored the use of a collaborative and sustained programme of continuing professional development (CPD) to support the adoption of a new pedagogical model within secondary school physical education. Specifically, the research examined the developmental journey of presenting a new conceptual Health-Based Physical Education (HBPE) pedagogical model to teachers and supporting them to implement it in practice. The aim of the research was to examine teachers’ experiences during the HBPE-CPD programme and the subsequent impact on their practice. Participants were nine physical educators from two secondary schools in England who worked with the programme for one year. The HBPE-CPD programme involved school-based meetings, reflective activities and on-going support during the model’s implementation. Participatory action research was employed as the methodology and the data gathering methods used included teacher reflections, interviews, lesson observations and field notes. Analysis followed an inductive, iterative process involving constant comparison between the different data sources to generate and subsequently code themes. The creation of sustained CPD programmes, with teachers and researchers working collaboratively, encouraged the adoption of the HBPE pedagogical model over time, although competing organisational pressures presented some challenges. Whilst the teachers demonstrated mixed success with their adoption of the HBPE model, there was a sustained shift away from a ‘fitness for performance’ philosophy with greater emphasis placed on explicitly promoting out-of-class physical activity for all students. These findings illustrate that collaborative and sustained CPD programmes involving external support can support teachers to adopt new ideas and change their practice over time. They also suggest the HBPE model has real promise, particularly in guiding teachers to promote healthy active lifestyles with their students. It is recommended that the model is further refined and new forms of CPD are developed to support teachers’ sustained adoption of pedagogical models, such as HBPE. However, a concerted effort needs to be made by all stakeholders in education to ensure that teachers have sufficient time allocated for CPD and are encouraged to engage in pedagogical change.
ACKNOWLEDGEMENTS

My sincere thanks and gratitude go to the following people:

All of the teachers and the students who agreed to participate in this study. I sincerely hope that engaging in this research has proved a positive learning experience for you all.

David – thank you for providing me with the opportunity to pursue a PhD in this area and for your invaluable guidance and support as my supervisor.

Leen – thank you for being the initial catalyst for this study and for your invaluable guidance early on.

Ash – a huge thanks for being here for me from the very start, as both a supervisor and a friend, and for your determination in ensuring that I would get to the end of the road! Your unwavering guidance and support over the past seven years are so much appreciated.

Lorraine – thank you so much for all of your guidance and support since coming on board as my supervisor. Your feedback has been invaluable!

Mark – thanks for being a fantastic critical friend, colleague and above all a really good mate! We began this journey together and your support over the years has been invaluable.

Niamh, Ellie & Rory (Team Sammon) – thank you for making me smile and proud to be your dad every day! Thanks also for all of your motivational messages 😊

‘Goosey’ & Grandad – thanks for all of your love and endless hours of on-going support for us as a family.

Ma & Da – thank you for all of your unconditional love and support throughout my life and for encouraging me to follow my dreams.

Kay - my soul mate and best friend! Thank you so much for just being you and for all of your love and support, not just during the course of this PhD study, but since the day we first met. I love you to the moon and back…
MATERIAL PUBLISHED AND PRESENTED


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CHAPTER 1: INTRODUCTION

The purpose of this chapter is to present a clear rationale for my study, explain the research focus, highlight the original contribution to the field and provide an overview of the structure and content of the thesis.

Rationale

Physical Education is recognised as a key site for promoting physical activity among young people (Dudley et al., 2011; Harris & Cale, 2018; McKenzie, 2007). Recently, Harris (2018) proposed that physical activity promotion through physical education is vitally important given growing concerns about children’s health. Moreover, she argues that curriculum physical education is the most effective and inclusive means of providing all children with the values, knowledge, understanding and skills for lifelong participation in physical activity (Harris, 2018). However, it is contended that the subject has been ultimately unsuccessful in its promotion of lifelong participation in physical activity (Armour et al., 2015; Haerens et al., 2016; McKenzie & Lounsbery, 2009; Trost, 2006).

When this lack of success is coupled with strong evidence of limited teacher engagement in specific continuing professional development for Health-Based Physical Education (HBPE-CPD) (Alfrey et al., 2012; Armour & Harris, 2013; Armour & Yelling, 2004; Castelli & Williams 2007; Kulinna et al. 2008), and scant opportunities for teachers to develop their practice in this area, it presents a compelling argument for further research. Certainly, the literature raises concerns that many physical educators remain poorly prepared to teach HBPE, with apparent gaps in subject knowledge and practice dominated by a narrow ‘fitness-for-sport-performance’ philosophy (Alfrey et al., 2012; Armour, 2010; Cale et al., 2014; Castelli & Williams, 2007; Harris, 2013; Harris & Leggett, 2013; McKenzie, 2007).

These highlighted practice concerns have led to Armour (2017) suggesting that the persistent research/theory–practice gap hinders the development of effective pedagogies and practices to support young people’s sustained engagement in physical activity. Given the widely reported and growing concerns over youth physical activity (Sallis et al., 2016; WHO, 2010; 2018) and the challenge of
translating research into practical strategies or policies to support physical activity participation (Souza, 2017), there is arguably a pressing need for researchers to work more closely with practitioners to improve physical activity outcomes for all young people. Furthermore, there have been independent calls from both Armour and Harris (2013) and Haerens et al. (2011) to help teachers develop new, effective ‘PE-for-health’ pedagogies and the development of an innovative pedagogical model for HBPE specifically designed for curriculum physical education respectively. Armour and Harris (2013) point out that whilst curriculum activities and interventions are well represented in the literature, pedagogies to support the adoption of active lifestyles are noticeably absent and subsequently are proposed as the next major area in physical education research.

Comparably, Haerens and colleagues advocate the development of a HBPE pedagogical model as part of a models-based approach to physical education to fundamentally reconceptualise the place of health within the subject. These authors furthermore argue that a new model for HBPE would be unique as, at this time, there was no other pedagogical model in physical education whose overarching goal was to help students develop positive physical activity behaviours. Drawing on the work of Siedentop (1996), Haerens et al. (2011) position the HBPE model as a means of highlighting that ‘valuing a physically active life’ is a sustainable long-term process.

Similar to Siedentop’s (1996) vision, a passion to encourage all children and young people to value and embrace an active lifestyle has always been central to my philosophy as a physical educator. This philosophy has underpinned my practice over the course of my professional career, formerly as a teacher of physical education in secondary schools (for nine years) and, more recently, as a physical education teacher educator (PETE) working with both pre-service and in-service teachers at a Higher Education Institution (for fourteen years). During my career, and in keeping with findings in the literature noted earlier, I have witnessed poor quality student learning experiences in the area of HBPE, which, I suggest, did little to motivate many of these students to adopt active lifestyles. Indeed, reflecting back on my own teaching of HBPE in secondary schools, referred to then as Health-Related Fitness (HRF) and Health-Related Exercise (HRE) respectively, my practice was often characterised by a focus on teaching
the components of fitness and training for sport performance, rather than explicitly on developing students’ knowledge and skills to support the promotion of active lifestyles. Furthermore, and reflecting on findings reported by Alfrey et al. (2012), I felt confident teaching health due to my strong background in fitness and sport. Consequently, I did not overtly recognise the need to significantly alter my HBPE practice. Whilst I viewed the promotion of healthy active lifestyles as highly important, I lacked a clear understanding of strategies to successfully support my students in this area. As there were undoubtedly gaps in my subject knowledge in terms of promoting active lifestyles, my experiences highlight limited initial teacher training and a subsequent lack of opportunity for HBPE-CPD in later years; at least any beyond the gaining of fitness industry qualifications.

Since moving in to higher education as a teacher educator, my own practice has progressed from this prior focus on fitness and training. For example, during this PhD process I have been fortunate to engage with both colleagues at my university and many other researchers from within the Physical Education and Sport Pedagogy (PESP) academic community. These individuals have helped to develop my thinking (and practice) both as an educator and as a researcher. In addition, the undergraduate and postgraduate pre-service teachers that I work (and have worked) with have also challenged my thinking and helped my practice to evolve. Moreover, prior to enrolling as a PhD student, I completed a Masters study which explored strategies to promote physical activity during physical education, and this experience motivated me to pursue further related research. Consequently, I was provided with the opportunity to develop a new conceptual framework for HBPE and to support teachers’ adoption of this new PE-for-Health pedagogy from theory to practice. From a personal perspective, my motivation for engaging in this research stems from an ambition to work with teachers on bridging the research-practice gap, so that all children and young people are inspired to habitually participate in physical activity for life.
Research Aims and Contribution

I argue that this research provides an original contribution to the field as it is the first study to focus on examining teachers' reported learning experiences during their early adoption of an innovative conceptual framework for HBPE. Furthermore, it presents unique insights into the complex and challenging process of supporting teachers to translate a new PE-for-Health pedagogy from a conceptual framework to their own classrooms. Moreover, this research explored the impact on teachers' practice beyond the initial implementation period. Thus, it is proposed that this study offers a potentially new way of stimulating the teaching of health in physical education, with teachers and researchers collaborating in an attempt to improve physical activity outcomes for their students.

At this point, I feel that it is important to position my research focus within the wider context and highlight, from the outset, that this study was part of a broader research programme, with a research colleague concurrently writing a thesis on the development stages of the HBPE pedagogical model. More specifically, this ‘other’ thesis is reporting on the major elements of the HBPE model, the types of curricula designed and the subsequent impact of these curricula on students’ physical activity. In keeping the two distinct parts of this larger research project separate, and acknowledging that we collectively gathered data and engaged with the same teachers over a period of one year, it is important to note that we undertook independent analyses of different sets of data and thereafter worked entirely independently on our respective theses.

Central to my inquiry has been a desire to help address the persistent research/theory–practice gap in education, and in particular the recognised lack of support for teachers to develop their pedagogy and practice in the area of HBPE. This study focused on presenting a new PE-for-Health pedagogy to teachers and supporting them to translate this pedagogy from theory to practice through a collaborative and sustained CPD programme. Specifically, the aim of the research was to examine teachers’ reported learning experiences and their views of impact on their practice over time. It is argued that if the goal of a CPD programme is teacher change, then it is vital that teacher learning is a central focus and teachers buy in to the pedagogical innovation (Darling-Hammond,
Examining the impact on teachers’ practice 12 months after their initial implementation of HBPE was deemed important as reviews of pedagogical models in physical education report limited evidence of their sustained use beyond the first implementation, or ‘honeymoon’ period (Goodyear & Casey, 2015; Harvey & Jarrett, 2014; Hastie et al., 2011). Consequently, in line with the specific focus of this study, and informed by the literature reviewed in the next chapter, the following research questions were asked:

1. What were teachers’ reported learning experiences during their engagement in a collaborative and sustained CPD programme for HBPE (HBPE-CPD)?
2. What were teachers’ views of impact on their practice and implications for their students over time?

**Structure of the Thesis**

Following this introductory chapter the thesis is presented in five further chapters. **Chapter 2: Review of Literature** initially examines the well documented physical activity crisis amongst children and young people and how both governments and global organisations are attempting to address this inactivity. This leads to a consideration of the advocated role for schools and physical education in supporting active lifestyles and some of the key recognised tensions and challenges. Next, a range of health programmes and physical activity interventions which have been implemented in school settings are reviewed to gain some insights of good practice. Following this, the issues surrounding HBPE practice and teachers’ lack of engagement with HBPE-CPD are discussed. Further, the traditional ‘training’ model commonly employed in education is examined and alternative approaches to CPD explored. Finally, there is a focus on the implementation of pedagogical models in physical education contexts. Drawing on the literature, I present a case for the creation of collaborative and sustained CPD programmes to support teachers in adopting a new PE-for-health pedagogy, namely a HBPE pedagogical model (Haerens et al., 2011).
Chapter 3: Methodology and Methods is divided into two parts:

Part A: Methodology considers the paradigm debate and provides insight into how my prior life history helped to shape my own assumptions and beliefs. Following an explanation and conceptualisation of action research, I examine the use of action research in education and critically discuss participatory action research (PAR) as my chosen methodology.

Part B: Methods focuses on the phased research design and the multiple data gathering tools that were employed to address my research questions. Further, I provide a detailed description of the research context and highlight the steps taken from the initial data gathering, through to the analysis process and the generation of themes. To conclude the chapter, I discuss how a number of ethical considerations such as informed consent, confidentiality, anonymity and trustworthiness were addressed throughout the study.

Chapter 4: Moving Towards HBPE-CPD as a Collaborative and Sustained Venture presents and discusses the findings specifically linked to Research Question One: What were teachers’ reported learning experiences during their engagement in a collaborative and sustained CPD programme for HBPE (HBPE-CPD)? The first section of the chapter explores Teachers’ Prior Experiences of Health-Related Learning in terms of their engagement with relevant professional development. Section Two considers how the induction phase, including the school-based professional learning meetings and the reflective activities facilitated ‘buy in’ to the HBPE model. Section Three explores Teachers’ Engagement with Practitioner Research, in particular their commitment during the induction period and when implementing the HBPE model. Section Four examines the key factors which supported teachers’ learning and their engagement throughout the professional learning programme. This included active learning, the continued external support and the strong collaborative working cultures at both schools. Finally, Section Five highlights the key challenges that the teachers experienced throughout the HBPE-CPD programme, especially in relation to the constraints of working in busy school environments.

Chapter 5: The Impact of Health-Based Pedagogical Change
The focus of this chapter is to present and critically discuss the findings in relation to Research Question Two: What were teachers’ views of impact on their practice
and implications for their students over time? Section One: Moving Towards a ‘Physical Activity for Life’ Philosophy examines whether there were any noticeable changes in teachers’ philosophies over the course of the HBPE-CPD programme. Section Two: Promoting Habitual Movers highlights both the positive impact on teachers’ practice, such as an increased focus on promoting physical activity out-of-class, the evidence of inclusive practice and teachers’ enthusiasm during their HBPE units. Furthermore, a tension around pursuing MVPA in lessons is considered. Section 3: Promoting Informed Movers explores how teachers developed their students’ knowledge and understanding of health-related learning, such as referring to the physical activity guidelines for children and young people and highlighting how and where to engage in physical activity. Section Four: Creating a Need Supportive Learning Environment considers the findings in relation to evidence of teachers employing autonomy supportive strategies and the reported impact on their students. Section Five: Promoting Critical Movers examines the extent to which the teachers discussed barriers to participation, strategies to overcome barriers and whether students were encouraged to promote physical activity in their family environments. Section Six: Transferring Health-Related Learning across the Curriculum explores any transfer of learning which occurred as a result of teachers’ engagement in the HBPE-CPD programme to other curriculum areas within physical education and Section Seven: Sustainability Beyond the Honeymoon discusses whether there were any sustained changes in the teachers’ practice beyond the initial point of implementation.

Chapter 6: Conclusion revisits my research focus and reinforces the original contribution of this study to the field. It provides a summary of the findings presented in Chapters Four and Five in relation to my research questions and considers some of the implications, such as the how best to support teachers engaged in pedagogical change in busy school environments. I reflect on the impact of engaging in this research process from a professional perspective, including the opportunities for growth and the challenges that I experienced. Further, some recognised strengths of the study and potential limitations are discussed. Finally, I propose a number of possible directions for future research to build on this work centred on two related areas: 1) HBPE-CPD and 2) The HBPE Model before concluding the chapter with some final thoughts.
CHAPTER 2: REVIEW OF LITERATURE

Introduction

This study was motivated by a desire to help address the persistent research/theory–practice gap in physical education, and in particular the recognised lack of support for teachers to develop their pedagogy and practice in the area of HBPE. Consequently, a key goal when conducting the literature review was to highlight the most pressing and pertinent concerns, discuss why these concerns are important and how this research could help to address them. Specifically a number of broad areas were identified as essential to help inform my understanding of the relevant literature; these included the issues around youth inactivity, physical activity promotion in schools, teacher’s HBPE practice, teacher CPD, the persistent research/theory practice gap in education and pedagogical change. Whilst this review is recognised as wide-ranging, it was deemed necessary to present a clear picture of the gap in the literature for developing a new PE-for-Health pedagogy to be translated from theory to practice by teachers supported by researchers during a sustained CPD programme.

Section One of this review examines The Physical Inactivity Pandemic, i.e. the well documented physical activity crisis amongst children and young people and how both governments and organisations are attempting to address inactivity.

Section Two explores The Role of Schools and Physical Education in Promoting Active Lifestyles. Following an initial overview of the history of health and physical activity in the National Curriculum, the discussion moves to consider a number of the recognised tensions and challenges for physical education with respect to promoting a physical activity for health agenda in the curriculum.

Section Three considers Health-Based Approaches in Physical Education i.e. initiatives and physical activity interventions which have been implemented in school settings over the past three decades, both in the UK and abroad, to gain some insights into effective (and ineffective) practice.
Section Four presents the conceptual framework for HBPE in detail, including the major theme (valuing a physically active life), the underlying theory (SDT), the five assumptions of learning and teaching, the five learning goals (movers) and the critical features which were created to guide both teacher and student behaviour.

Section Five explores Teachers’ Health-Based Philosophy and Practice when teaching health and highlights some of the well-documented issues surrounding HBPE practice, including the practice of fitness testing. Furthermore, teachers’ engagement with HBPE-CPD opportunities is discussed.

Section Six focuses on Teachers’ CPD and initially considers the purpose of CPD, before examining a number of theoretical frameworks proposed for the design and evaluation of CPD programmes. I reflect on what is known about (supposed) effective and ineffective CPD programme design, and critique the traditional ‘training’ model commonly employed in education. The section concludes by examining the collective participation of teachers working in collaboration with external researchers to develop and sustain innovative pedagogy.

Section Seven: Bridging Research/Theory Practice Gaps in Education discusses the long-standing research/theory practice gap which exists in education, especially the obstacles to practitioner engagement in and/or with research. Some potential solutions are then offered to help bridge this gap and develop closer working partnerships between the research and practitioner communities.

Section Eight: Pedagogical Models in Physical Education explores curriculum innovation, in particular the implementation of pedagogical models in physical education contexts. Following an overview of pedagogical models and a justification for their use in school physical education programmes, I consider their adoption and teachers’ experiences of employing them when initiating pedagogical change.

To conclude the review of literature, I highlight the pressing need for teachers to develop their health-related learning and call for the design of a collaborative and
sustained CPD programme to support teachers’ adoption of a new conceptual framework for HBPE.

Section 1: The Physical Inactivity Pandemic

In this section the well documented physical activity crisis in adult and youth populations is initially explored. The discussion then shifts to consider how both governments and organisations, such as the World Health Organisation (WHO), are attempting to address the increasing challenge of childhood inactivity.

At a time when social and economic trends are contributing to a reduction in physical activity it is perhaps no surprise that physical inactivity (a lack of physical activity) has been identified by the WHO as the fourth leading risk factor for global mortality (6% of deaths globally). This follows high blood pressure (13%), tobacco use (9%) and high blood glucose (6%), with overweight and obesity responsible for 5% of deaths globally (WHO, 2010). Moreover, physical inactivity is on the rise in many countries, adding to the burden of non-communicable diseases (NCDs) such as cardiovascular diseases, cancer and diabetes (WHO, 2018). Indeed, physical inactivity is reportedly one of the top ten causes of disease and disability, and is reputed to be responsible for one in six deaths, and costs the taxpayer an estimated £7.4 billion annually (Public Health England, 2016).

Shifting our focus from adult to youth physical activity, evidence indicates that more than 80% of the world’s adolescent population is insufficiently active for health benefits. (Currie et al., 2008; Sallis et al., 2016; Scholes, 2016; World Health Organisation [WHO], 2010; 2018). Consequently, there is considerable documented concern for the health of young people, particularly in relation to their declining physical activity levels and the correlation with future issues later in adulthood (Blair, 2009; Harris & Cale, 2018; Corbin, 2002; Currie et al., 2004; DoH, 2015; Mountjoy et al. 2011; Pate et al., 2002). Indeed, Blair (2009) has even suggested that physical inactivity may be the biggest public health issue of this century. Further evidence of inactivity is provided by the Active Healthy Kids Global Alliance (Tremblay et al., 2015), which published report cards on the state of physical activity amongst children and young people across the globe. These
report cards graded countries on nine common indicators including overall physical activity and sedentary behaviour, both of which were rated as poor.

In response to this pandemic of inactivity, Trost et al. (2014) draw our attention to a number of emerging and increasingly key ‘investment recommendations’ made by the International Society for Physical Activity and Health (ISPAH). Approved by the WHO, and cited by the International Olympic Committee in its Lausanne Consensus, these recommendations are positioned as ways of framing the argument for the public health benefits of physical activity. Fundamentally, they are proposed as investments that work to limit the ‘disease of physical inactivity’ (Trost et al., 2014) and make progress towards achieving the WHO global target of a 10% reduction in physical inactivity by 2025. A further development has been revised physical activity for health guidelines, initially produced by the World Health Organisation (WHO, 2010), and subsequently published in a number of countries, including Australia (DoH, 2014), Canada (CSEP, 2011), the United States (NASPE, 2010) and the United Kingdom (Chief Medical Officers, 2011) respectively. These current guidelines recommend that all school-aged children and young people should engage in at least 60 minutes of moderate to vigorous intensity aerobic physical activity every day. Secondly, it is recommended that activities, including those that strengthen muscle and bone, should be included at least three times per week and thirdly, that all children and young people should minimise the amount of time spent being sedentary for prolonged periods.

Despite the publication of these guidelines, evidence suggests that many children and adolescents are still not physically active on a regular basis. In the US, for example, only 29% of high school students surveyed in 2011 reported at least 60 minutes of daily physical activity over seven consecutive days and only 31% attended physical education class daily (CDC, 2011). Furthermore, these figures represent a decline from previous research conducted in the US when a reported 42% of children allegedly met the physical activity guidelines (Troiano et al., 2008). Similarly, worrying evidence of childhood inactivity in England comes from a recent Health Survey report (Scholes, 2016). This report reveals that, excluding school-based activities, only 22% of children aged 5 to 15 years were moderately active for at least one hour every day over seven consecutive days (23% of boys and 20% of girls respectively). Moderate intensity activities, such as brisk walking
or jogging, elevate body temperature, breathing and heart rate, but still enable participants to conduct a conversation. Conversely, 9% of children are reported to be sedentary for at least six hours per day on week days, with this figure increasing to 19% on weekend days. Indeed, the proportion of both girls and boys who are sufficiently active has decreased between 2008 and 2015, with this being more marked amongst adolescents (Harris & Cale, 2018). On a wider scale, findings from a Health Behaviour in School-aged Children cross national survey reveal worrying trends concerning many teenagers’ health behaviours (including obesity levels, eating habits and physical activity), with UK youngsters lagging behind their European counterparts in many areas (World Health Organisation, 2017). Furthermore, there are also growing concerns about children’s mental health, particularly as the UK was recently ranked 20th in life satisfaction scores internationally (Hagell et al., 2017). Given that the UK Government’s proposals for a legacy after the London 2012 Olympic and Paralympic Games included a population increase in physical activity (DCMS, 2010), this evidence is both concerning and disappointing.

Whilst much reported evidence highlights a marked decline in physical activity during adolescence (Dumith et al., 2011; Franco & Coteron, 2017; Sallis, 2016), recent research also illustrates the need for physical activity interventions to begin much earlier in childhood. For example, the Gateshead Millennium Study in the UK, which tracked the physical activity habits of 545 children over an eight year period, has revealed reduced activity levels in children from seven years old. Indeed, there was no evidence from the study that physical activity decline began in adolescence, or that declines were greater in girls than boys (Farooq et al., 2017).

Recognising the need to address childhood inactivity earlier, the Department for Education in England has recently doubled the PE and Sport Premium funding that primary schools receive from £160 million to £320 million a year to help children lead healthy active lifestyles (DfE, 2018). This ring-fenced funding, which is allocated directly to primary schools across England was introduced in March 2013 to improve the provision of physical education and school sport. Schools are expected to use the funding to make sustainable improvements to the quality of physical education and sport they offer such as developing new types of
activities and building capacity for the future (Association for Physical Education [afPE], 2018). There are five key indicators that schools should expect to see improvement across:

1. The engagement of all pupils in regular physical activity with at least 30 minutes during the school day
2. The profile of PE and sport is raised across the school as a tool for whole-school improvement
3. Increased confidence, knowledge and skills of all staff in teaching PE and sport
4. Broader experience of a range of sports and activities offered to all pupils
5. Increased participation in competitive sport

**Summary**

This section has highlighted the reported rise in physical inactivity as a global concern across both adult and youth populations. Despite initiatives, such as the production of physical activity guidelines in many developed countries, evidence suggests that these are having little impact on young peoples’ activity levels. Indeed, whilst it has been commonly reported that physical activity declines during adolescence, recent longitudinal evidence highlights declining activity levels in primary aged children. Recognising the need to address childhood inactivity earlier, the UK government has increased ring-fenced funding for PE and sport in primary schools to help children lead healthy active lifestyles. This has led to a renewed focus on the role of schools in the promotion of active lifestyles which is the focus of the next section.

**Section 2: The Role of Schools and Physical Education in Promoting Active Lifestyles**

Many scholars have consistently advocated for schools in general, and physical education more specifically, to help address inactivity concerns by supporting children and young people to adopt active lifestyles (Bailey et al., 2009; Cale et al., 2014; Dobbins et al., 2013; Haerens et al., 2011; Harris & Cale, 2018; Houston & Kulinna, 2014; McKenzie & Lounsbery, 2009). It is argued that schools provide an obvious site for physical activity promotion, as they usually offer an existing infrastructure where young people can be active (Fernandez-
Moreover, a well-documented primary goal of physical education is to encourage lifelong physical activity participation (afPE, 2015; Department for Education (DfE), 2013; Tannehill et al., 2013; Whitehead, 2016). As such, there appears a clear opportunity to positively influence young people’s physical activity behaviour through the subject (Armour, 2010; Harris & Cale, 2018; McKenzie, 2001, McKenzie & Lounsbery, 2009). Indeed, the idea of promoting public health through physical education is not new, with this being an expectation for schools in England at the beginning of the twentieth century:

The primary objective of any course of physical exercise in schools is to maintain, and improve, the health and physique of the children. This may be described as the ‘physical effect’. (The Board of Education, 1905, p.9)

Fast forward one hundred years and various government policies and strategies in the UK, such as ‘Healthy Lives, Healthy People’ (Department of Health, 2010), ‘The Link between Pupil Health and Wellbeing and Attainment’ (Public Health England, 2014) continue to highlight the importance of schools and physical education in health promotion. Whilst some scholars (Webb & Quennerstedt, 2010; Evans & Rich, 2011) have expressed concerns regarding the apparent increased health surveillance by government, physical education is viewed as a public health tool to help tackle high obesity rates and promote increased physical activity engagement in young people (Houston & Kullina, 2014). It is important to note, however, that physical education alone is unable to fight both obesity rates and physical inactivity, and consequently must be incorporated as part of a whole school approach to promoting healthy active lifestyles (Haerens et al., 2016; Harris & Cale, 2018).

**Supporting Active Lifestyles through Physical Education**

Since the 1988 Education Reform Act in England, and the subsequent introduction of a National Curriculum for Physical Education (NCPE) (DES, 1990), the subject [Physical Education] has had a statutory responsibility to promote children’s physical development and support healthy active lifestyles (Cale & Harris, 2013). It is suggested that health has become more explicit within
each successive revision of the NCPE, with two of the four current curriculum aims stating that all young people ‘are physically active for sustained periods of time’ and ‘lead healthy, active lives’ (DfE, 2013, p.1). Whilst this seems a positive development, there has also been a noted emphasis by the UK government on promoting physical activity through competitive sport, which Armour and Harris (2013) suggest will not appeal to all children. Furthermore, there is no statutory obligation for schools in England working outside of local authority control, such as academies or free schools, to engage with the national curriculum framework. According to afPE (2015), more than half of all secondary schools in England are now either free schools or academies, with this number expected to rise in the future. Consequently, it is proposed that the NCPE aim for all young people to adopt active lifestyles may not be realised in the current educational climate.

This concern for young people not adopting active lifestyles has led some well-established researchers in the USA to call for increased activity during physical education lessons (McKenzie & Lounsbury, 2009, 2014; Sallis et al., 2012; Trost & van der Mars, 2009). Consequently, Sallis et al. (2012) have developed ‘Health Optimising PE’ (HOPE), a type of comprehensive school physical activity programme (CSPAP) whose overarching goal is to support young people to gain the necessary knowledge and skills for lifelong physical activity participation. HOPE programmes have four main aims, one of which advocates keeping students active for at least 50% of class time in physical education (Haerens et al. 2016). This minimum recommendation has also been endorsed in the UK (afPE, 2015), although there is inconclusive evidence that engaging children and young people in highly active physical education lessons equates with positive physical activity behaviour. Despite these recommendations, research findings highlight considerable differences in both the duration and intensity of physical activity during lesson time, due to a host of factors including the particular learning outcomes and how the subject matter is delivered (McKenzie, 2002; Pate, O’Neill & McIver, 2011). Further, a number of studies (e.g. Aelterman et al., 2012; Fairclough & Stratton, 2005; Hollis et al., 2016) have reported low levels of activity during secondary school lessons, which highlights the need to support teachers in developing new active pedagogies.

Whilst the importance of maximising opportunities for meaningful activity during
lessons is recognised, it is worth considering whether this strategy alone is likely to result in long-term physical activity behaviour change (Armour, 2010; Fox et al. 2004; Harris, 2000; Haerens et al., 2016). Indeed, Quarmby et al. (2018) caution that prioritising time spent on high intensity activity during lessons may negatively impact on students’ enjoyment and their subsequent motivation to embrace an active lifestyle. Clearly, and as advised by Harris and Cale (2018), it is fundamental for teachers to ensure that activities are carefully integrated in physical education to help provide positive learning experiences for all young people. This advice is timely given that recent evidence from a ‘Girls Active’ survey (YST & WiS 2017) of over 21,000 girls aged 11-16 years reported that over half of the participants surveyed did not enjoy physical education, especially when lessons were competitive. The research also revealed an apparent disconnect between girls’ attitudes towards active lifestyles and their subsequent behaviour, with only just over half stating that physical activity was an important part of their lives. This evidence suggests a review of the curriculum offer, with an explicit focus on promoting the benefits of physical activity is warranted to help make physical education more relevant to adolescent girls. Further recommendations from the ‘Girls Active’ programme include involving girls in the design and delivery of physical education and physical activities and encouraging them to positively influence their peers.

Life-long physical activity preparation is viewed as a key goal of physical education in many countries (Department for Education, 2013; SHAPE America, 2013; UNESCO, 2014; Australian Curriculum and Reporting Authority, 2015). That said, it is but one of many widely contested goals including the development of social responsibility, teamwork and communication skills (Cale & Harris, 2014; Kirk, 2010). Kirk (2006) argues that this simultaneous pursuit of diverse learning goals has led to inconsistency with regards to physical education’s specific purpose. Moreover, there are repeated claims that the subject has remained largely unsuccessful in motivating young people (and adults) to adopt active lifestyles (Armour, 2010; Cale et al., 2016; Carse, 2015; Haerens et al., 2011; McKenzie & Lounsbery, 2009; Siedentop, 1996; Trost, 2006). Indeed, Cale et al. (2016) recently highlighted that despite growing expectations, the same old issues are still evident in practice. These claims raise questions concerning the quality of HBPE in schools and suggest an urgent need for new pedagogies to
support teachers’ in preparing their students for a life of physical activity.

Although Fairclough et al. (2002) recommend that physical educators must provide opportunities for all students to experience activities that they are likely to engage with as adults, research suggests that the transfer of learning beyond school rarely occurs (Haerens et al., 2010). Indeed, the continued dominance of traditional team games within the physical education curricula of many schools (Kirk, 2010; Ofsted, 2013) appears at odds with evidence from adult physical activity participation surveys demonstrating a preference for individual pursuits such as swimming, running and cycling (Physical Activity Council Report US, 2016; Sport England, 2017). This evidence indicates that the way physical education is predominantly structured in many schools is not reflecting current adult participation trends and reinforces the concerns raised earlier by Armour and Harris (2013) on emphasising competitive sport to promote physical activity engagement.

Further concerns regarding physical education’s activity promotional role are expressed by McKenzie and Lounsbury (2009) who contend that if exercise is medicine, physical education is the pill not taken. The authors (McKenzie & Lounsbery, 2009) identify numerous barriers to this endeavour, including the subject’s low status in schools, poor resources and restricted curriculum time, which they suggest hinder physical education in successfully fulfilling its activity promoting role. Exploring the latter issue of limited curriculum time, Fox et al. (2004) revealed that physical education typically represents less than 2% of a child’s waking time. To compound matters, there has recently been a worrying trend in the number of schools in England which have reduced the curriculum time available for physical education due to examination pressures, additional time for core subjects and teacher shortages. Research conducted by the Youth Sport Trust in England has revealed 38% of secondary schools to have cut timetabled physical education for 14 – 16 year olds since 2012, with almost one in four (24%) schools having done so since 2016. Moreover, the cuts are reported to be greater as students move through school, with 16 – 18 year olds experiencing very few opportunities to be physically active during the school day (YST, 2018). The time challenges that physical education is currently experiencing in schools seems to strengthen the argument that the subject is
incapable of single-handedly solving the physical activity problem. Consequently, and as advocated by Harris and Cale (2018), there appears a pressing need to prioritise the promotion of physical activity out-of-class.

Promoting Physical Activity beyond the School Gates

Clearly, if physical education is to be effective in promoting physical activity for health, young people must be taught how to be active outside of school and throughout life (Cale & Harris, 2011; Fernandez-Rio, 2016; Fox et al., 2004; Harris, 2000; Heidorn et al., 2016; Webster et al., 2015). Yet, previous research (McKenzie & Kahn, 2008; Stratton et al., 2008) has reported out-of-school physical activity to be signposted by physical educators in less than 2% of lessons, suggesting that this may not be at the forefront of most teachers’ practice. A number of scholars (Bauman et al., 2012; Biddle et al., 2015; Hastie et al., 2012), however, have highlighted the positive influence of active parents on their children’s activity levels. This evidence points to the importance of teachers working closely with parents and families to support young people’s physical activity participation beyond the school gates.

Prioritising physical activity out-of-class appears to represent a major challenge to the physical education profession for various reasons. Primarily, Hastie et al. (2012) suggest that influencing the habitual adoption of physical activity is a potentially complex and long-term process. Second, with the limited time for physical education in an increasingly congested school curriculum, it is argued that focusing on the dual aspects of keeping students sufficiently active in lessons and also supporting them to develop positive physical activity habits is not viable (Quarmby, 2018; Tannehill et al., 2013). Third, there is a recognised lack of support for teachers to develop their knowledge and understanding of effective physical activity promotional strategies (Cale et al., 2014; Haerens et al., 2011; Harris, 2014; McKenzie, 2007), an area that is explored later in this chapter.
**Summary**

It is clear that despite school physical education being advocated as an obvious site for supporting young people to adopt active lifestyles, evidence indicates that the subject has remained largely unsuccessful to date in this physical activity promotional role. Whilst acknowledging that physical education alone is incapable of solving the problem of youth inactivity, it raises questions concerning the quality of HBPE in schools and suggests an urgent need for new pedagogies to support teachers in this area. Contributing to physical education's apparent lack of success in promoting active lifestyles are numerous barriers such as the increased marginalisation of the subject in schools, a curriculum dominated by competitive sport and limited signposting of activities beyond the lesson. Consequently, and whilst not common practice, there have been calls for physical educators to shift their focus and prioritise out-of-class physical activity promotion.

**Section 3: Health-Based Approaches in Physical Education**

This section examines a number of health-based approaches and programmes which have been implemented in physical education in recent decades to gain some insights into effective (and ineffective) practice with respect to promoting “health, rather than skill or sport outcomes” (Haerens et al., 2011, p.325). Further, there is a consideration of how an autonomous learning environment may be constructed to support students' motivation during physical education.

In England, the term ‘Health-Related Fitness’ (HRF) emerged from the work of Whitehead and Fox (1983), who initiated a ‘Student-Centred Physical Education’ programme. This programme involved promoting healthy attitudes towards physical activity and educating young people with the knowledge and skills to engage in an active lifestyle. Students were also provided with a choice of activities in an effort to personalise their learning experience. Despite the best efforts of Whitehead and Fox to develop learning in the psycho-social domain, at this time HRF practice in schools was largely focussed on measuring physical fitness and remained what Sparkes (1989) termed ‘an innovation without change’. The programme’s sustainability was primarily hindered by entrenched
attitudes, such as a conservative, sport-based, teacher philosophy, which Kirk (1986) suggested resulted in limited teaching approaches being employed. The study, however, did provide some early evidence to support the notion that traditional, sport-focused physical education curricula were incapable of effectively promoting health goals.

During the 1980s, English schools also witnessed a growth in the popularity of Health-Related Exercise (HRE). This growth was supported by a pioneering Health and Physical Education Project which led to many schools incorporating distinct strands of HRE within their physical education programmes (Cale, 1996). Moreover, Almond (1989) an early advocate of the HRE movement highlighted a near tenfold rise in the assimilation of health-based approaches within schools and physical education during the late 1980s. These approaches included initiatives such as the "Exercise Challenge" (McGeorge, 1993) and the "Active School" (Almond & McGeorge, 1995). The ‘Exercise Challenge’ initiative, for example, aimed to encourage young people to be more active by rewarding positive health behaviour and promoting home – school links. Meanwhile, ‘The Active School’ initiative aimed to support schools to increase physical activity participation, both within and outside of school (Almond & McGeorge, 1995).

Despite this rise in the number of health-based approaches used in schools generally, and physical education more specifically, Cale and Harris (2005) proposed that it led to confusion and limited approaches being employed. Furthermore, HRE was excluded as a distinct activity area of the NCPE when it was introduced in 1990 (DES, 1990) and not afforded the same status as more traditional activity areas such as athletics and games. Consequently, immersing health goals within a predominantly sport-focused curriculum led to teachers adopting diverse approaches to the teaching of HRE (Harris, 1995). These involved focused units and assimilation both through other activity areas within physical education and across the wider school curriculum. Whilst this, in theory, gave teachers some flexibility to determine how best to incorporate health-related learning, many scholars claim that in practice successful implementation was undermined as a result, with health goals permeated weakly across activity areas (Cale & Harris, 2005; Haerens et al., 2011; Jewett et al., 1995; Penney, 2013).
Although it is recognised that health-related learning can be taught well through all activities, there is equally awareness that knowledge and understanding may be diluted when employing a permeated approach, especially if the teaching of sport techniques is prioritised (Harris, 2000; Harris & Cale, 2018; Haerens et al., 2011; Kirk, 2010). Consequently, adopting a focused approach where health is allocated discrete time on the physical education curriculum may guard against health goals being marginalised. However, this approach could result in health being viewed in isolation from other activities and lengthy gaps between units. One potential solution, proposed by Harris and Cale (2018) is to encourage the adoption of teaching approaches which embed learning tasks through meaningful physical activity contexts where possible.

This recognised need to support teachers in constructing and teaching high quality HBPE programmes centred on physical activity promotion resulted in a National Working Group being formed in England during the late 1990s. With increased evidence that combining educational and psychological approaches could positively support long-term engagement in physical activity (Bailey et al., 2009), there was a focus on supporting children and young people to develop the appropriate knowledge, understanding and behavioural skills to realise active lifestyles (Harris, 2000). Together with the creation of detailed units and assessment strategies to support teachers, the following seven guiding principles were also developed to inform teaching and learning, with a noted focus on promoting inclusive practice; (1) Exercise can be a positive and enjoyable experience, (2) Exercise is for all, (3) Everyone can benefit from exercise, (4) Everyone can be good at exercise, (5) Everyone can find the right kind of exercise for them, (6) Exercise is for life, and (7) Excellence in health-related exercise is maintaining an active way of life (Harris, 2000, p.18). Whilst the production of these guiding principles was undoubtedly a positive development, it has been suggested that providing teachers with detailed resources may ironically have contributed to the challenges of successfully implementing HRE (Cale et al., 2002). These (and other) externally produced resources may in fact have reinforced teachers’ position as passive recipients in the learning process, rather than co-constructors of new knowledge.
Proving similarly unsustainable was an innovative Australian Daily Physical Education programme in primary schools across the states of Queensland and Victoria during the 1980s. Whilst Kirk (1986) argued that alternative teaching approaches were needed to deal with new concepts, he later noted that teachers’ practice during this programme was more akin to daily fitness, with a heavy emphasis on the physiological changes which occurred during exercise (Kirk, 1989). This relatively narrow view of health-as-physical fitness also resulted in a shift from promoting physical activity to supporting wider school issues, such as improving class management and academic performance. Based on these findings, Kirk (1989) concluded that professional development was central to sustained change in practice, with teachers needing to develop new strategies, away from a traditional, command style approach (Tinning and Kirk, 1991). More recently, Armour et al. (2015) advocate that for sustained change in practice to occur, teachers need to be supported as co-constructors in the development of new PE-for-health pedagogies, which are explained later.

There have also been a number of large interventions in the US which in the main have aimed to promote high levels of physical activity in physical education lessons. These interventions include the Sports, Play and Active Recreation for Kids (SPARK) programme (McKenzie et al., 2009), involving a self-management component centred on developing students’ motivational skills. Through the programme teachers are coached to implement sample unit and lesson plans and are provided with strategies to increase children’s activity levels during physical education lessons. A further intervention is the Middle School Physical Activity and Nutrition (M-SPAN) programme which focused on increasing teachers’ awareness of the need for active lessons, supporting them to plan and implement active strategies and developing their pedagogical skills (McKenzie et al., 2000; 2004). Indeed, in a review of health pedagogies, Haerens et al. (2016) identified the continued nature of on-site support as a key factor in successful implementation. The importance of sustained support will be discussed in greater depth later in this chapter.

Further success has been reported during ‘The Physical Activity and Teenage Health’ (PATH) programme, which attempted to promote HBPE and positively impact student learning. This programme was implemented in New York schools
and involved comparing changes in health and fitness between students in the PATH programme and those who remained in traditional sport curricula. The findings demonstrated that PATH students, especially girls and the most overweight, improved significantly more than their peers in heart-health knowledge, health behaviours and aerobic fitness (Bayne-Smith et al., 2004; Fardy et al., 2004). This reveals the potential of HBPE programmes, especially in terms of supporting less active students and highlights some lessons that can be learned for the future design of programmes.

Considering the development of the HBPE model, a review of the adolescent physical activity promotion literature by Pardo et al. (2013) identified several promising strategies. The authors grouped these strategies into five broad intervention guidelines as follows: (i) design multi-component interventions that empower members of the school community; (ii) develop improvements to physical education curricula as a strategy to promote physical activity to adolescents; (iii) design and implement extra-curricular programmes and activities to promote physical activity; (iv) include technology interventions during the implementation and monitoring of physical activity promotion programmes and (v) design and implement specific strategies that respond to the interests and needs of girls. It is proposed that these five guidelines be considered in school-based interventions focused on enhancing adolescent physical activity in particular. Further recommendations made by Pardo et al., (2013) include empowering students to manage their own physical activity behaviour and developing the role of physical educators as facilitators of healthy active lifestyles. More recently, these recommendations for employing a comprehensive whole-school approach to health have been increasingly endorsed in the literature (Haerens et al., 2016; Harris & Cale, 2018).

Moreover, the problem of physical inactivity is complex and is influenced by a range of social, cultural, political and economic factors (Ainsworth, 2016). In terms of students’ needs, Carlin et al. (2015) highlighted a number of key influences on the physical activity participation of 11–13 year olds. These included peers, family members, changing priorities, cost and access to resources. With regards to the future provision of physical activity, participants in this study favoured opportunities to try new activities, increased prospects for
school-based activities with friends, and activities which used technology and encouragement through rewards and incentives. Gender differences were apparent in relation to the types of activities preferred and there were also variances between ‘low-active’ and ‘highly-active’ groups in relation to their perceived barriers to participation. The authors propose that these findings may help to inform targeted interventions to increase physical activity in low active adolescents (Carlin et al., 2015). In addition, Rickwood et al. (2011) advocate forging strong partnerships between home and school which could encourage students to value physical activity and support them to achieve recommended daily guidelines.

**A Call for New Health-Based Pedagogies**

Despite the implementation of numerous health-based programmes in school physical education, it is suggested by Haerens et al. (2011) that these interventions have largely failed to stimulate sustained pedagogical change in teachers' practice. In addition, there is little evidence indicating that they have been wholly successful in terms of increasing student physical activity participation. Consequently, Armour and Harris (2013) have called for the development of new ‘PE-for-health’ pedagogies and outline three key steps which they believe will support sustained change in practice. Essentially, these three steps recommend that 1) teachers collaborate with health experts from outside education, 2) the learning needs of young people are placed at the heart of practice and 3) CPD is reconceptualised to focus on the individual needs of teachers as learners.

Reflecting on some past (and present) pedagogies, both a Fitness Education curriculum model (McConnell, 2005) and a Concepts-Based Fitness and Wellness programme (McConnell, 2014) advocate that teachers prioritise the process of being physically active with students, rather than focus on improving physical fitness. Furthermore, a multi-dimensional curriculum model named Health Optimizing Physical Education [HOPE) (Metzler et al. 2013) has been developed to help address the issues of childhood obesity and physical inactivity. Designed to support students to acquire appropriate knowledge and skills for lifelong participation in physical activity, the HOPE model has a number of
different strands with wide-reaching goals, such as ‘Diet and Nutrition for physical activity’ and the ‘Integration of HOPE across the school’. Whilst undoubtedly a highly ambitious whole school model, it is argued that there still remains a necessity to develop a clear conceptual framework to specifically support the teaching of health in school physical education.

Recognising this need for a clear framework to support physical educators, Haerens et al. (2011) proposed the development of a pedagogical model for HBPE. With a specific focus on promoting positive behaviour towards physical activity, the HBPE model centrally positions ‘valuing a physically active life’ (Siedentop, 1996) as a sustainable long-term process. Consequently, Haerens and colleagues argue that valuing will only be achieved if individuals are intrinsically motivated to engage in activity and advise that teachers prioritise the affective domain when planning for learning. McKenzie et al. (2018), however, warn that characteristics such as attitudes, emotions and feelings often associated with the affective domain present conceptual issues and are difficult to assess in physical education. It is also recommended that physical educators must procure new knowledge and skills in order to support individual behaviour change and motivation. In designing the HBPE model, key learning outcomes, assumptions about teaching and learning domain priorities need to be established (McConnell, 2015).

The potential for this HBPE model to facilitate physical activity behaviour change has led Fernandez-Rio (2016) to debatably suggest that it should be viewed as the pivotal pedagogical model for physical education as all of the other more established models (e.g. Cooperative Learning, Teaching Games for Understanding and Sport Education) support HBPE’s overarching goal, namely to help students develop positive behaviours to embrace an active lifestyle.

**Summary**

Although there have been a number of innovative approaches to the teaching of health and multiple HBPE programmes in schools over the past three decades, there is limited evidence to suggest that these initiatives have been successful in stimulating long-term pedagogical change. Furthermore, there has been a heavy
emphasis on designing and implementing health curricula, which has consequently led to calls for new PE-for-Health pedagogies. The next section presents and critiques a theoretically informed conceptual framework for HBPE.

Section 4: A Conceptual Framework for HBPE

Building on Haerens et al.’s (2011) advocacy paper which is viewed as the first step in the HBPE model’s development, the conceptual framework is presented as a second key step. Casey (2017) argues that a conceptual framework should only progress to a pedagogical model after it has been applied in practice with teachers and subsequently reviewed and revised where necessary both during and after the process of implementation. Indeed, Casey’s argument builds on the work of Jewett and Bain (1985), who stressed the importance of developing and subsequently refining a theoretically informed conceptual framework before designing specific curriculum models.

Major Theme

Drawing on Siedentop’s (1996) earlier notion of valuing, Haerens et al. (2011, p.336) proposed the central theme of the model as students ‘valuing a physically active life, so that they learn to value and practise appropriate physical activities that enhance health and well-being for the rest of their lives’. Valuing, according to Siedentop (1996, p.266), occurs when people ‘organize their lives so that regular involvement in activity occurs throughout the lifespan’. Central to Siedentop’s concept of valuing is that individuals will participate in ways that are literate and critical; in other words they are knowledgeable physical activity participants, who understand both the benefits and barriers of participation, and strive to overcome these barriers for themselves and others. Figure 2.1 below provides an overview of the HBPE conceptual framework which was developed during this study, highlighting the major theme, underlying theory, assumptions of learning and teaching and the key learning goals.
HEALTH-BASED PHYSICAL EDUCATION

Habitual movers | Enthusiastic movers | Confident movers | Informed movers | Critical movers

Major Theme
‘Valuing a physically active life’

Underlying Theory – Self-Determination Theory
Autonomy – choice, ownership, flexibility,
Competence – positive feedback, improvement
Relatedness – caring, security, co-operation

Assumptions of Learning & Teaching
1. Value and demonstrate sustained physical activity
2. Learn in all four domains (affective prioritised)
3. Transfer beyond the lesson
4. Intrinsic motivation
5. Support mechanisms

Learning Goals
1. Habitual movers – choose to lead an active lifestyle and participate in regular physical activity
2. Enthusiastic movers – demonstrate a positive attitude and engage enthusiastically in regular physical activity
3. Confident movers – demonstrate perceived competence in chosen physical activities through effort and progress/improvement
4. Informed movers – understand how and where to engage in physical activity, the effects of an active lifestyle and how to participate safely and effectively
5. Critical movers – understand the barriers to physical activity and become activists (movement promoters) to positively affect their physical activity environment

Figure 2.1: Overview of the HBPE conceptual framework

Underlying Theory

Self-Determination Theory (SDT; Deci & Ryan, 1985; 2000; Ryan & Deci, 2000) has become well established as a validated, theoretical framework to explore physical activity behaviours in several contexts, including school physical education (Aelterman et al., 2013; Cox & Williams, 2008; Sun & Chen, 2010; Ntoumanis & Standage, 2009; Standage & Ryan, 2012; Van den Berghe et al. 2014). In short, SDT is concerned with human motivation and the conditions that support and thwart engagement. Haerens et al. (2011) presented SDT as the major theory underpinning the HBPE model, arguing that valuing would only be possible if individuals were intrinsically motivated to participate in physical activity. Central to SDT is the extent to which an individual's behaviour is...
autonomous or self-determined (Deci & Ryan, 2000). In terms of promoting positive physical activity behaviours, Blain and Bellamy (2019) advocate that developing autonomous or self-determined forms of motivation towards physical activity is a productive strategy.

Hagger et al. (2014) explain that autonomous motivation involves engaging in behaviour because it relates to a person’s intrinsic goals and originates from within. Individuals who are autonomously motivated experience a sense of choice, interest, and satisfaction and thus are likely to persist with the behaviour. On the other hand, controlled motivation results in people engaging in behaviours for externally referenced reasons such as to gain rewards, seek approval from others and avoid punishment or feelings of guilt. When individuals are driven by controlled motivation they feel pressure to behave in a certain way and are less likely to be self-regulated (Ryan & Deci, 2017). The behaviour is not perceived as supporting psychological needs and is instead likely to be viewed as need-thwarting (Hagger et al., 2014).

SDT proposes that an individual will develop more autonomous forms of motivation when their basic human needs for autonomy, competence, and relatedness are satisfied (Deci & Ryan, 2000). The need for autonomy is fulfilled when individuals perceive that they have a degree of control over their behaviour, such as choice and ownership to make decisions. Competence concerns our achievements, knowledge, and skills; people have a need to build their competence and develop mastery over tasks that are important to them. Thirdly, relatedness involves feelings of belonging or connectedness and being respected by significant others (Deci & Ryan, 2017; Franco & Coteron, 2017).

Drawing on the work of both Standage and Ryan (2012) and Ntoumanis (2012), a number of strategies are proposed to create a need supportive environment in physical activity settings. To foster autonomy support strategies include maximising opportunities for meaningful choice relevant to participants’ values and goals, encouraging initiative-taking and providing a rationale for task engagement. Support for competence is generated when teachers plan activities that optimally challenge all students and provide constructive, informative feedback that encourages perceptions of competence. Finally, relatedness
support is nurtured through creating a collaborative learning environment where there are positive interactions between all participants and teachers demonstrate a real interest in their students (Ntoumanis, 2012; Standage & Ryan, 2012).

If teachers can create a need-supportive learning environment with autonomy, competence and relatedness embedded, research shows that their students are more likely to be autonomously motivated (Deci & Ryan, 2000; Ntoumanis & Standage, 2009; Ward et al. 2008). Gavin et al. (2014), however, explain that people’s motivation will most probably reflect both internal and extrinsic elements as we are complex beings with diverse goals and needs. For example, extrinsic motivation has been identified as a key factor for initiating physical activity (Teixeira et al. 2012), whereas intrinsic motivation appears more important for sustaining activity (Lim et al. 2013). These findings highlight the importance of considering both types of motivation, especially since intrinsic strategies alone are unlikely to support physical activity adherence (Gavin et al. 2014). Consequently, motivation should be viewed as a continuum from non-self-determined to self-determined, as illustrated in Figure 2.2.

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Non self-determined</th>
<th>Self-determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of motivation</td>
<td>Amotivation</td>
<td>Extrinsic Motivation</td>
</tr>
<tr>
<td>Level of control</td>
<td>Controlling</td>
<td>Autonomous</td>
</tr>
<tr>
<td>Type of regulation</td>
<td>Non regulation</td>
<td>External regulation</td>
</tr>
<tr>
<td>Perceived locus of causality</td>
<td>Impersonal</td>
<td>External</td>
</tr>
<tr>
<td>Defining features</td>
<td>No intention to participate in physical activity</td>
<td>Participates for a reward, to avoid punishment or to meet external expectation</td>
</tr>
</tbody>
</table>

Figure 2.2: The Self-Determination Continuum (adapted from Deci & Ryan, 2000)

To the left of the continuum is amotivation, where an individual is completely non-autonomous and their behaviour is characterised by a lack of drive. Moving along
the continuum there are various forms of extrinsic motivation beginning with external regulation, where motivation is regulated by factors such as compliance, gaining rewards and avoiding punishment. The next level of extrinsic motivation is termed introjected regulation, with motivation somewhat external and driven by avoiding guilt and protecting the ego, whereas in identified regulation, the motivation is somewhat internal and largely based on a person’s values and beliefs. Finally, integrated regulation involves the individual being motivated by intrinsic sources and the desire to act in accordance with their core values. The right end of the continuum shows an individual entirely motivated by intrinsic sources. In intrinsic regulation the individual is self-motivated, with behaviour driven by interest, enjoyment and personal satisfaction (Deci & Ryan, 2000).

Building on this, intrinsic motivation appears to positively correlate with desirable outcomes such as enjoyment (Pulido et al., 2014), positive attitudes towards physical activity (Halvari et al., 2011) and intention to be physically active (Taylor et al., 2010). Further, findings in relation to physical activity adherence reveal that individuals who receive autonomous support from others are more likely to remain active over time and have higher perceived competence and psychological well-being (Hagger & Chatzisarantis, 2008). In the context of school physical education, research studies have shown that enhancing student motivation is associated with higher levels of physical activity during class and can also have a positive impact on leisure time activity participation (Aelterman et al., 2012; Chatzisarantis & Hagger, 2008; Cox & Williams, 2008; Haerens et al., 2010). More specifically, Cox and Williams (2008) concluded that creating a learning environment focused on task mastery and personal improvement and where students feel their teachers value them as individuals is crucial for promoting self-determined motivation in physical education.

In addition, Aelterman et al. (2012) associated autonomous motivation with students displaying high levels of effort, engagement and enjoyment during class and there were also reported differences between classes depending on whether students were largely autonomously motivated or amotivated as a whole. More recently, Franco and Coteron (2017) highlighted enjoyment as one of the most important affective outcomes of quality physical education, which they noted can subsequently lead to young people participating in more physical activity during
their free time. On a similar vein, data from a recent survey on children and young people’s attitudes to sport and physical activity identifies enjoyment as the biggest driver of activity (Sport England, 2019).

Several studies confirm that perceived autonomy support by teachers such as providing opportunities for decision-making (Mandigo et al., 2008; Murcia, Lacarcel, & Alvarez, 2010) and meaningful choice (Ward et al., 2008; Prusak et al., 2004) can have a positive impact on students’ intrinsic motivation during physical education (Amado et al., 2014; Cheon et al., 2012; González-Cutre et al., 2014; Shen et al., 2009). Furthermore, Fernandez-Rio et al. (2018) suggest that self-determined motivation may be an effective way to ensure that physical education supports the development of positive physical activity behaviours in young people. However, it is recognised that physical educators need to have access to CPD opportunities focused on how to teach in an autonomy supportive manner (Haerens et al., 2013).

While autonomy supportive teaching can result in positive student learning experiences, need-thwarting contexts can have a negative impact. These contexts, often characterised by controlling teacher behaviour, a chaotic learning environment and unfriendly interactions, can result in students' psychological needs for autonomy, competence and relatedness being frustrated, leading to extrinsic motivation or amotivation (Bartholomew et al. 2011; Deci & Ryan, 2002; Van den Berghe et al. 2013). Evidence reveals that individuals who are amotivated or externally motivated are generally lower in need satisfaction, specifically in terms of autonomy and relatedness (Calvo et al., 2010). In the context of secondary school physical education, a study by Jackson-Kersey and Spray (2015) revealed that if students perceive their teacher to provide inadequate support for their basic psychological needs, activities become less attractive over time. This suggests that physical educators have an important role to play in helping to avert the development of specific amotivated behaviours in young people.
Learning Domain Priorities and Interactions

As the major theme of the HBPE model is ‘valuing a physically active life’ and the model is concerned with developing positive attitudes towards physical activity behaviour, the affective learning domain is viewed as central to optimally create a needs supportive learning environment (Haerens et al., 2011). Consequently, it is proposed that teachers should prioritise learning opportunities in this domain which focuses on students’ feelings, attitudes and values about movement. Together with the affective domain, the conceptual framework highlights that opportunities for learning should also occur across the three other recognised domains in physical education, namely the cognitive, physical and social domains (Bailey et al., 2009; Kirk, 2012; Casey & Goodyear, 2015). Whilst the social domain was not included in the vision for HBPE proposed by Haerens et al. (2011), it is argued that social learning opportunities are important to support students’ need for relatedness or their sense of belonging.

Assumptions of Learning and Teaching

The HBPE conceptual framework proposes five assumptions of learning and teaching (Figure 2.3) to help teachers support their students to develop positive physical activity behaviours.

<table>
<thead>
<tr>
<th>Assumptions of Learning and Teaching</th>
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<tbody>
<tr>
<td><strong>Assumption 1:</strong> Teaching can result in motivated young people who value and demonstrate sustained physical activity.</td>
</tr>
<tr>
<td><strong>Assumption 2:</strong> Changes in physical activity behaviour require learning in multiple domains over significant periods of time.</td>
</tr>
<tr>
<td><strong>Assumption 3:</strong> What is learnt in Health-Based Physical Education can be transferred beyond the lesson.</td>
</tr>
<tr>
<td><strong>Assumption 4:</strong> Long-term participation in physical activity is facilitated by feelings of interest, enjoyment and satisfaction (intrinsic motivation).</td>
</tr>
<tr>
<td><strong>Assumption 5:</strong> Physical activity interventions are best supported by integrated school, family and community strategies.</td>
</tr>
</tbody>
</table>

Figure 2.3: Assumptions of Learning and Teaching for HBPE
**Assumption One**: Teaching can result in motivated young people who value and demonstrate positive physical activity behaviours.

Cox et al. (2008) found that perceived competence, autonomy and relatedness were key predictors of students' leisure time physical activity. Furthermore, Haerens et al. (2010) discovered that university students with more autonomous motivation reported higher levels of physical activity at secondary school and in their early adulthood, further supporting the argument for interventions which aim to enhance students' self-determined motivation.

**Assumption Two**: Changes in physical activity behaviour require extended periods of learning in multiple domains.

As discussed earlier, learning in the affective domain should be prioritised to reflect the HBPE model's major theme (Bowler et al., 2011). However, learning opportunities should also occur across the three other recognised domains in physical education (i.e. the cognitive, physical and social) (Bailey et al., 2009; Kirk, 2012; Casey & Goodyear, 2015). Reflecting the calls for longer units of learning in physical education (Kirk, 2012) and for school-based physical activity interventions to last for at least 12 weeks (Dobbins et al., 2013), it is further recommended that HBPE should be taught for at least 12 lessons.

**Assumption Three**: What is learnt in Health-Based Physical Education must be transferable beyond the lesson into young people’s leisure time.

For any physical activity to transfer into leisure time, children and young people must find the activity relevant and meaningful (Chase et al. 2007). Consequently, the curriculum must be meaningful and reflect young people’s leisure time interests and participation trends. Fostering close links between the school and community is also viewed as crucial for effective transfer of learning out of class.

**Assumption Four**: Teaching using need-supportive strategies can result in feelings of autonomy, competence and relatedness in young people.

The fourth assumption draws directly on SDT (Deci & Ryan, 1985; 2000; Ryan & Deci, 2000). As noted earlier, evidence reveals that employing need-supportive teaching strategies, such as offering choice and autonomy, can positively impact on students’ motivation to be physically active (Amado et al., 2014; Cheon et al., 2012; González-Cutre et al., 2014; Shen et al., 2009). Moreover, it is assumed
that students will be encouraged by their teachers to devise personalised physical activity participation goals.

**Assumption Five**: Physical activity interventions are best supported by multiple school, family and community strategies. It is therefore assumed that teachers will enlist the support of family and friends (Hager & Beighler, 2006) and the community (Faber et al. 2007) to positively support their students’ physical activity engagement.

**Learning Goals**

Building on the five assumptions of learning and teaching, five learning goals were subsequently developed. The term ‘mover’, coined by Hastie (2010) to describe someone who is regularly active, was adopted as a metaphor for each of the learning goals to help reinforce the physical activity promotion focus of the HBPE model. It is argued that the *habitual mover* is the overarching goal of HBPE reflecting the model’s major theme of ‘valuing a physically active life’ (Siedentop, 1996). Evidence indicates that those who value physical activity are more likely to be *motivated movers*. Hence, the development of autonomous forms of motivation in children and young people is a key goal of the HBPE model.

Research shows that individual’s perceptions of competence are important for their sustained engagement in physical activity (Bauman et al. 2012; Biddle et al. 2011). During the teaching of HBPE, the need to support students’ feelings of perceived competence through task mastery and receiving personalised, constructive feedback is recognised (Ntoumanis, 2012; Standage & Ryan, 2012). The development of *informed movers* is another key learning goal of HBPE. This cognitive goal is primarily focused on enhancing students’ knowledge and understanding of the health benefits, effects of exercise, safety issues and activity promotion (Harris & Cale, 2018). Finally, the *critical movers* learning goal is considered vital for students to develop awareness of different barriers to physical activity participation including culture, disability and gender and how to potentially overcome these barriers. As advocated by Siedentop (1996), it is also anticipated that students will be encouraged by their teachers to promote physical
activity beyond the school gates.

The foundations of the HBPE conceptual framework provide a theoretical basis for teaching and learning. Following their development, critical features were devised to reflect the underlying theory of self-determination, the major theme (valuing a physically active life), the assumptions about teaching and learning, and the learning goals (‘movers’). The next section considers these critical features which highlight how teacher and student interactions should occur during the teaching of HBPE.

**Critical Features**

According to Metzler (2011), critical features for teacher and student behaviour must be designed to maximise the potential for a model’s learning goals to be achieved. Critical features provide a reminder of how to teach and how students will learn in a particular model and can help determine if it has been implemented as intended (Hastie & Casey, 2014). This is particularly important given the evidence that some teachers teach what Curtner-Smith et al. (2008) described as ‘watered down’ or ‘cafeteria’ versions of pedagogical models. Thus, the critical features for HBPE were designed to help ensure children and young people achieve the specific learning goals (‘movers’) and develop positive physical activity behaviours.

The critical features (Figure 2.4) represent key teacher and student behaviours that should be observed when implementing the HBPE model over the course of a unit. It is important to note, however, that not all of the behaviours are expected to be demonstrated in every single lesson. The critical features were specifically devised to reflect the HBPE model’s foundations outlined in the previous section. For example, one critical feature (T1) encourages teachers to promote physical activity both within and beyond class. However, research has found that only less than two percent of physical educators actually signpost opportunities for activity out of class (McKenzie et al. 2006; McKenzie & Kahn, 2008). It is therefore anticipated that this critical feature may prompt teachers to promote out-of-class participation.
<table>
<thead>
<tr>
<th>Teacher Behaviours</th>
<th>Student Behaviours</th>
</tr>
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<tbody>
<tr>
<td><strong>T1. Teacher promotes physical activity (PA)</strong></td>
<td></td>
</tr>
<tr>
<td>- Demonstrates a passion and energy for PA</td>
<td></td>
</tr>
<tr>
<td>- Encourages students to identify and meet PA targets</td>
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</tr>
<tr>
<td>- Maximise opportunities for MVPA</td>
<td></td>
</tr>
<tr>
<td>- Sets ‘activity challenges’ beyond the lesson</td>
<td></td>
</tr>
<tr>
<td>- Communicates with parents/carers and community bodies</td>
<td></td>
</tr>
<tr>
<td><strong>S1. Students engage in regular physical activity (PA)</strong></td>
<td></td>
</tr>
<tr>
<td>- Are fully prepared for lessons</td>
<td></td>
</tr>
<tr>
<td>- Actively engage in meaningful MVPA during lessons</td>
<td></td>
</tr>
<tr>
<td>- Evidence progress in PA participation out of lessons</td>
<td></td>
</tr>
<tr>
<td><strong>T2. Teacher supports students to be informed movers</strong></td>
<td></td>
</tr>
<tr>
<td>- Refers to current national PA recommendations for age group</td>
<td></td>
</tr>
<tr>
<td>- Highlights how and where to engage in PA</td>
<td></td>
</tr>
<tr>
<td>- Highlights the effects of PA (benefits and risks)</td>
<td></td>
</tr>
<tr>
<td>- Promotes safe and effective practice</td>
<td></td>
</tr>
<tr>
<td><strong>S2. Students are informed participants in physical activity (PA)</strong></td>
<td></td>
</tr>
<tr>
<td>- Explain PA levels and guidelines for age group</td>
<td></td>
</tr>
<tr>
<td>- Describe how and where to engage in PA locally</td>
<td></td>
</tr>
<tr>
<td>- Can explain the benefits of PA</td>
<td></td>
</tr>
<tr>
<td>- Demonstrate/explain safe and effective practice</td>
<td></td>
</tr>
<tr>
<td><strong>T3. Teacher creates a needs supportive learning environment</strong></td>
<td></td>
</tr>
<tr>
<td>- Provides choices in response to needs and interests of students</td>
<td></td>
</tr>
<tr>
<td>- Encourages students to work collaboratively and sensitively</td>
<td></td>
</tr>
<tr>
<td>- Demonstrates empathy towards all students</td>
<td></td>
</tr>
<tr>
<td>- Provides personalised feedback on student progress</td>
<td></td>
</tr>
<tr>
<td>- Provides personalised feedback on student effort</td>
<td></td>
</tr>
<tr>
<td><strong>S3. Students set and review individual/team physical activity targets</strong></td>
<td></td>
</tr>
<tr>
<td>- Set and review written self-referenced targets</td>
<td></td>
</tr>
<tr>
<td>- Actively contribute to team target setting and review</td>
<td></td>
</tr>
<tr>
<td>- Share individual and team progress at regular intervals</td>
<td></td>
</tr>
<tr>
<td>- Provide peer feedback on progress</td>
<td></td>
</tr>
<tr>
<td><strong>T4. Teacher encourages students to become critical movers</strong></td>
<td></td>
</tr>
<tr>
<td>- Identifies barriers to participation</td>
<td></td>
</tr>
<tr>
<td>- Illustrates strategies to overcome barriers</td>
<td></td>
</tr>
<tr>
<td>- Sets ‘movement promoter challenges’</td>
<td></td>
</tr>
<tr>
<td>- Supports movement promoters</td>
<td></td>
</tr>
<tr>
<td><strong>S4. Students promote physical activity (PA)</strong></td>
<td></td>
</tr>
<tr>
<td>- Encourage others to meet and exceed PA guidelines</td>
<td></td>
</tr>
<tr>
<td>- Support peers to engage in PA within lessons</td>
<td></td>
</tr>
<tr>
<td>- Promote PA out of lessons</td>
<td></td>
</tr>
<tr>
<td>- Support others to overcome barriers to participation</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2.4: Critical Features for HBPE
Supporting students as informed movers is deemed important to develop their knowledge and understanding of how and where to be active, as well as of the benefits and risks associated with physical activity engagement. Siedentop’s (1996) notion of ‘literate’ also suggests a knowledgeable participant, further endorsing this critical feature for HBPE. In addition, monitoring one's own and others' physical activity participation is viewed as an effective strategy in physical activity promotion (Hastie et al. 2012). Specifically, Harris and Cale (2018) recommend monitoring in order to inform both teachers and students themselves of their activity levels.

**Summary**

This section has presented and critiqued the conceptual framework for HBPE, including the major theme (valuing a physically active life), the underlying theory (SDT), the five assumptions of learning and teaching, the five learning goals (movers) and the critical features which were created to guide both teacher and student behaviour. The HBPE conceptual framework, as outlined here, was introduced to teachers and provided a scaffold for them to implement health units of learning in their respective schools, which will be discussed in later chapters.

**Section 5: Teachers’ Health-Based Philosophy and Practice**

Section Four explores physical education teachers’ understanding of health, their predominant philosophies and subsequent practice. Some of the well-documented issues surrounding HBPE practice are highlighted, including the contested area of fitness testing and teachers’ engagement with HBPE-CPD.

**Concerns over Teachers’ HBPE Practice**

The teaching of health within physical education, as with any area of the curriculum, is heavily influenced by teachers’ beliefs and understanding. Whilst many teachers may, and in fact do, view the promotion of physical activity for health as important, Cale (2000) recommends that they must also have a clear understanding of how to successfully promote healthy, active lifestyles. In this respect, Harris and Cale (2018) recently advocated that learning in physical education should challenge the misconceptions that many young people hold
about health and fitness and support them to be physically active for life. Research evidence, however, reveals misunderstandings in teachers’ health-related knowledge, with many physical educators reported to be unaware of frameworks for teaching health and promoting physical activity (Puhse et al., 2011). Indeed, a number of authors point to teachers demonstrating heavy ‘fitness for performance’ philosophies, with their HBPE practice dominated by sport and fitness-related activities (Alfrey et al., 2012; Cale, 2000; Castelli & Williams, 2007; Harris, 2000; Wrench & Garrett, 2008).

Furthermore, Harris and Leggett (2013) highlight an apparent mismatch between teachers’ articulated philosophy and their actual practice. For example, whilst some teachers in their study advocated a ‘fitness for life’ philosophy centred on life-long physical activity participation, their planning documents and subsequent teaching demonstrated a ‘fitness for performance’ approach to health. More evidence of questionable practice is provided by Harris (2013), who examined the development of pre-service teachers’ HBPE subject knowledge during a one year post-graduate training programme. She reported that their learning on school placements was limited to observing practice dominated by the teaching of health content knowledge and subsequently did not support the development of pedagogical approaches to effectively promote physical activity. These findings led Harris to conclude that such a narrow focus on health content knowledge provided little opportunity for young people to develop the skills needed to adopt active lifestyles, a concern also raised by others (Cale & Harris, 2013). Indeed, evidence suggests that much curriculum time in physical education is devoted to the practice of fitness testing under the guise of health, a contested area which is explored further.

**The Contested Practice of Fitness Testing**

Research highlights that fitness testing, as one form of health-related assessment, is widespread in a number of countries such as Australia (Wrench & Garrett, 2008), England (Alfrey et al., 2012) and the US (Keating & Silverman, 2004). In an attempt to explain the prevalence of fitness testing in many school physical education programmes, Cale et al. (2014) point to factors such as teacher confidence and the relative ease of its implementation. Moreover, it is
argued that a fitness testing culture appears to be a ‘passed down’ tradition in physical education (afPE, 2015; Cale & Harris, 2005), despite long standing concerns with respect to the purpose, validity and reliability of testing children, alongside other issues such as the wasted curriculum time and the potentially negative experience for some (Cale & Harris, 2009).

Despite these concerns, there have recently been renewed calls by governments for the systematic employment of compulsory fitness testing, for example in English secondary schools (DfE, 2010) and in Australian primary schools (NSW Auditor General, 2018). These calls, based on claims that testing will allegedly enhance young people’s physical fitness or physical activity levels, appear ill-advised, with empirical evidence finding no significant improvements in youth fitness and physical activity levels in the USA since the introduction of fitness tests in the 1950s (Keating 2003; Keating & Silverman, 2009). Moreover, Corbin (2002) challenges the claim that fitness is closely linked to health, or physical activity levels, and argues that limited time, equipment and facilities in school physical education thwart the development of children’s health-related fitness. As a result, Cale and Harris (2009) contend that much of the fitness testing carried out in physical education is mis-directed, with limited evidence that this practice positively influences young people’s attitudes towards physical activity or, indeed, their activity levels (Cale, 2017). Further, Trost (2004) points out that physical fitness is heavily influenced by genetics and out of class sports participation, thereby emphasising the relatively limited role of physical education in positively developing this attribute. Instead, it is proposed that time could be better spent on the process-oriented areas of ‘health’ and ‘physical activity’ behaviour, such as educating young people about the benefits of physical activity, where to be active and how to overcome barriers to participation (Cale & Harris, 2005; Harris & Cale, 2018; YST & WiS, 2017).

Although guidelines on how fitness testing can be employed in positive and appropriate ways are available (afPE, 2015; Cale & Harris, 2009; Harris & Cale, 2018; Keating & Silverman, 2004), the literature highlights some questionable practice when it comes to the implementation of fitness tests in school physical education; such as compelling students to perform tests in front of their peers and comparing test scores between individuals (Keating & Silverman, 2009). It is
argued that practice such as this can be counter-productive when promoting participation in healthy active lifestyles and may lead to many young people, potentially the most vulnerable, ultimately disengaging from physical activity due to their negative experiences (Harris & Cale, 2018). A further concern raised by Haerens et al. (2016), amongst others, is that fitness testing fails to address the broad aims of physical education, beyond promoting physical fitness. Moreover, as this form of assessment focuses exclusively on physical prowess, Lloyd and Smith (2009) argue that it fails to support young people’s holistic development across the other learning domains discussed earlier.

Indeed, in their study, Alfrey and Gard (2014) highlighted a noted tension regarding teachers’ beliefs about why they employed fitness testing from an educational perspective. Some authors maintain that, if appropriately employed in a broad and balanced physical education curriculum, fitness testing can positively support the promotion of healthy active lifestyles (afPE, 2015; Cale et al., 2014; Cale & Harris, 2009; Keating et al., 2002). Consequently, fitness testing may be viewed as part of the solution, but equally it can be seen as part of the problem, especially if it is poorly implemented in practice. To avoid the latter, Harris and Cale (2018) advocate that physical educators be given guidance, support and training in the effective implementation of fitness testing. This is only one aspect of subject knowledge development from a much wider HBPE-CPD landscape which is discussed next.

**Teacher Engagement in HBPE-CPD**

The general absence of health-related learning from the CPD profiles of physical education teachers has been heavily reported in the literature (Alfrey et al., 2012; Cale, 2000; Armour & Yelling, 2004; Castelli & Williams, 2007; Armour & Harris, 2008; Kulinna et al., 2008; Harris, 2010; Harris, 2013). Indeed, teacher CPD still appears to be dominated by attending sport-specific courses (Armour et al., 2015) and the literature highlights an over-reliance on prior life experiences and media sources to develop subject knowledge, rather than via formal engagement in health-related learning (Alfrey et al., 2012; O’Sullivan, 2005; Tsangaridou, 2006). Illustrating this lack of prior engagement in relevant professional development, a survey by Alfrey et al. (2012) of 112 secondary PE teachers in
England revealed that around half of teachers had no experience of health-related learning before teaching it themselves in schools. Moreover, almost three-quarters felt that their physical education initial teacher training (PEITT) had not sufficiently prepared them to teach HRE, which highlights the need for a greater HBPE focus during this early stage of a teacher’s career.

Given their findings, Alfrey et al. (2012) questioned how well equipped teachers were to educate their students for healthy active lifestyles. Yet, despite this and their lack of experience, most teachers did not perceive a need for any further health-related professional development. In order to better understand why teachers’ practice wasn’t progressing, the authors proposed a ‘HRE Conundrum’ model which highlights a persisting cycle of teachers’ philosophies and practices being rarely challenged. Consequently, due to teachers’ failure to recognise the need for, and subsequently engage in health-related CPD, the status quo of narrow health practice prevails (Alfrey et al., 2012).

Furthermore, a widely reported study conducted by Castelli and Williams (2007) in the US revealed that many teachers were unable to design an effective physical activity programme for adolescents and were not aware of gaps in their HBPE subject knowledge. These findings, which support previous research (Alfrey et al., 2012; Cale, 2000; Cardon & De Bourdeaudhuij, 2002; Clarke & Hollingsworth, 2002), highlight the misconceptions in teachers’ perceived confidence to teach health and therefore failure to recognise the need to modify their existing practices. Consequently, and as others have (Alfrey et al., 2012; Cale et al., 2016), Castelli and Williams (2007) questioned the effectiveness of teachers in educating their students to lead active lifestyles. Whilst the authors (Castelli & Williams, 2007) offered futile CPD as the main explanation for their findings, the difficulty in providing appropriate programmes was acknowledged. This suggests that health aspirations are unlikely to be realised if teachers lack the subject knowledge to effectively teach their students (Armour et al., 2015; Armour & Harris, 2013).

Despite this reported limited engagement in health-related professional learning, and as just noted, evidence suggests that teachers paradoxically appear over-confident in this area (Alfrey et al., 2012; Castelli & Williams, 2007; Harris, 2005).
This predicament has led to many scholars (c.f. Armour, 2010; Armour & Harris, 2013; Cale & Harris, 2009; Castelli & Williams, 2007; Harris, 2005, 2013) expressing serious reservations over teachers’ pedagogical knowledge to effectively educate students for lifelong physical activity. Further, Cale et al. (2014) suggest that this apparent lack of subject knowledge may explain why teachers find strategies to support their students’ physical activity a real challenge. Harris (2014) highlights that the physical education profession in England has previously been criticised by school inspectors for the poor knowledge and understanding of health and fitness demonstrated by students.

In response, Armour et al. (2015) call for teachers to engage with the physical activity for health agenda in order to support the promotion of active lifestyles. Furthermore, Harris and Cale (2018) have recently created two separate sets of PAL (promoting active lifestyles) principles to support teachers in promoting physical activity across the whole school and also within physical education. An example of a whole-school PAL principle includes developing strong community links with activity providers such as sports clubs and leisure centres to increase opportunities for students. On the other hand, a specific PAL principle for physical education recommends limiting instructional and waiting time during lessons. It is important to note that teachers have autonomy to adopt which PAL principles they feel best suit their particular context and the principles are also not planned to be restrictive, with teachers free to create their own.

**Summary**

This section has considered some of the concerns expressed in the literature regarding teachers’ HBPE practice, such as misunderstandings in their health-related knowledge and a lack of awareness of frameworks to support the promotion of physical activity for health. Moreover, evidence suggests that teachers largely demonstrate ‘fitness for performance’ philosophies, with narrow and sometimes questionable practice reported. This is particularly prevalent in the contested area of fitness testing, which appears to take precedence over physical activity promotion. Compounding these concerns, research suggests that teachers often demonstrate a misguided confidence in their teaching of HBPE-CPD. Thus, evidence of engagement with relevant health-related learning
is largely absent from teachers’ CPD profiles. Subsequently, there have been calls for teachers to engage with new approaches and ideas to support the promotion of active lifestyles in school physical education. This leads in to the next section, which broadly explores the CPD landscape in the field of education and specifically considers the experiences of teachers.

Section 6: Teachers’ CPD

This section initially defines CPD and outlines its supposed purpose, before exploring what the literature suggests constitutes effective CPD practice. This is followed by considering a number of theoretical frameworks for designing and evaluating CPD programmes in terms of both teacher and student learning. Further, what is known about effective and ineffective CPD programme design is considered, which leads to a critique of current models for teacher CPD and the experiences of participants.

Defining CPD

There are numerous definitions and terms used to describe teachers’ professional learning in the literature. Historically, the most common term has been ‘continuing professional development’, but recently other terms have emerged including ‘career-long professional development’ (Armour et al. 2015) and teacher professional development and learning (CPDL) (Cordingley et al. 2015). Regardless of the terminology, professional development has become closely linked with a top-down, training model which is typically delivered in a ‘one-size fits all, sit and get’ session and is based on the assumption that teachers need direct instruction about how to improve their practice (Martin et al., 2014). Indeed, this training model appears to contradict what is commonly recognised as good teaching practice and the recognition of professional learning as a growth model that values active engagement, teacher voice, collaboration and reflection.

Whilst it is widely accepted that teachers have both a right and a responsibility to engage in CPD throughout their careers (Cordingley et al., 2015; Darling-Hammond et al., 2009; Desimone, 2009), research highlights different goals for
professional learning from fulfilling national policy to meeting teachers’ individual needs (Armour et al., 2015). Previously, it has been argued that there was a strong focus in England on school improvement priorities over the specific needs of individual teachers, which may have impacted on the effectiveness of practice (Keay & Lloyd, 2011; Pedder et al. 2010). However, a recent ‘Standard for Teachers’ Professional Development’ published by the DfE (2016) for all schools in England sets out a clear description of what effective CPD for teachers looks like and advocates a sharp move away from generic ‘one size fits all’ programmes. Instead, the document recommends that teachers must be able to access CPD that is relevant for their particular contexts.

International evidence however has highlighted a marked difference between countries in the expectation for teachers to engage in professional development. For example, whilst Iceland has set an annual minimum requirement of 150 hours for all teachers and Japanese teachers are required to complete 30 hours of professional development every 10 years for recertification (Office of Economic Co-operation and Development [OECD], 2014), other countries including England have no mandated minimum prerequisite. Moreover, Ashmore (2018) highlights that the average teacher in England spends only four days on CPD per year and that the professional development they do undertake is not always of high quality. Furthermore, evidence shows that opportunities for teachers in England do not focus sufficiently on specific student learning needs and lag behind those experienced by colleagues elsewhere internationally (Cordingley et al., 2015). Despite this worrying situation, there is currently no widely used system of quality assurance for teacher CPD provision in England.

Consequently, it is important that teachers understand what is meant by, and are able to access, high-quality CPD (Timperley et al., 2007; Kraft et al., 2018; Cordingley et al., 2015). A suggested issue with having no specific mandate or quality assurance system is that teachers may not be actively supported to engage in professional development and may not have a clear understanding of what high-quality CPD looks like. Indeed, this was highlighted earlier in the chapter when exploring teachers’ lack of engagement with HBPE-CPD.
Guskey (2002), however, viewed quality professional learning as a vital ingredient in supporting both teachers’ practice and their students’ learning:

professional development programs are systematic efforts to bring about change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students. (p.381)

On a similar vein, more recent evidence has identified the quality of teaching as the most important in-school factor for improving student outcomes (Hanushek and Rivkin, 2012; Burgess, 2015). Moreover, several studies correlate collaborative and sustained teacher CPD with significant learning improvements for students (Cordingley et al., 2015), thereby illustrating the importance of proper investment in high quality professional development.

**Theoretical Frameworks for Designing and Evaluating CPD**

In proposing a theoretical framework for designing CPD programmes, Birman et al. (2000) highlight a number of essential structural features such as form, duration and participation that set the context for professional learning. Building on these features, the authors outline content, active learning and coherence as key factors during the CPD process (Birman et al., 2000). These three factors, together with sustained duration and collective participation, are also endorsed by Desimone (2009) as five core features of effective professional development programmes. Exploring these features in more depth, Desimone (2009) argues that the content of CPD programmes must have a subject-specific focus and be compatible with teachers’ existing experiences and beliefs, as these can have a significant influence on their subsequent learning (and practice). When considering how long CPD programmes should last to achieve sustained impact, reviews support planning programmes over at least twelve weeks or one school term (Cordingley et al., 2005). More recently, research by the Teacher Development Trust (2015) highlighted that most effective professional development lasted at least two school terms, but ideally for a year or longer.
This research suggests the need for a re-think on how CPD programmes are structured, with a move away from the traditional, one day externally provided courses to longer term in-house teacher collaboration.

Guskey (2002) proposed three further key ingredients for the design of high-quality CPD programmes. First, designers need to recognise that change takes place gradually and is a difficult process for teachers. Second, CPD programmes must provide teachers with regular feedback on how their practice impacts on student learning. Third, there must be some follow-up support after the initial professional development phase. This notion of continued support is accepted as a key component in the process of teachers making positive changes to their practice (Fullan 2001; Goodyear et al., 2015; Little & Houston, 2003). Indeed, Bechtel and O’Sullivan (2006) argue that applying the key ingredients of Guskey’s model in the design of CPD programmes will promote positive changes in teaching and learning.

However, assessing the impact of professional development on practice has been recognised as problematic by a number of authors (Ingvarson et al, 2005; Bubb et al, 2008; Darling-Hammond et al, 2009). As identified earlier, although evidence demonstrates that professional development can improve student learning (Cordingley et al., 2015; Pedder et al., 2008; Yoon et al., 2007), it is rarely related specifically to student achievement and learning. Consequently, providing evidence of the subsequent impact of teachers’ learning on their students’ learning is recognised as a challenge for both participants and providers of professional development (Keay & Lloyd, 2011). To support teachers in evidencing the impact of CPD on their learners, Keay and Lloyd (2011) recommend that teachers embed a ‘Process Model’ in their daily practice. Essentially, this model is viewed as a tool which teachers can use to recognise the impact of CPD activities on their students’ learning. Such a model requires teachers to identify their own learning needs directly in relation to the needs of their individual students and to plan for, and monitor, the intended impact of their new learning. It is argued that this process promotes an inclusive approach to teaching and learning and also personalises teachers’ professional learning experience (Keay and Lloyd, 2011).
An earlier hierarchical model for evaluating professional development was proposed by Guskey (2000) with five levels of impact to consider including: (1) participants’ reactions; (2) participants’ learning; (3) organization support and change; (4) participants’ use of new knowledge and skills; and (5) student learning outcomes. In this model it is suggested that each level increases in complexity, with the fourth and fifth levels (i.e. the impact of professional development on teachers’ practice and the subsequent impact on their students’ learning) being the most challenging to evaluate. More recently, Armour et al. (2015) have advocated the adoption of a Deweyan perspective, with the concept of ‘education as growth’ underpinning a new conceptual framework for the design, delivery and evaluation of CPD in physical education. The authors argue that the energy invested by policy makers and CPD providers in sourcing “practical models of ‘effective’ CPD that work’ (Armour et al., 2015, p. 2) has been wasted, as evidenced by teachers repeatedly rejecting externally created curriculum materials. This reminds us that teachers should be provided with opportunities to be actively engaged in the production of new ideas, rather than viewed as passive recipients of knowledge. Therefore, it is advised that the core focus of CPD is contextualised practice and claimed that effective CPD will only occur if learning is dynamic and continuous (Armour et al., 2015). Drawing on Greene’s (1995) idea of ‘teachers as strangers’ who are encouraged to view their practice through ‘fresh eyes’, Armour et al. (2015) highlight the importance of a learning focus for effective CPD, which is active, on-going and supports reflection.

What Constitutes Effective CPD?

Effective CPD appears to be about helping teachers to continually grow as learners throughout their careers. Mourshed et al. (2010) reported effective teacher professional learning as one of the six key interventions consistently seen at all stages of educational improvement. Yet, there is still limited robust evidence to support conclusive claims about what constitutes effective CPD (Armour et al., 2015). With the continued devolvement of schools from local authority control leading to a fragmented educational landscape in England over the past decade, Griffiths and Makapoulou (2015) contend that it is increasingly difficult to determine what effective CPD looks like. In contrast, others are less
quick to dismiss the idea that we cannot determine what effective CPD looks like.

Indeed, an extensive body of literature on different models of CPD and their relative effectiveness does exist. For example, Guskey (1994) argues that CPD should be integrated, systematic, coordinated and progressive, although Armour et al. (2015) contend that this is a particularly challenging aspiration in practice. Jayaram, Moffit and Scott (2012) suggest that at least five major strategies are needed to deliver effective CPD: (1) having a vision of effective teaching; (2) being strategic; (3) prioritising coaching; (4) ensuring teachers’ needs are met and (5) having impact. Several review studies have been conducted in an effort to identify the features which increase the chance that CPD programmes for teachers will result in more effective practice (Garet et al., 2001; Timperley et al., 2007; Van Veen et al., 2012). Important features include learning together with colleagues and being actively engaged in deliberate critical reflection of practice (Keay & Lloyd, 2011). Although knowledge of such features is potentially helpful for the design of CPD programmes (Lydon & King, 2009; Van den Bergh et al., 2014), research evidence on teachers’ experiences is predominantly disappointing. More specifically, in some previous studies fewer than fifty percent of teachers have reported their CPD experiences as pertinent to their specific contexts (Lieberman & Pointer Mace, 2008; Opfer & Pedder, 2011; Wei et al., 2009), which reinforces the need for CPD to be relevant for the unique learning requirements of teachers as learners.

Earlier work by Darling-Hammond (2006) placed an emphasis on teachers’ learning and linked knowledge and practice in ways that supported professional and pedagogical growth. More recent research similarly recommends that CPD should be personalised to an individual's learning needs and comprise activities, such as reflection and collaboration with colleagues on developing practice, which may actually support schools to do better (Cordingley et al., 2015; de Vries et al., 2014; OECD, 2015; Timperley, 2011). Furthermore, in the context of PE-CPD, Tannehill et al. (2015) identify a wide range of relevant activities including academic study, reading professional material and participating with professional networks outside of school. However, encouraging teachers to engage with these recommended activities may prove a challenge, especially if they fail to consider the impact of more informal potential avenues for their professional learning.
(Keay & Lloyd, 2011). This argument is supported by findings from a Teaching and Learning International Survey [TALIS] (OECD, 2014), which revealed that the activities teachers most often participate in are courses or workshops, with 71% of lower secondary teachers reporting that they had engaged in these activities during the survey period. After courses and workshops, the next most frequently cited activities are attending education conferences or seminars (44%) and participating in a teacher network (37%). This evidence suggests that more work is needed on encouraging and supporting teachers to consider other forms of professional learning beyond attendance at an external event and advocates a subsequent move away from the traditional model of CPD in education.

**The Problematic Traditional Training Model**

Together with unconvincing evidence demonstrating how CPD programmes have impacted on both teacher and student learning (Hill, Beisiegel & Jacob, 2013), reviews of the literature consistently highlight the futility of most programmes (Guskey, 2002; Timperley et al., 2007). More specifically, Guskey (2002) argued that teachers must buy in to a curriculum or pedagogical innovation if it is to be successful, yet the traditional model of professional development expects teachers to adopt a new idea before they see evidence of its impact on their practice. As highlighted earlier, this traditional model is often characterised by short, de-contextualized, external courses involving the compartmentalisation of knowledge into discrete blocks of learning, without any follow-up support (Armour, 2010; Armour & Harris, 2013; Armour & Yelling, 2004, 2007; Casey, 2012; Garet et al., 2001; Muijs & Lindsay, 2008; Wright et al., 2009). Consequently, various phrases such as ‘pre-packaged’ (Darling-Hammond, 2010), ‘spray-on’ (Mockler, 2005) and ‘visited upon teachers’ (Groundwater-Smith and Mockler, 2009) have been used to describe such practice. Noteworthy and of particular concern is that none of these phrases point towards professional development as being a career-long process for teachers, suggesting that the traditional model is not fit for purpose (Armour, 2010; Armour et al., 2015; Lieberman & Pointer-Mace, 2008).

Supporting this observation, Armour (2006) argues that improving the quality of teachers' CPD is crucial to raising the standard of physical education, yet she
describes the traditional model as incompetent and unlikely to result in effective teacher learning (Armour, 2006; Armour, 2010). Further, Attencio et al. (2012, p.141) suggest the traditional model results in:

superficial participant learning experiences and does not support teachers in becoming adaptable and innovative practitioners.

Whilst it is concerning that this CPD model has prevailed for so long, it is perhaps also understandable given the many pressures of the current educational climate. Patton and Parker (2014) advocate a longer-term view of teachers’ professional learning and stress that both sufficient time and continued support are needed in order for deep level changes in practice to occur. In an attempt to explain the general poor quality of CPD offered, McChesney (2015) points to common practice where professional development is often done to, rather than with, teachers. This manifests itself in learning activities which are not relevant and disconnected from both teachers’ prior learning and their current learning needs. Against this backdrop, it is hardly surprising that a study by Wei et al., (2009) reported a majority of teachers rating their professional learning experiences as unhelpful in developing their practice.

The lack of helpfulness must be considered alongside strong evidence that CPD programmes are viewed favourably by teachers when they are sustained and intensive, and when sufficient time is afforded for them to consider the implementation of new ideas in their own schools (Garet et al. 2001; Desimone et al. 2002; Penuel et al. 2007; Weiss & Pasley 2006). Fullan (2007, p.35), however, argues that CPD programmes are ‘seldom powerful enough, specific enough, or sustained enough to alter the culture of the classroom and school’. Further, a lack of planned follow up support for teachers during the challenging implementation phase has been highlighted as a limiting factor in the design of PE-CPD programmes (Armour & Makopoulou, 2012; Cothran et al., 2006; Kulinna et al., 2008; Harris et al., 2011). Specifically illustrating this lack of follow-up support during a CPD programme for a Fitness Education model, Kulinna et al. (2008) reported that teachers felt overwhelmed and unable to absorb all of the information being presented. In addition, these teachers stated that the knowledge failed to relate to their own contexts, so they rejected it, thereby
reinforcing concerns raised earlier in the chapter.

Researchers have argued that many CPD programmes lack recognition of the need to embed learning in teachers' own professional practices and working conditions (Borko, 2004; Timperley & Alton-Lee, 2008). Indeed, scholars (e.g. Huizinga et al., 2014; Petrie & McGee 2012) suggest that teachers need support to become curriculum designers, as well as implementers, and point to limited research in this area. As teaching and learning to teach are contextually situated, Opfer and Pedder (2011) recommend that CPD programmes should build on teachers' own knowledge and beliefs, classroom practices and perceived problems. This idea of co-producing knowledge with teachers to support the development of their practice points to alternative models of CPD, such as practitioner research (Casey, 2013; Casey & Dyson, 2009; Glotova & Hastie, 2014; Keegan, 2016). The following section focuses attention on teachers' engagement in pedagogical change.

**Teachers’ Engagement in Pedagogical Change**

Research suggests that often teachers find it difficult to initiate change, due to a lack of confidence and feeling like beginner teachers again (Casey, 2013; Cruz, 2008; Robson, 2002; Rust & Myers, 2006). Robinson (2013) also identifies a perceived professional risk for teachers engaging in the process of pedagogical change, but argues that only by initially identifying their limitations can teachers enhance their knowledge, skills and understanding. Indeed, Guskey (2002) believes that teachers grow in confidence once they witness a positive impact on student learning. Further, successful implementation of pedagogical change has the potential to alter teachers’ attitudes and beliefs, but Halton (2004) proposes that they must be fully committed to the change process. Teachers, however have reported engaging with CPD, (and practitioner research more specifically), difficult due to competing organisational commitments, curriculum pressures and increased accountability (Brydon-Miller & Maguire, 2009; Ellis & Loughland, 2016; Keay and Lloyd, 2011). Indeed, these are often cited as key reasons as to why teachers do not sustain pedagogical change (Goodyear & Casey, 2015; Harvey & Jarrett, 2014; Hastie et al., 2011). Therefore, Keegan (2016) calls for
an appreciation of the potential challenges faced by teachers, whilst Casey et al. (2017) identify the need for both time and opportunity in order to change practice.

Although Aubusson et al. (2009) have also highlighted the challenges of working in busy schools, William (2014) reinforces the need to create specific time and space for teachers’ professional learning. Moreover, Weston (2015) argues that schools must protect substantial amounts of time every week for professional development, collaborative planning and peer observation. Finding this additional time, though, appears to pose a real challenge for teachers and school leaders in England at present, especially with squeezed budgets, increasing class sizes and a teacher recruitment crisis highlighted by the National Audit Office (2016). While this landscape paints a pretty pessimistic picture, Cordingley et al. (2015), in contrast, have reported that successful CPD can occur where school leaders create positive conditions to allow it to flourish.

There is evidence that education policy can encourage CPD providers to offer largely similar courses to a diverse group of teachers, often with completely different needs. Consequently, very little changes in practice and ‘teachers are effectively deskillled as they progress through their careers’ (Armour, 2010, p.5). In support of this claim, Armour and Yelling (2007) found that attempts by providers to generalise knowledge for the ease of dissemination made it challenging for participants to apply new learning in the context of their own schools. This challenge has also been highlighted by Cothran et al. (2006), who reported that teachers felt overwhelmed with new knowledge from a directed public health curricular change project, due to its perceived disparity with both their philosophies and their specific teaching contexts. Further, Armour and Makopoulou (2012) stressed a disconnect between providers of a nationally funded PE-CPD programme in England, who aimed to support teachers as independent learners, yet inadvertently controlled the learning agenda to reflect government policy. These findings highlight the challenges of achieving sustained pedagogical and curriculum change and stress the importance of developing CPD programmes, which are co-constructed with teachers and bespoke to their particular contexts (Cliff, 2012). Goodyear et al. (2016) however, highlighted how the adaptation of the Cooperative Learning model was dependent on a teacher educator who was external to the school-based community. Therefore, in order to
support schools and teachers in engaging in on-going curriculum change, school-based communities may need external support on how to adapt curriculum for it to be both contemporary and contextually relevant.

Reconceptualising Teacher CPD

Reflecting on the lack of sustained pedagogical transformation in schools, Armour et al. (2015) argue that teachers and schools (not just CPD providers) are partly to blame, with previous research (e.g. Curtner-Smith, 1999; Evans et al., 1996) reporting an apparent reluctance by teachers to change their practice. There is also evidence that schools are not conducive environments to supporting developments in practice. For example, a report published in the US for The New Teacher Project (TNTP, 2015) challenges the perception that we know what works when it comes to teacher CPD. Over a two-year period, the research team examined teacher development in three large school districts and one charter school network and found that, despite major investment in CPD, there was no large-scale systemic evidence that any particular strategies were effective in helping teachers improve. Further, the report concluded that school systems are failing to help teachers understand how to improve their practice and, consequently, proposed a re-evaluation of existing CPD programmes in order to enhance learning and teaching.

This call for a re-evaluation of existing CPD programmes is supported by a recent Teaching and Learning International Survey (OECD, 2015), which found that teachers were mainly participating in CPD activities out of school, yet ironically reported more positive impact on their practice from school-based professional learning. The apparent disconnect between teachers’ current participation in CPD activities and what they felt would most benefit their practice suggests a shift in focus is needed, with increased opportunities for teachers to engage in collaborative professional learning activities with their colleagues in school (Department for Education, 2010; OECD, 2014). Supporting this proposed move towards more school-based professional learning is evidence from a CfBT Education Trust report (Daw & Robinson, 2013). This report highlights that the best improvements in secondary school teaching were observed when CPD was developed in-house and was focused on having a direct impact on practice. The
authors, however, recommended that CPD needs to be on-going through activities such as workshop, lesson observation and mentoring (Daw & Robinson, 2013).

There are multiple reasons reported for the failure of many CPD programmes, not least the challenges in designing effective opportunities for teachers to reflect on their learning (Armour & Yelling, 2004; Deglau, 2005). Guskey (1986) previously argued that most programmes fail because they do not consider what initially motivates teachers to engage in CPD activities, nor the change process which typically occurs. Although research has investigated teacher beliefs and teacher change during CPD programmes (Bechtel & O’Sullivan, 2007; Deglau, 2005), still relatively little is known about what teachers actually learn. The former study conducted by Bechtel and O’Sullivan (2007) examined enhancers and inhibitors of change and how these contributed to the teacher change process of four physical education teachers. Enhancers of change included teachers’ beliefs and support, with three sub-themes of collegial, principle and student support identified. Where unsustainable change was noted, it was due to a lack of prominence of these enhancers. Reported inhibitors to teacher change were district policies and practices, educational priorities and the status of physical education. This has led to recommendations that CPD providers create opportunities for teachers to actively examine their role in the change process and include better support mechanisms for teachers trying to implement change (Bechtel & O’Sullivan, 2007; Carse, 2015).

Thus, Cordingley et al. (2005) advise that professional development programmes should ideally involve the collective participation of at least two teachers from the same department and/or school, as this provides the opportunity for learning to be on-going through the informal sharing of practice. This opportunity to share practice is endorsed by findings from the ‘Variations in Teachers’ Work, Lives and the Effects on Pupils’ (VITAE) research project (Day et al., 2007). In a longitudinal study of one hundred schools across seven local authorities in England, Day et al. (2007) found that one of the key aspects of professional development teachers valued most was the opportunity to share practice with their peers. It is recognised, however, that a number of important factors need to be in place to facilitate this, such as positive school conditions which provide
opportunities for teachers to work with other educators in professional learning communities (Morgan et al., 2010).

**Collective Participation**

As already noted, there is growing evidence to suggest that providing opportunities for collective participation in professional learning communities has real potential to develop teachers of physical education as continuous learners (Armour & Makopoulou, 2012; Goodyear & Casey, 2015; Jess & McEvilly, 2013). According to Attencio et al. (2012), these professional communities often involve teachers supporting each other’s learning, through regular professional dialogue, to develop their own pedagogy. Further, teachers may be engaged in exploring practice with colleagues. This need to be supported in their professional learning has been identified as important by Cochran-Smith (2003) in helping teachers manage the tensions associated with pedagogical change.

Notably, teachers have reported a better understanding of their practice through participation in a learning community, which is viewed as a key factor for the successful implementation of new ideas (Cochran-Smith, 2003; Deglau & O’Sullivan, 2006; Morgan et al., 2010; O’Sullivan 2007; Parker et al., 2010). Further, Armour and Makopoulou (2012) described teachers developing a shared language and understanding, which has facilitated peer support during the challenging implementation phase. An emphasis on peer support has also been reported as beneficial in a number of systematic reviews on teacher CPD (Cordingley et al., 2003, 2005a, 2005b; 2010; 2015). For example, teachers supported each other through shared activities such as coaching, joint lesson planning and team building. Working collaboratively helped to reduce teacher load, while simultaneously enhancing their productivity as a group (Cordingley et al. 2010).

Importantly, teachers themselves view CPD programmes to be effective when they foster the development of collaborative learning environments and communities of practice in schools (Darling-Hammond et al. 1995; Knapp 2003; Wei et al. 2009). Yet, despite the potential for teachers to collaborate with fellow practitioners to aid pedagogical change and innovation, professional learning
communities appear to be under-developed in physical education. For example, only a limited number of studies (Goodyear and Casey, 2015; O'Sullivan 2007; Parker et al. 2010) have reported how learning communities have helped to sustain a pedagogical innovation. Of further note is the realisation that learning communities may not necessarily result in a high quality experience for either teachers or their students and can just as easily lead to the reinforcement of poor practice (Pedder et al., 2010). Whilst considerable challenges remain developing and sustaining collaborative learning communities in unsupportive school contexts (Makopoulou & Armour, 2014), teachers (and CPD providers) may wish to explore opportunities which involve sustained collaboration, grounded in classroom observation and support by external individuals such as university researchers (Bell et al., 2010; Cordingley et al., 2015).

**Summary**

This section has considered the purpose of CPD and what constitutes effective CPD. A need to reconceptualise CPD for teachers is proposed, with a move away from the model traditionally employed in education, often involving one-off sessions with little opportunity for teachers to apply their learning in practice. The literature highlights a need to actively involve teachers in collaborative and sustained forms of school-based CPD programmes. It is argued that these programmes may help to bridge the research/theory practice gap which is considered next.

**Section 7: Bridging Research/Theory Practice Gaps in Education**

In this section, I begin with a general overview and discussion of the long-standing research/theory practice gap which exists in education. I highlight some of the key issues which have been identified in the literature, especially the obstacles to practitioner engagement in and/or with research. Following this, some potential solutions are offered to help bridge this gap and develop closer working partnerships between the research and practitioner communities.
The relationship between theory and practice is often described as a gap that needs to be bridged, or as two different worlds that should be synchronised (Kvernbekk 2012; Hammerness 2013). It is proposed that the disconnect between theory and practice, coupled with the customary top-down model of disseminating knowledge, has contributed to an on-going research/theory practice gap in education. Indeed, Armour (2017) argues that this persistent gap acts as a formidable barrier to the development of optimally effective pedagogies and practices. Following a review of the literature, Broekkamp and Van Hout-Wolters (2007) concluded that while a gap may exist, the transfer of results from research to practice is a complex process. They identified a number of issues pertaining to this complexity, such as educational research not being meaningful for teachers, who consequently make little use of research in their practice. More recently, Armour (2017) has further highlighted that practitioners have difficulty in accessing potentially useful research and have few opportunities or mechanisms to engage productively with researchers. Developing her argument further, Armour (2017) points to much published research on effective pedagogies to support young people’s sustained engagement in physical activity, which she claims remains largely inaccessible to practitioners. Furthermore, Armour and Harris (2013) argue that most research is published and presented primarily for fellow academics/researchers in forums that practitioners do not engage with.

Attempting to explain this division between research and practice, a number of barriers have been identified in the literature concerning practitioner engagement with educational research. Findings from a systematic review conducted by Bell et al. (2010), for example, identified time as a major obstacle; especially the difficulty for practitioners to undertake research in the face of multiple, competing organisational agendas. Together with time to implement research in practice, Vanderlinde and van Braak, (2010) reported the lack of applicability of educational research and the use of complex language in research reports as key barriers. The authors further proposed that researchers and practitioners have different priorities; for whilst the former pursue new knowledge, the latter seek new solutions to current issues. Indeed, although the teachers in their study conveyed that they were more receptive of practical and applicable research,
evidence suggests there still appears to be a challenge applying research effectively to practice.

Recently, Stolz and Pill (2016) reported a false division between teacher educators as theory generators and teachers as theory appliers. This discrete separation of theoretical and practical knowledge resulted in a split between theory and practice, with theoretical knowledge not being viewed as highly relevant by school-based practitioners. Kinyaduka (2017), however, stresses the importance of embedding theoretical knowledge in practice to help inform and develop teaching and learning. Consequently, there have been calls for teachers to assume a more prominent role and for researchers and practitioners to collaborate in new ways to enhance both research and practice (Armour, 2017).

**Bridging the Gap through Partnership**

In attempting to understand the challenges of applying research to practice in educational contexts and how to potentially bridge the gap, Coburn and Stein (2010) highlight fostering partnerships as a key ingredient. Vanderlinde & van Braak (2010) have advocated the promotion of ‘design-based research’ and the establishment of ‘professional learning communities’ to help build bridges between researchers and practitioners and facilitate school improvement. According to the authors, design-based research involves the study of learning in context, whereas professional learning communities involve groups of people, such as teachers, who share a common goal and support each other’s practice. More recently, the creation of ‘Research-Practice Partnerships’ (Coburn, Penuel & Giel, 2013; Penuel & Farrell, 2016), where researchers and practitioners have opportunities to interact and to inform practice have been proposed as a potential solution. Coburn, Penuel and Giel (2013, p. 2) define these Research-Practice Partnerships as:

> long-term, mutualistic collaborations between practitioners and researchers that are intentionally organized to investigate problems of practice and solutions for improving district outcomes.
In presenting their vision for new ways of working, Penuel and Farrell (2016) argue that traditional research and development cycles take too long to be of real use for practitioners. Consequently, they propose more productive and faster ways of translating research to practice. Indeed, analysis of the research/theory practice literature in education by Grima-Farrell (2012) resulted in the creation of a range of guiding statements to support a closer alliance between research and practice. One of these guiding statements advocated the development of collaborative partnerships between schools and universities, with teachers and researchers merging their respective skills to ultimately support student learning (Grima-Farrell, 2012). On a similar vein, Meijer and Kuijpers (2016) contend that creating partnerships between practitioners and researchers will help to generate meaningful knowledge which can be transferred to practice contexts. Moreover, Ulvik et al. (2017) advocate that teachers need knowledge developed by external experts in order to teach better. A particular strategy proposed by Vanderlinde & van Braak (2010) is the establishment of dissemination centres at universities which would have a remit for translating and distributing research findings to practice.

It is argued that ‘Research-Practice Partnerships’ benefit researchers by allowing them to trial ideas in real-world contexts, whilst simultaneously providing practitioners with an opportunity to explore issues of interest to them (Coburn et al., 2013; Penuel, Allen, Coburn, & Farrell, 2015). Kemmis and McTaggart (2008), however, advise that the role of researchers is primarily one of service to teachers and they must respect teachers’ experiential, or craft knowledge. The literature equally reveals that such ‘Research-Practice Partnerships’ are only effective and sustainable where there is true collaboration between the university researchers and school-based practitioners throughout the process (Penuel & Fishman, 2012; Penuel et al., 2015). More specifically, De Vries and Pieters (2007) proposed that practitioners and researchers should be encouraged to co-construct ideas and set research agendas, with Grima-Farrell (2012) reporting shared responsibility and a sense of ownership when there was strong teacher engagement in the research process. In addition, Coburn et al. (2013) have highlighted close collaboration between researchers and teachers during the design and development of innovative curriculum materials to support student learning.
Critical friendship and peer support have also been reported by Bell et al. (2010) as key factors supporting practitioner engagement in and/or with research. Specifically, Bell and colleagues' review provided examples of researchers acting as mentors who modelled intervention strategies, provided technical support via email and supported teachers with resources such as manuals which they used collaboratively. Additionally, Cordingley et al. (2015) have identified other strategies such as providing teachers with access to relevant research, encouraging them to reflect on their practice and to consider the impact of alternative approaches on their students’ learning. Indeed, numerous systematic reviews on collaborative CPD (Cordingley et al., 2003, 2005a, 2005b 2015) highlight the need for sensitivity to ensure that partnerships between teachers and external people are based on mutual respect and that professional learning is a shared process.

Summary

This section has highlighted a number of issues concerning the gap between research/theory and practice, in particular a persistent divide between theory and practice and limited opportunities for practitioners and researchers to collaborate productively. A number of barriers to practitioner engagement in and/or with research have been identified such as a lack of time, the perceived irrelevance of much research and the lack of opportunity to engage with researchers. The creation of collaborative research practice partnerships between schools and universities was highlighted as one potential solution to help disseminate and translate new knowledge effectively to practice. However, it is recommended that practitioners be centrally involved in shaping research agendas and supported by external specialists when implementing research in their own classrooms.

Section 8: Pedagogical Models in Physical Education

The next section explores the implementation of pedagogical models in physical education contexts. Following a justification for a move away from the Multi-Activity Model to employing pedagogical models as the ‘organising centre’ for physical education curricula, I consider their adoption in school physical education programmes and why they appear to have remained an ‘innovation
without change’. This leads onto an examination of teachers’ experiences when learning to use new pedagogical models.

**A Move Away from the Multi-Activity Model**

It is now three decades since the Multi-Activity Model, which prioritises the teaching of activity content, was formally identified by Siedentop et al. (1986) as the dominant curriculum model used in school physical education worldwide. This model typically involves teachers employing direct teaching styles to develop technical mastery in activities such as athletics, games and gymnastics over short blocks of four to six lessons (Curtner-Smith & Sofo, 2004). Evidence suggests that the model remains prominent in physical education today, despite strong reservations especially in the context of achieving health-related outcomes (Armour & Harris, 2013; Kirk, 2010; Haerens et al. 2016). In attempting to explain this continued prominence, one suggestion is that most teachers are products of a multi-activity curriculum and go on to replicate it in their own practice. A further proposal is that designing the curriculum in this manner is perceived to afford students’ breadth of experience across a wide range of different activities and also prevents boredom. Kirk (2012), however, argues that these short, sport-focused units provide limited opportunities for students to progress their learning beyond basic levels. Moreover, in adopting a ‘one size fits all’ approach, similar to the traditional CPD model discussed earlier, these programmes cater only for a minority of already sport-competent children, typically boys. Consequently, it has been suggested that physical education fails to provide a positive learning experience for the majority of children (Kirk, 2012; Metzler, 2011).

Attempting to address these concerns, Metzler (2011) advocated a move away from the Multi-Activity Model to employing Instructional Models as the ‘organising centre’ for physical education curricula. Kirk (2010), however, argues that the term ‘Instructional’ implies a teacher centred approach and suggests ‘Models Based Practice’ or ‘Pedagogical Models’ as better alternative terms. Further, the term ‘pedagogical’ is viewed as more neutral and includes all three aspects of learning, curriculum and instruction (Kirk, 2013). Pedagogical models are described as design specifications, frameworks or ‘blueprints’ (Metzler, 2011) for teachers to guide the development of flexible programmes for specific local

The foundations of such design specifications include a central theme and key learning goals, closely aligned with subject content and teaching strategies. Whilst there are some commonly recognised pedagogical models in physical education, such as Cooperative Learning (Slavin, 1983), Sport Education (Siedentop, 1994) and Tactical Games (Griffin, Mitchell & Oslin, 1997), more recent additions have included Health Optimizing Physical Education (Metzler, 2013) and Outdoor Adventure Education (Williams & Wainwright, 2016). Each model has a number of distinct critical features, or ‘benchmarks’ (Metzler, 2011) to guide teaching and learning and to support the achievement of the specific learning goals. This comprehensive framework has led to many scholars endorsing the potential for pedagogical models to enhance practice in physical education (Casey, 2014, 2016; Casey & MacPhail, 2018; Haerens et al. 2011; Kirk, 2010, 2013; Lund & Tannehill, 2015; Metzler, 2005, 2011). However, despite warnings that some pedagogical models are too complex to implement well, Kirk (2013) advocates that models must allow teachers the flexibility for ‘local adaptation’ in order to meet their specific needs.

Indeed, returning to the earlier argument for collaborative working, there is increasing evidence that this support can help teachers to translate a pedagogical model from theory to practice and thus provide a strong platform for positive curricular change (Goodyear & Casey, 2015; MacPhail et al., 2008; McCaughtry et al., 2004; O’ Donovan et al., 2010; Sinelnikov, 2009; Wright et al., 2006). Specifically, Casey (2014) argues that collaborative partnerships between schools and universities are fundamental for teachers’ learning and their subsequent engagement with models-based practice, which supports previous findings (Barrett & Turner, 2000; Wright et al., 2009). The need for support was further recognised by Stran and Curtner-Smith (2009), who claimed effective professional development required time to initially help teachers understand the particular model being implemented. Moreover, in their study, McCaughtry et al. (2004) found that increased support from a theoretical perspective helped teachers to refine their use of a pedagogical model in practice.
Supporting this potential, Goodyear and Casey (2015) have highlighted over one thousand studies since the 1990s which confirm that pedagogical models promote learning across the physical, cognitive, social and affective domains. Despite this evidence, Bechtel and O'Sullivan (2007) noted that pedagogical models have not been widely adopted by teachers and have, in essence, remained an 'innovation without change' (Dyson, 2006). As was recognised in the context of CPD earlier in the chapter, Kirk (2011) contends that this lack of adoption is primarily caused by the tendency for school systems to control innovative practice, so that it fits with existing structures. Moreover, Lawson (1988) suggested thirty years ago that emergent practice is often immersed into traditional practice and subsequently, only a superficial change in teachers' pedagogy occurs (Fullan, 2007).

Exploring Lawson's argument further, reviews of pedagogical models employed by physical educators report limited evidence of their sustained use beyond the initial implementation phase, or 'honeymoon period' (Goodyear & Casey, 2015; Harvey & Jarrett, 2014; Hastie et al., 2011). In addition, model fidelity has become an important consideration in order to determine whether a particular model has been implemented as intended (Hastie & Casey, 2014). Indeed, research highlights that teachers often opt for modified versions of the original model, which suggests that adherence is largely teacher-dependent (Curtner-Smith et al., 2008; Goodyear, 2014; Stran & Curtner-Smith, 2009). To illustrate this and, with respect to the Sport Education model, Curtner-Smith et al. (2008) identified three levels of adoption, categorised into the ‘full version’ of the model; a ‘watered down’ version, with some critical features missing; or a ‘cafeteria approach’, which merely incorporated some features of Sport Education into teachers’ existing practice. Findings unsurprisingly revealed that the level of adoption closely reflected the extent to which teachers successfully employed the Sport Education model in practice (Curtner-Smith et al., 2008). A further study by Rossi et al. (2007) reported a number of challenges and frustrations for teachers in Singapore when implementing a Games Concept Approach (GCA), a form of Teaching Games for Understanding, which resulted in a limited version of the GCA model being used. It should be noted, however, that this study was
conducted with student teachers whose relative lack of experience and subject knowledge may have been contributory factors in their partial adoption of the model. Nonetheless, the weak evidence of teachers implementing pedagogical models, as intended, and of their sustained use in schools, has led to repeated calls for radical pedagogical change in physical education (Kirk, 2010; Metzler, 2011; Tinning, 2012).

A potential explanation for the lack of sustainability of pedagogical models in schools, as acknowledged earlier in this review, is the realisation that pedagogical change is a complex, messy and gradual process (Cook, 2009; Dyson, 2002; Casey et al, 2009). As previously noted, it can take years for teachers to feel confident employing a new pedagogy and they are unlikely to fully commit until they see evidence of positive change in student learning and/or their own practice (Casey, 2012, Dyson, 2002; Guskey, 2002). Moreover, as sustained pedagogical change often involves a conceptual shift regarding how learning and teaching are constructed (Bechtel & O’Sullivan, 2006; Casey & Dyson, 2009; McCaughtry, 2006), teachers may need to adopt an unfamiliar role, which takes them out of their comfort zone, possibly making them feeling like beginners again (Casey, 2012; Cruz, 2008). As a result, teachers have reported frustration, anxiety and a loss in confidence, especially when first using a new pedagogical model and not achieving instant success. In some cases, these feelings have had a negative impact on teachers’ learning and, consequently, had limited impact on their practice (Barrett & Turner, 2000; Dyson, 2002; Dyson & Rubin, 2003; Goodyear, 2013; Gubacs-Collins, 2007; Kim, 2006). Consequently, there is an argument that pedagogical models may not be the unanimous way forward as they have not as yet consistently bridged the research practice gap.

**Teachers’ Experiences of Pedagogical Change**

On a more positive note, Dyson and Rubin (2003) recounted that the initial frustrations experienced by the teacher in their study on Cooperative Learning were suppressed with on-going CPD that permitted her to view the rewards of persisting with the model. As discussed earlier in the chapter, and acknowledging that there was only one teacher, this evidence reinforces the potential for
sustained support during the implementation phase to help teachers translate theory to practice in their school contexts (Goodyear & Casey, 2015; McMahon & MacPhail, 2007; Sinelnikov, 2009; Wright et al., 2006). Attard and Armour (2006), however, caution that providing sustained support during the implementation phase and beyond can present a real challenge for CPD providers in terms of their own time commitment. On this point, Kirk (1986, p.176) similarly recognised that ‘innovating involves extra work and an investment of energy and commitment above and beyond what is required contractually’. He (Kirk, 1986) also noted how teachers exposed themselves to personal and professional risks when engaging in pedagogical innovation, especially when good teaching was not always the benchmark against which meaningful involvement in the school was measured.

Clearly, learning to employ a new pedagogy requires a willingness for teachers to experiment with their practice (Wright & Burton 2008). However, it is widely accepted that curriculum innovation is potentially a complex process which can also be labour intensive and time consuming to implement (Attencio et al., 2012; Casey et al, 2009; Casey & Dyson, 2009; Dyson, 2002; Goodyear & Casey, 2015; Gubacs-Collins & Oslen, 2010). In addition, evidence suggests that teachers often need different organisational and management skills, especially at the start of the implementation process (Pill, 2008). This may necessitate teachers making considerable adaptations to their management structures when using pedagogical models (Dyson, 2002; Dyson et al, 2010). Given the time commitment and additional work recognised for pedagogical change, a key challenge is how to encourage teachers to engage with innovative pedagogy. In response to this challenge, Kirk and Macdonald (2001) propose that meta-curricula should be co-constructed in partnership with teachers. Although the authors suggest that ‘most [teachers] will not contribute in any substantial way to the construction of the instructional discourse’ (p.565), they nonetheless view teachers’ local expertise as an important factor. Moreover, researchers (Cordingley et al., 2015; Goodyear et al., 2016; Haerens et al., 2016; Patton & Parker, 2014) argue that a long-term vision for teacher professional learning, including sustained support, is needed for deep level changes in practice to occur.
Whilst there is evidence of some teachers welcoming the opportunity to re-evaluate their role in the learning process (Barrett & Turner, 2000), other studies have reported teachers struggling to shake off their prior pedagogical practice (Casey, 2012; Casey & Dyson, 2009; Ko et al., 2006; Pill, 2008). Examining teachers' pedagogical change when learning to use the Sport Education model, Ko et al. (2006) noted that whilst teachers acquired a general understanding of the model early in the professional development process, this understanding was lost in translation during the implementation phase. Similar findings were reported by McCaughtry et al. (2004) who concluded that misunderstanding and inaccurate assumptions, derived from prior experiences, resulted in teachers merely rebranding their traditional practice of teaching sport-specific skills. This may indicate a lack of sustained support during the critical implementation phase and highlights a need for further research on both the facilitators and challenges for teachers involved in pedagogical change. Despite the challenges outlined above, some positive impact of pedagogical models on teachers' practice has been reported.

Research has demonstrated increased teacher enthusiasm and a preference for using models-based practice over traditional physical education pedagogies (Clarke and Quill, 2003). Interestingly, Pill (2008) reported that although the Sport Education model increased teachers' workload, it provided them with an opportunity to refocus on the learning of all children, rather than just on those who were perceived as high physical achievers. This is a positive finding, especially in terms of the potential for pedagogical models to promote inclusive practice. Further, O'Donovan et al. (2011) specifically explored the impact of implementing Sport Education over a prolonged period on the professional lives of primary teachers and the extent to which they 'bought into' the model. The authors concluded that the clear structure of Sport Education enhanced many teachers' self-confidence in teaching physical education, which subsequently upgraded the subject's status in the curriculum. Moreover, the support of the head teacher and the staff commitment aided the sustainability of the model, which again reinforces the importance of these two factors when implementing pedagogical change (O'Donovan et al., 2011).
Summary

To summarise this section, the literature highlights that physical education curricula have historically been dominated by a Multi-Activity Model, which prioritises activity content and is characterised by direct teaching approaches. Despite the continued dominance, it is argued that this model provides a poor learning experience for most students, especially in the context of achieving health-related outcomes. Consequently, pedagogical models are proposed as an alternative to enhance practice, although there is weak evidence of teachers' implementing these models effectively and of their sustained use in schools. A potential explanation for this lack of sustainability is the realisation that pedagogical change is a complex, messy and gradual process where teachers require sufficient time and support during implementation.

Conclusion

Reflecting on the literature, despite renewed calls for physical education to help address childhood inactivity concerns, it is apparent that the subject is struggling to make any real progress in the area of health and physical activity promotion. Whilst acknowledging that physical education alone is incapable of solving the problem of youth inactivity, it raises questions concerning the quality of HBPE in schools, with narrow practice and limited evidence of teacher engagement in relevant CPD reported. Although there has been a heavy emphasis on the development of health curricula and activity content, little importance has been attached to the design of evidence-informed health pedagogies which appears to be a significant gap in the literature.

Currently, teachers' limited engagement in health-related professional learning suggests that this area is a low priority and their subject knowledge and practice is arguably limited, with a narrow approach often centred on developing fitness and fitness for sport performance. Where professional learning does occur, it tends to be de-contextualised, with few opportunities for teachers to apply their new learning in practice and critically reflect on their experiences. This strongly supports the creation of PE-CPD opportunities and specifically in the area of health (i.e. both the approach to the CPD and the pedagogical model being proposed for health are different) that involve working collaboratively with
teachers and which are focussed on new pedagogies for health in school physical education programmes.

Moreover, the design of new and sustained HBPE-CPD programmes, which promote collaboration and engage teachers as active learners is advocated, with a subsequent move away from the traditional top down training model. However weak evidence of the sustained use of pedagogical models in schools suggests that they may not be the unanimous solution. On a positive note, where teachers have employed pedagogical models in their practice, there is some evidence of a more inclusive learning environment with increased levels of teacher enthusiasm, effectiveness and self-confidence.

To conclude, this review of literature highlights the pressing need to develop new PE-for-health pedagogies, such as the conceptual framework for HBPE presented in this chapter. It is argued that teachers will need to be supported by the designers of this framework, (teacher educators-researchers), through a collaborative and sustained CPD programme to effectively translate theory to practice and help bridge the research-practice gap.
CHAPTER 3: METHODOLOGY

Introduction

This chapter is divided into two parts:

**Part A: Methodology** begins with Section One: *The Paradigm Debate* which initially defines the term paradigm and explores why paradigms are deemed important as a starting point for conducting research in terms of assumptions and beliefs. Reflecting on the paradigm debate I provide insight into how my prior life history helped to shape my own assumptions and beliefs and subsequently influenced the construction of my research questions.

Section Two: *Action Research* initially considers action research as a form of practitioner research and provides an overview of its origins. Next, action research is discussed as a form of self-reflective practice. Following a brief history of action research in education, the potential benefits of employing this methodology in educational contexts to inform and subsequently enhance teaching and learning is deliberated. The discussion then moves to specifically focus on action research in physical education and highlights some of the recent developments in this area. Finally, I explore some of the potential benefits and challenges for teachers when they are engaged in pedagogical change exploring *Participatory Action Research* as my chosen methodology.

**Part B: Methods** focuses on my phased research design and the multiple data gathering tools that were employed to help answer my research questions. I justify each of my chosen methods and explain how these linked collectively to inform the on-going participatory action research process. Further, I provide a detailed description of the research context, including my own role in the process. Next, I describe the steps taken during the initial gathering of data through to the analysis process and the subsequent generation of themes. To conclude the chapter, I discuss how I addressed a number of ethical considerations throughout the study, including informed consent, confidentiality, anonymity and trustworthiness.
PART A: METHODOLOGY

Section 1: The Paradigm Debate

The term paradigm, first used by Thomas Kuhn in his 1972 book ‘The Structure of Scientific Revolutions’, denotes this to be an overarching theoretical framework (Mack, 2010). According to Willis (2007):

A paradigm is thus a comprehensive belief system, world view, or framework that guides research and practice in a field (p.8).

In other words, a paradigm is the philosophical stance a researcher adopts concerning how research should be undertaken. Lincoln and Guba (1985) initially proposed two competing paradigms; positivism and naturalistic inquiry or constructivism, but later expanded this number to five identifying post-positivism, critical theory and participatory research as additional paradigms (Guba & Lincoln, 2005). Whilst explaining each paradigm in detail is beyond the scope of this chapter, fundamentally it is the philosophical underpinnings of different paradigms that make them distinct (Guba & Lincoln, 1994; Lincoln & Guba, 1985). Specifically, paradigms comprise our interpretation on the nature of reality (i.e. ontology), beliefs about how we come to know about social reality (i.e. epistemology) and an orderly approach to generating that knowledge (i.e. methodology) (Denzin & Lincoln, 2011; Grix, 2002; Taylor & Medina, 2013). Consequently, paradigms are deemed important because they provide an understanding of a researcher’s assumptions and beliefs (Lincoln, 2010).

There is much debate, however, on what should be the starting point for conducting research. Crotty (1998), for instance, proposes that researchers can choose to initiate research from an ontological, epistemological or methodological position, whilst Griggs (2004), amongst others, advocates that research is best conducted by firstly establishing our ontological assumptions. Grix (2010) argues that researchers need to understand the philosophical foundations that inform their choice of research questions, methodology and methods if they wish to conduct clear research. Put another way, our view of social reality informs our methodology and these subsequently guide our choice of data gathering methods.
(Mack, 2010). This alignment of ontology, epistemology and methodology is supported by Sparkes and Smith (2014), who likewise position our assumptions and beliefs as the starting point for research. They further elaborate that it is our prior life experiences and personal understanding of the world which subsequently shapes our research questions:

...we conduct enquiry via a particular paradigm because it embodies assumptions about the world that we believe in and supports values that we hold dear (Sparkes & Smith, 2014, p. 9)

An alternative argument proposes no connection between paradigm and methodology, but that rather the methods employed should be those deemed most suitable to help answer the research questions (Morgan, 2007). This stance, termed a *pragmatic paradigm approach*, views the research questions as the initiator and subsequent driver of the research process (Tashakkori & Teddlie, 2003). Gill (2011), however, disagrees with this approach and suggests that whilst questions may guide our direction of travel, they are influenced by our prior socialisation, or life experiences:

Questions set our destination, but they often also set the direction or path. Questions do not arise out of thin air. Rather our questions come from us (the researchers) and are influenced by a host of factors including our training, experiences and immediate surroundings (p. 309).

**My Philosophical Position**

Reflecting on the paradigm debate, it is important at this point to explain my own position. This study involved conducting empirical research with teachers to explore their experiences during a CPD programme where they were introduced to, and subsequently supported to implement a new conceptual framework for HBPE. Consequently, I employed a qualitative approach within an interpretivist philosophy, as I believed that it offered the best opportunity to understand and explain teachers’ reported experiences when involved in pedagogical change. From an interpretative view, however, it is important to recognise that there are no clear solutions to challenges in complex contexts like education. Denzin and
Lincoln (2011) explain how interpretivism is informed by a subjectivist epistemology (the idea that understandings are created through interaction), and a naturalistic set of methodological procedures (where participants are studied in their normal settings). Furthermore, Patton (2002) clarifies that in attempting to understand phenomena in real world settings, the researcher should not try to manipulate the phenomenon of interest. Consequently, the role of the researcher in the interpretivist paradigm is to, ‘understand, explain, and demystify social reality through the eyes of different participants’ (Cohen et al, 2011, p.19). Moreover, Taylor and Medina (2013) suggest that interpretive inquiry helps educational researchers to build rich local understandings of teachers’ ‘real world’ experiences and also involves engaging them as reflective practitioners, especially when they are developing student-centred, constructivist pedagogies. Glesne (2011) further highlights the potential for qualitative research to record rich and individualised responses through an on-going process of enquiry and interpretation of data. Thus, the researcher must be able to observe behaviour and establish close contact with the participants when collecting data (Shenton, 2004; Yilmaz, 2013).

At the beginning of my study, I assumed a largely pragmatic approach (Morgan, 2007), with my research questions initially guiding the process (Tashakkori & Teddlie, 2003). It is important to acknowledge, however, that these initial questions underwent several revisions as my thinking evolved during the research process. Further, I accept, in agreement with Sparkes and Smith (2014), that my prior life experiences and personal understanding of the world influenced the construction of these research questions. Moreover, the past experiences and beliefs of my supervisory team were also influential in shaping the initial research focus. Although Glaser and Strauss (1967) argue that researchers are not expected to embark on the inquiry process with formulated ideas, I concur with others (Keay & Lloyd, 2011; Smith & McGannon, 2017) that this ‘clean slate’, or theory-free knowledge, is not possible to achieve, due to the nature of an individual’s previous life experiences and beliefs.

Accordingly, I began the inquiry process with a good awareness and understanding of the perceived problem in terms of promoting physical activity for health within physical education. As discussed in Chapter Two, this problem
specifically related to the marginalised place of health within many school physical education curricula, the limited opportunities for teachers (both pre-service and in-service) to develop their health-based subject knowledge and the subsequent variable quality of teaching and learning in this area. My awareness and understanding of these issues developed over the course of seventeen years’ experience working as a physical educator prior to the study commencing. Specifically, this experience involved one year as a trainee teacher on a secondary physical education post-graduate course, nine years as a teacher of physical education in three different secondary schools, and a further seven years working as a teacher educator in two higher education institutions. During this time, I developed a strong inclusive philosophy centred around supporting all young people to adopt active lifestyles through high quality, enjoyable learning experiences in physical education.

Summary

In summary, I have provided a rationale for employing a qualitative approach within an interpretivist philosophy to best explore teachers’ experiences of engaging in pedagogical change. Further, I clarified how my prior life experiences, formerly as a teacher and, more recently, as a teacher educator, helped to shape my assumptions and beliefs prior to beginning this study. Next, following an explanation and conceptualisation of action research, I critically discuss participatory action research as my chosen methodology.

Section 2: Action Research

This section initially considers action research as a form of practitioner research and provides an overview of its origins. Next, action research is discussed as a form of self-reflective practice. Following a brief history of action research in education, the potential benefits of employing this methodology in educational contexts to inform and subsequently enhance teaching and learning is deliberated. The discussion then moves to specifically focus on action research in physical education and highlights some of the recent developments in this area. Finally, I explore some of the potential benefits and challenges for teachers when they are engaged in pedagogical change using PAR.
Practitioner research is an umbrella term for research which involves one or more practitioners, such as teachers, who are seeking to solve problems identified in their practice and thus enhance teaching and learning (Bartlett & Burton, 2006). Whilst action research is one specific form of practitioner research, the terms practitioner research and action research are often used interchangeably (Kemmis, 2006, 2009; Bartlett & Burton, 2006). An important aspect of practitioner/action research is that it primarily involves teachers doing the research in their own classrooms, although, as discussed earlier, this research is sometimes conducted with external 'experts' such as university researchers (Bell et al., 2010; Cordingley et al. 2015). Furthermore, Ulvik et al. (2018) propose that action research can provide local solutions to challenges identified by the participants and aims to empower teachers.

**The Origins of Action Research**

Action research emerged from the field of social psychology in the United States during the 1940s as a means of "promoting positive social change" (Lewin, 1946, p. 390) and as a form of "action-research, research-action" (Collier, 1945, p. 294) to explain how researchers and practitioners could work together. At this time, Lewin (1946) discussed action research as a form of experimental inquiry and argued that practitioners had to be involved in all stages of inquiry in order to have a positive impact on social change. Meanwhile, Collier (1945) identified the in situ knowledge and expertise of practitioners as fundamentally important to directly inform action, which has more recently been reinforced by Kemmis and McTaggart (2008).

Many definitions and forms of action research have been provided since the pioneering work of Lewin and Collier. However, Kemmis et al. (2013) propose that two key features are common across all varieties: (1) People living and working in particular settings should be actively involved in all aspects of the research process; and (2) The participants focus on making improvements in their own practices and settings. For instance, Carr and Kemmis (1986), who advocated teachers’ capacity for praxis (i.e practically applying learning) to inform action through self-reflection, provide a classic definition:
Action research is simply a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, and the situations in which the practices are carried out. (p. 162)

This description of action research as a form of self-reflective practice aligns closely with the work of Donald Schon (1983), whose innovative thinking around ‘reflection-on-action’, has become part of established education practice (O'Donnell et al., 2011). Kemmis and McTaggert (2008), however, warn that action research is not just ‘reflection’ as advocated by Schön, but requires systematic action to be taken as a result of learning from experience. Indeed, Bogdan and Biklen (2007) propose that action research should be conducted by people in the real world, who are interested in both finding practical solutions and effecting social change. Fundamentally, action research involves practitioners seeking to understand and improve practice in their own environment, with the practitioner “both central to and active in the research process” (Casey et al., 2017, p. 21). Moreover, Winter (1998) earlier cautioned that action research is not ‘spectator’ research, as the theories which the practitioner encounters need to be integrated within their own contexts. In the context of education, it adheres to the notion that teachers can understand and change their own lives by mixing research, education and action (Brydon-Miller & Maguire, 2009). Further, many scholars argue that action research becomes practically embedded in daily practices over time (Goodnough, 2010; Goodyear & Casey, 2015).

Action research also provides a unique opportunity for the teacher and/or researcher to be centrally involved in the research process (Koshy, 2010). This opportunity can afford valuable ‘insider’ knowledge and understanding about the research context, for example, the role of ‘practitioner-researcher’ can help appreciate the challenges teachers experience during the research process (Casey & Dyson, 2009; Robson, 2002). As action research brings teachers together, it supports the development of a self-reflective community committed to advancing educational ideas and practice (Carr & Kemmis, 1986).
**Action Research in Education**

During the early 1950s, Stephen Corey and colleagues at Columbia University employed action research in education. By the end of the 1950s, action research had become more about personal and professional learning and was increasingly focused on the individual teacher. Although the 1960s witnessed a decline in the popularity of action research in the US, it enjoyed a revival in the UK during the mid-1970s, primarily due to teacher-researcher developments, such as the Humanities Curriculum Project (Stenhouse, 1975) and the Ford Teaching Project (Elliott and Adelman, 1973). These projects, which placed teachers at the heart of curriculum and pedagogical change, were able to move towards a pedagogically driven, rather than a standards-based curriculum, through action research (Casey, 2009; Zeichner, 2001). Casey et al. (2009) highlight that Stenhouse championed the idea of ‘teachers as researchers’ and argued that good teaching involved a combination of research informed ideas and action.

**Action Research as a Collaborative Approach**

According to Jaipal and Figg (2011), action research can make a major contribution to teacher CPD as teachers can develop their natural skills through seeking to enhance their practice. Further, it has been reported that, through action research, teachers are afforded the chance to share practice with other teachers, which supports sustained changes to teaching and learning (Jaipal & Figg, 2011; Koshy, 2010). A key feature of action research is that it usually involves peer collaboration between teachers in order to collectively develop their practice. Indeed, it is advised that this form of collaborative working is crucial for practitioner research to be successful in schools (Cordingley et al., 2010; 2015). Thus, practitioner research offers teachers an opportunity to build professional communities in order to support the development of learning and teaching.

This argument for teachers to be active participants in the research process has been echoed by who believed that the likelihood of educational change increases when teachers are centrally involved as key stakeholders (Coburn et al., 2013; Penuel et al., 2015). Moreover, Creswell (2005) proposed that action research designs provide systematic procedures to gather information about, and subsequently improve, teaching and learning processes in educational contexts.
Indeed, it has been suggested by Mills (2000) that action research within educational contexts is important for many reasons. Specifically, it encourages change, empowers individuals through collaboration, positions teachers as learners, encourages reflection, and promotes the testing of new ideas (Robinson, 2013). In support of this proposed emphasis on action research as a collaborative process involving group work (Kemmis & McTaggart, 1988; Smith, 2007), Cochran-Smith and Lytle (2007, pp. 25-26) specifically highlight the potential for teachers and researchers to work together on curricular and pedagogical change in schools, acknowledging how:

Action research is a methodology commonly used in collaborations between teachers and university-based researchers for the alteration of curriculum and common practices in schools through problem-posing, data collection, analysis and action.

Importantly, Kemmis and McTaggert (2008) stress that in this form of collaboration, or participatory research, the researchers’ role is one of service to teachers, supporting them to make decisions about how to improve their own practices. However, they also warn of the potential challenges when helping others to learn how to conduct action research, an area that is now considered further.

**The Challenges of Employing Action Research**

Alongside the potential benefits of employing action research in educational contexts, a number of challenges have also been identified in the literature: 1) participants’ commitment to implementing pedagogical change and 2) the time commitment needed for implementing change (Keegan, 2016). Casey and Dyson (2009) reported on the use of action research through the eyes of a teacher-researcher to examine the effectiveness of employing a number of different pedagogical models in secondary school physical education. Their findings confirmed that action research is a ‘messy’ process and implementing pedagogical change is labour intensive (Casey & Dyson, 2009). According to Smith (2007), this is because they (practitioners) are often constrained by a host of factors including their own cultural perceptions and the institutions within which
they work. Furthermore, due to the nature of action research, there can be a blurred division between the practitioner and the researcher, or indeed between the teaching and the research (Casey et al., 2009). The discussion now moves to examine action research specifically in the context of physical education.

**Action Research in Physical Education**

Given its potential to enhance teaching and learning, and specifically to encourage sustained change in practice (Casey, 2013), it is surprising that action research appears to have had relatively limited impact on the teaching of physical education (Casey & Larsson, 2018; Robinson, 2013; Rossi & Tan, 2012). This is despite repeated calls over the past three decades for physical educators to employ action research in their practice (Almond & Thorpe, 1988; Casey & Larsson, 2018; Casey et al., 2009; Kirk, 1986; 1995; Tinning, 1992). In attempting to explain the perceived lack of impact of action research, Robinson (2013) suggests that historically, physical education research has positioned students (and teachers) as objects of study and has subsequently employed deductive research practices (Enright & O’Sullivan, 2010; Tinning, 1992). However, this seems to contradict the findings of Gubacs-Collins (2007), who reported an increased influence of action research in physical education in the US. Moreover, Casey et al. (2017), in conducting a review of literature on action research in physical education, recently highlighted a growing number of studies, which they believe clearly illustrate this research process in action.

To highlight some of these studies identified by Casey et al. (2017) in more detail, Glotova and Hastie (2014) recently conducted action research with student teachers to explore their experiences of learning to use the Sport Education model. Findings indicated that action research supported these teachers to sustain their motivation and interest during the process of applying this pedagogical model in their practice and points to the potential of action research to help facilitate curriculum change. Meanwhile, Bodsworth and Goodyear (2017) employed this methodology as a professional learning tool to examine a teacher-researcher’s use of technology within a cooperative learning track and field athletics unit. The authors argued that action research served as a key facilitator in learning how to use digital technology to support learning. Moreover, they
believed that action research could be ‘used as a key driver to support teachers learning how to incorporate digital technologies into their classrooms’ (Bodsworth & Goodyear, 2017, p. 15).

In addition, Keegan (2016) identified three main benefits of using action research to develop both her own teaching and her students’ learning: 1) its contribution to teacher professional development, 2) its capacity to generate new knowledge and practice and 3) the value of the teacher or researcher being involved in the research. A further claim in support of action research is made by Sum et al. (2016), who highlight that the process of formalising teachers’ reflections helped them to realise how ‘their teaching styles may have been personalized according to their intentions and beliefs’ (p. 14). Similarly, earlier work by Robinson (2013) reported teachers’ improved understanding of their practice and concluded that action research within physical education has the potential to enhance teaching and learning and to provide in-school research opportunities.

**The Steps of Action Research**

Returning to Lewin’s (1946) concept of action research, he proposed that it involves:

a spiral of steps, each of which is composed of a circle of planning, action and fact-finding about the results of the action (p. 38).

Casey et al. (2017) advocate that in this spiral model, the practitioner is encouraged to undertake a series of cycles based on five steps, or stages: Think, Plan, Act, Evaluate and Reflect which offer a structured approach to action research. Table 3.1 provides an overview of the action at each step of the cycle.
Table 3.1: The Five Steps of Action Research (adapted from Casey et al., 2017)

<table>
<thead>
<tr>
<th>Step</th>
<th>Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Think</td>
<td>Identifying a general problem or idea from reconnaissance</td>
</tr>
<tr>
<td>2. Plan</td>
<td>Formulating an initial way of approaching the general problem or idea</td>
</tr>
<tr>
<td>3. Act</td>
<td>Enacting the plan through practice</td>
</tr>
<tr>
<td>4. Evaluate</td>
<td>Using observation or data gathering tools to understand how actions impact on both thinking and learning</td>
</tr>
<tr>
<td>5. Reflect</td>
<td>Reflecting on the action and the resultant learning to identify strengths and weakness to inform future practice</td>
</tr>
</tbody>
</table>

Evidence suggests that the spiral model has proved helpful for practitioners in terms of providing a clear framework for their reflections. Keegan (2016) for example, reported that the model supported her to make the transition from a predominantly direct, to a more democratic teaching style. In contrast, others have noted that the spiral model suggests a rather sequential and inflexible structure, which can result in limited analysis by practitioners at key stages (Robinson, 2013; Smith, 2007). Furthermore, Elliott (1991) points out that using the spiral model might lead to practitioners wrongly assuming that the ‘general idea’ can be fixed in advance, that ‘reconnaissance’ is simply fact-finding and that ‘implementation’ is a relatively straightforward process.

Identifying the potential for misunderstanding, Casey et al. (2017) propose that the key success indicator is not whether participants have dutifully followed the action research steps, but the extent to which they have improved their practice. Further, Kemmis and McTaggart (2008) propose that the action research process is likely to be more fluid than the spiral of self-contained cycles suggests. As such, the steps in the spiral should be viewed as overlapping constructs, with the cycle of planning, action, observation and reflection being followed by revised planning, further action, observation, and reflection in light of learning from experience. Similarly, Casey (2010) suggests that action research should be
viewed in multiple cycles, or as *cycles within cycles*. In other words, as practitioners move into subsequent cycles, they move from the reflection stage back to re-thinking (6), the creation of new plans (7), fresh actions (8), new evaluations (9) and further reflections (10) in an on-going cycle (Casey et al., 2017 p.23). Figure 3.1 illustrates this notion of multiple cycles, or *cycles within cycles*.

![Figure 3.1: Cycles within Cycles (Casey et al., 2017)](image)

**Participatory Action Research**

Although recognising that action research is often viewed as ‘a solitary process of systematic self-reflection’, Kemmis and McTaggert (2008) argue that it is best undertaken collaboratively through PAR. PAR is a critical form of inquiry, which supports the belief that knowledge is embedded in social relationships and is most powerful when produced collaboratively through action. Thus, PAR offers an opportunity for people to create a communicative space and engage in a social process of collaborative learning in order to facilitate changing practice (Kemmis & McTaggert, 2008). Consequently, there is an expectation that all participants (e.g. researchers and teachers) are both co-learners and co-producers of knowledge, thus affording them shared ownership of the research
process (Enright & O’Sullivan, 2012; Reason & Bradbury, 2005). This shared ownership is a key characteristic of PAR, and is often used to distinguish it from conventional modes of investigation. For example, a participative researcher is not a bystander and needs to be receptive to the perspectives of the participants (Shenton, 2004).

Enright and O’Sullivan (2010) suggest that PAR has two main objectives: 1) to produce knowledge and action directly useful to a specific group of people; and 2) to empower people at a deep level through the process of construction using their knowledge. Thus, whilst participatory action researchers may be on a mission to change both their own practice, and their practice settings, Kemmis and McTaggert (2008) highlight a number of challenges involved in creating the right learning conditions for participants. Further, they propose that PAR has seven other key features that are at least as important as the self-reflective spiral. These key features are outlined in table 3.2.

<table>
<thead>
<tr>
<th>Key Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A social process</td>
<td>Collaborating to enhance teaching and learning</td>
</tr>
<tr>
<td>2. Participatory</td>
<td>Examining knowledge and interpreting action</td>
</tr>
<tr>
<td>3. Collaborative</td>
<td>Working together to explore, and improve, practice</td>
</tr>
<tr>
<td>4. Emancipatory</td>
<td>Practices shaped and constrained by wider society</td>
</tr>
<tr>
<td>5. Critical</td>
<td>Contesting and reconstructing poor practice</td>
</tr>
<tr>
<td>6. Reflexive</td>
<td>Changing practice through a spiral of cycles of critical action and reflection</td>
</tr>
<tr>
<td>7. Transformative</td>
<td>Altering both practitioners’ theories and practices and those of others who may influence local settings</td>
</tr>
</tbody>
</table>

(Adapted from Kemmis & McTaggert, 2008)

PAR was chosen as my methodology as it permits an individual to conduct inquiry that subsequently leads to personal and/or institutional enhancement and change (Casey, 2010). More specifically, in the context of this study, PAR was employed as a professional learning tool to support teachers during the process of initially learning to use the HBPE model and subsequently implementing it in their practice. PAR involved strategies such as teachers analysing their practice
and the frequent exchange of ideas with both their colleagues and myself, as a co-collaborator in the research process. I propose that PAR was fit for purpose as a practitioner-orientated methodology to highlight the collection of individual steps when teachers were engaged in the co-construction of pedagogical change. Moreover, my goal was to explore teachers' learning experiences during the CPD programme and the subsequent impact on their practice through this cycle of change (Casey et al., 2017).
Part B: METHODS

The second part of this chapter focuses on my research design in relation to what was planned and then subsequently how these plans were implemented in the field. To aid clarity for the reader, I have embedded the various data gathering tools chronologically within each distinct phase of the research. I justify each of my chosen methods and explain how these methods linked collectively to inform the on-going PAR process. I also clearly illustrate how I piloted these methods, prior to employing them in the field. Further, I highlight the steps that I took from the initial data gathering through to the analysis process and the generation of themes. To conclude the chapter, I discuss how a number of ethical considerations were addressed throughout the study, including informed consent, confidentiality, anonymity and trustworthiness.

This study employed multiple data generation methods to provide differential layers of collaborative evidence or triangulation (Miller & Glassner, 1997; Patton, 2002). Briefly, primary data sources included a survey, teacher reflections, individual interviews, a field journal and observation of lessons. Further data were also gathered through memos, informal discussions, email conversations and document analysis, such as department schemes of work and learning resources.

Research Design

This section aims to provide a rich and detailed description of my research design. Essentially, the research study was divided into four distinct phases which were conducted over the course of three years as follows: 1) HBPE Conceptual Framework Development and Teacher Recruitment, 2) Teacher Induction to HBPE, 3) Implementation of HBPE and 4) Sustaining HBPE (Appendix 1).

Phase 1: HBPE Model Development and Teacher Recruitment

HBPE Model Development

As outlined in Chapter One, my study formed part a wider research programme, with a separate thesis specifically reporting on the development of the HBPE
model. Consequently, it is beyond the remit of my thesis to report in detail on the entire model development process. Instead, I focus on the initial steps which resulted in a conceptual framework for HBPE being developed. This conceptual framework was then presented to teachers during Phase 2 of my research: *Teacher Induction to Health-Based Physical Education.*

**Step 1: Literature Review**

The literature review involved a search of the Physical Education Index Database using the terms ‘health’, ‘physical* active*’ and ‘physical education’ to identify relevant papers in the area of HBPE. This search resulted in the identification of 696 published works (both theoretical and empirical) from 660 journals (279 peer-reviewed journals), three conference papers and 28 books. Drawing on previous reviews (e.g. Hastie et al., 2011; Harvey & Jarrett, 2014) works were categorised using headings which included the author(s), study focus, participants, context/activities, data gathering methods, results, journal and country. Insights from this review of the literature subsequently informed the development of a draft conceptual framework for the HBPE model.

**Step 2: Draft ‘Foundations’**

As highlighted in Chapter Two, Haerens et al. (2011) explain that the *Foundations* of a pedagogical model relate to its underlying theory and rationale, the major theme of the model, and the assumptions about teaching and learning. They go on to propose Siedentop’s (1996) notion of ‘valuing a physically active life’ as the major theme for a HBPE model and subsequently suggest Self-Determination Theory (SDT) as the over-arching theoretical framework to support the promotion of active lifestyles. Building on the work of Haerens et al. (2011) and others, five assumptions about teaching and learning were agreed by the research team which we believed would help support young people to value and engage in physical activity. Given Metzler (2011) stresses the importance of teachers understanding, ‘most or all of the assumptions behind a particular model’ (p.24), we recognised the need for our assumptions about teaching and learning to be clear and concise. Table 3.3 provides an overview of these assumptions.
Table 3.3 Initial Assumptions about Teaching and Learning

<table>
<thead>
<tr>
<th></th>
<th>Initial Assumptions about Teaching and Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Value and demonstrate sustained physical activity behaviour</td>
</tr>
<tr>
<td>2</td>
<td>Learn in all domains (affective domain prioritised)</td>
</tr>
<tr>
<td>3</td>
<td>Transfer beyond the lesson</td>
</tr>
<tr>
<td>4</td>
<td>Autonomy (choice and decision making)</td>
</tr>
<tr>
<td>5</td>
<td>Support mechanisms</td>
</tr>
</tbody>
</table>

The first assumption about teaching and learning *Value and demonstrate sustained physical activity behaviour* suggests that effective teaching can result in motivated young people who value and demonstrate positive physical activity behaviours.

The second assumption *Learn in all domains* proposes that learning should occur across the four recognised domains in physical education, namely the affective, cognitive, physical and social domains (Bailey et al., 2009; Casey & Goodyear, 2015). As the HBPE model's theme centres around 'valuing the physically active life', it is proposed that providing learning opportunities through the affective domain should be prioritised (Bowler et al., 2011).

The third assumption *Transfer beyond the lesson*, recommends that the curriculum content must be meaningful and reflect young people’s interests and participation trends out of class, with a suggested emphasis on life-time activities as advocated in the literature (Fairclough et al., 2002; Trudeau & Shephard, 2008). Fostering close links between the school and community is also viewed as crucial for effective transfer of learning out of class.

The fourth assumption *Autonomy* draws directly on SDT (Deci & Ryan, 2000). As discussed earlier in the thesis, evidence suggests that enabling young people to take on some responsibility for their own learning, for example though offering choice and shared decision making, can positively impact on their motivation to be active (Amado et al., 2014; Cheon et al., 2012; González-Cutre et al., 2014). Moreover, it is assumed that students will be expected to set (and monitor) personalised targets in relation to their own physical activity participation.
Finally, the fifth assumption *Support mechanisms* recognises that physical activity interventions are best supported by a combination of multiple school, family and community strategies.

These initial *Assumptions about Teaching and Learning* were presented at the International Association of Physical Education in Higher Education (AIESESEP) World Congress in Limerick (Bowler et al., 2011). Feedback was requested from the scholars in attendance concerning the assumptions and whether they were suitable in terms of potentially helping young people to value a physically active life. It is important to acknowledge that subsequent revisions of the conceptual framework resulted in the assumptions undergoing further modification, as illustrated in Table 3.4.

**Table 3.4 Revised Assumptions of Teaching and Learning**

<table>
<thead>
<tr>
<th>Assumption 1: Teaching</th>
<th>Assumption 2: Changes in physical activity behaviour requires <strong>sustained periods</strong> of learning in <strong>multiple learning domains</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assumption 3: What is learnt in Health-Based Physical Education must be <strong>transferable</strong> into young people’s leisure time</td>
<td></td>
</tr>
<tr>
<td>Assumption 4: Teaching using needs-supportive strategies can result in feelings of autonomy, competence and belonging (<strong>intrinsic motivation</strong>) in young people</td>
<td></td>
</tr>
<tr>
<td>Assumption 5: Physical activity interventions are best supported by <strong>multiple school, family and community</strong> strategies</td>
<td></td>
</tr>
</tbody>
</table>

The next step in developing the draft ‘Foundations’ for the HBPE model involved the creation of five ‘Learning Outcomes’, later termed ‘Learning Goals’. Although neither Metzler (2011) or Haerens et al. (2011) specifically refer to model learning goals, it is argued that these are essential to provide a picture for teachers of what ‘valuing the physically active life’ might look like in terms of students’ learning. The term ‘mover’, used by Hastie (2010) to describe someone who is regularly active in a range of activities, was employed as a metaphor for each of the learning goals to help reinforce the physical activity promotion focus of the HBPE model. Table 3.5 presents an overview of the five learning goals.
Table 3.5 HBPE Learning Goals

<table>
<thead>
<tr>
<th>Learning Goals</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Habitual movers</td>
<td>choose to lead an active lifestyle and participate in regular physical activity</td>
</tr>
<tr>
<td>2. Enthusiastic movers</td>
<td>demonstrate a positive attitude and engage enthusiastically in regular physical activity</td>
</tr>
<tr>
<td>3. Confident movers</td>
<td>demonstrate perceived competence in chosen physical activities through effort and progress/improvement</td>
</tr>
<tr>
<td>4. Informed movers</td>
<td>understand how and where to engage in physical activity, the effects of an active lifestyle and how to participate safely and effectively</td>
</tr>
<tr>
<td>5. Critical movers</td>
<td>understand the barriers to physical activity and become activists (movement promoters) to positively affect their physical activity environment</td>
</tr>
</tbody>
</table>

**Step 3: Draft ‘Critical Features’ and Subsequent Conceptual Model**

Following the development of the HBPE model’s draft ‘Foundations’, critical features were devised to reflect the underlying theory of self-determination, the major theme, the learning goals and the assumptions about teaching and learning. According to Metzler (2011), specific benchmarks (critical features) for teacher and student behaviour must be designed to maximise the potential of a model’s learning outcomes being achieved. Drawing on the eight pedagogical models identified by Metzler (2011), this process initially involved a research colleague and I separately producing a set of prospective critical features for HBPE. Following a review meeting, these critical features were then combined and mapped to the HBPE learning outcomes to produce a first working draft (Table 3.6).
<table>
<thead>
<tr>
<th>Teacher Benchmarks</th>
<th>Student Benchmarks</th>
</tr>
</thead>
</table>
| **1. Teacher creates a positive and supportive learning climate (LO 1 + 2)**  
  - Promotes celebration of student progress/achievement  
  - Encourages students to work collaboratively in pairs/groups (activity buddy)?  
  - Rewards learner empathy/sensitivity towards each other | **1. Students positively interact to support each other’s learning and encourage engagement in physical activity (LO 1 + 3)**  
  - Engaged in peer teaching and assessment |
| **2. Teacher plans and selects appropriate learning activities/tasks that promote personalised student learning (LO 1)**  
  - Evidence of learning support requirements and differentiation in lesson plans  
  - Provides individual personal feedback on effort and progress | **2. Students set and demonstrate progress against self-referenced targets (short and long-term) for their participation in physical activity during leisure time (LO 1)**  
  - Activity diaries |
| **3. Teacher offers a structured choice of physical activity options that reflect students’ interests (e.g. recreational and competitive pathways?) (LO 1)**  
  - Unit and lesson plans  
  - Provides choice of physical activity options | **3. Students have some ownership over their own learning - make decisions and choose tasks/activities that are of interest and relevance to them (LO 1)**  
  - Make personal decisions in relation to activities |
| **4. Teacher refers to physical activity guidelines (MVPA) and uses these to aid students’ personal target setting (LO 1, 2 + 3)**  
  - Unit and lesson plans  
  - Resources – posters? | **4. Students demonstrate positive attitudes towards (enthusiastic engagement in) physical activity both during and out of lessons. (LO 1 + 3)**  
  - Demonstrate enthusiasm for physical activity |
| **5. Teacher employs strategies for student physical activity in leisure time (LO 1 + 3)**  
  - Establishes a ‘community of practice’ (e.g. extra-curricular club)  
  - ‘Activity challenges’ (homework) that involves significant others (peers/family)  
  - Activity diaries | **5. Students are knowledgeable participants who can identify the health benefits of an active lifestyle (LO 2)**  
  - Activity diaries |
| **6. Teacher develops literate students who understand the health benefits of engaging in an active lifestyle (LO 2)**  
  - Unit and lesson plans | **6. Students demonstrate awareness of the barriers to participation in their community and encourage others to be active (LO 3)**  
  - Engage in community of practice |
| **7. Teacher develops critical students who are aware of the potential barriers to participation in their community (LO 3)**  
  - Unit and lesson plans | |
These draft critical features were piloted with 75 trainee PE teachers during a taught Health unit at a Higher Education Institution in England and then subsequently re-piloted with 12 in-service physical educators, as recommended by Brandl-Bredenbeck and Kampfe (2012). The piloting process uncovered some content and clarity issues, which led to minor revisions being made. For example, similar to a strategy employed by Goodyear (2013), the total number of teacher and student behaviours were reduced to create a more viable framework. In addition, the critical features were compared with a validated system for observing teacher behaviours that support and thwart the development of autonomy, competence and relatedness (Haerens et al. 2013). This process resulted in several revisions to the critical features, before they were introduced to teachers during Phase 2 of the research project *Induction to Health-Based Physical Education*, which is discussed later in the chapter.

**Teacher Recruitment**

Following the development of the HBPE conceptual framework and ethical approval being granted by a university research ethics sub-committee, schools from within a university partnership were invited to participate in the study. Initially, the recruitment process involved a presentation to physical education subject leaders during a local professional subject group meeting hosted at the University. This presentation provided an overview of the HBPE conceptual framework (Appendix 2) and highlighted that teachers had an opportunity to lead the way with a new approach to the teaching of health within physical education.

Twelve teachers from eight schools subsequently expressed an interest in being involved in the study and were sent a letter of invitation outlining the aims of the study and the anticipated commitment involved. Nine teachers across six schools accepted the invitation and subsequently began what transpired to be a pilot HBPE-CPD programme in January 2012, comprising of three professional learning meetings over a three month period. Although three teachers from three different schools completed the programme, these teachers ultimately decided to withdraw from the study due to a variety of reasons. For example, one teacher moved school and the other two teachers cited existing work commitments. Reflecting on these recruitment challenges, and as discussed in Chapter Two, it
highlighted early in the research process the time pressures on teachers working in busy school environments which will be explored further in Chapter Four. Returning to the drawing board to recruit a new set of teachers for the study, expressions of interest were invited from a targeted number of secondary schools within the same university partnership. This resulted in seven teachers from a secondary school (Sycamore School) and two teachers from a middle school (Maple School) being recruited.

**Participants and Settings**

Participants were nine specialist teachers of secondary physical education (6 males and 3 females) based in two different schools in England. Seven teachers (4 males and 3 females) worked in a mixed secondary school (Sycamore School) for children aged 11 – 18 years, whilst the remaining two teachers (both male) worked in a mixed middle school (Maple School) for children aged 9 – 13 years. The secondary school (Sycamore School) had 1841 students on roll at the time of the study. Most of these students were of white British heritage and the proportion of students supported with a statement of special educational needs was above the UK national average (School Ofsted Inspection Report, September 2012). Similarly, at the middle school the percentage of students with special educational needs was higher than the national average, as was the proportion of students known to be eligible for free school meals. Additionally, most of the 369 students were from minority ethnic backgrounds, with twenty seven different first languages spoken at the school (School Ofsted Inspection Report, February 2012).

As illustrated in Table 3.7 below, teachers had varied experience as physical educators of between 2 – 33 years (9.90 mean years teaching experience ± 9.86). When categorising levels of experience into the six ‘Professional Life Phases’ proposed by Day et al. (2006), four teachers had taught for 0 - 7 years, four teachers had 8 - 15 years’ experience and one teacher had over 16 years’ experience. Further analysis revealed that the seven teachers at Sycamore School had a combined experience of 75 years (mean 10.7 years), whilst the two teachers at Maple School had a total of 12 years’ experience (mean 6 years). In addition, survey data demonstrated that although their prior health learning (at
school, during ITT and whilst in-service) varied, all of the teachers reported that they were at least confident to teach health.

**Table 3.7 Teacher Characteristics**

<table>
<thead>
<tr>
<th>Name</th>
<th>Gender</th>
<th>School</th>
<th>Teaching Experience (Years)</th>
<th>Current School (Years)</th>
<th>Prior Health Learning</th>
<th>Health Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terry</td>
<td>M</td>
<td>Sycamore</td>
<td>13</td>
<td>8</td>
<td>Inadequate</td>
<td>Confident</td>
</tr>
<tr>
<td>Molly</td>
<td>F</td>
<td>Sycamore</td>
<td>4</td>
<td>4</td>
<td>Adequate</td>
<td>Confident</td>
</tr>
<tr>
<td>John</td>
<td>M</td>
<td>Sycamore</td>
<td>5</td>
<td>5</td>
<td>Good (ITT)</td>
<td>Very confident</td>
</tr>
<tr>
<td>Clara</td>
<td>F</td>
<td>Sycamore</td>
<td>10</td>
<td>5</td>
<td>Adequate</td>
<td>Confident</td>
</tr>
<tr>
<td>*James</td>
<td>M</td>
<td>Sycamore</td>
<td>2</td>
<td>2</td>
<td>Good (ITT)</td>
<td>Very confident</td>
</tr>
<tr>
<td>Patricia</td>
<td>F</td>
<td>Sycamore</td>
<td>33</td>
<td>5</td>
<td>Adequate</td>
<td>Confident</td>
</tr>
<tr>
<td>*Sean</td>
<td>M</td>
<td>Sycamore</td>
<td>8</td>
<td>0</td>
<td>Adequate</td>
<td>Confident</td>
</tr>
<tr>
<td>*Karen</td>
<td>F</td>
<td>Sycamore</td>
<td>8</td>
<td>8</td>
<td>Adequate</td>
<td>Confident</td>
</tr>
<tr>
<td>Colin</td>
<td>M</td>
<td>Maple</td>
<td>10</td>
<td>5</td>
<td>Inadequate</td>
<td>Confident</td>
</tr>
<tr>
<td>Luke</td>
<td>M</td>
<td>Maple</td>
<td>2</td>
<td>1</td>
<td>Good (ITT)</td>
<td>Very confident</td>
</tr>
</tbody>
</table>

* James did not complete Phase 4 due to leaving the school  
* Sean was a new teacher and did not complete Phase 2: Teacher Induction  
* Karen was absent for Phase 3: Implementation

Shifting the focus from the teachers, the discussion now turns to the role that Mark and I had as participant researchers. Specifically, I critically examine the challenges and tensions of this role, especially the potential for subjectivity and how I attempted to address this throughout the research process.

**Participant Researchers**

In participant research of this nature, it is important to recognise the potential for subjectivity and to address potential bias (Bogdan & Biklen, 2007; Taylor & Medina, 2013). Sparkes and Smith (2014) explain that this includes considering how a researcher’s personal beliefs, values and experiences may have influenced the research process, namely the collection and interpretation of data and the subsequent communication of findings. Miles and Huberman (1994) also
highlighted how as researchers ‘we do have background knowledge’ (p. 17), although Grima-Farrell (2012) proposed that it helps us to be more aware of the issues at play. For example, as a former secondary school physical education teacher and a current teacher educator at the time of the study, it is recognised that my personal beliefs and values around HBPE were strongly influenced by my prior experiences.

To reduce the potential for bias, it was important that I started from a position where multiple perspectives or interpretations were possible (Hastie & Hay, 2012). Moreover, I tried to adopt an objective stance when analysing the data so that the findings reflected what was actually happening within the two respective schools, rather than drawing on my own preconceptions (Mack, 2010). Sparkes and Smith (2014), however, argue that it is pointless for qualitative researchers to try and attain objectivity given our core assumptions, but stress the importance for reflexivity to guard against prejudice and allow unfounded judgements to form. The importance of adopting a reflexive stance, or in other words turn back on oneself, is also recognised by Day (2012) when conducting qualitative research in an effort to reduce this potential for subjectivity. Employing reflexivity helped me to evaluate the impact of my involvement on all aspects of the research process. Thus, I was constantly engaged in a process of self-reflection which involved examining my own assumptions and beliefs and how these may have potentially influenced the analysis, interpretation and reporting of the findings.

Having a supportive, yet critical friend is a further recommended way to enhance this reflexivity (Sparkes & Smith, 2014). Throughout this study, my fellow researcher (Mark) acted as a valued confidante and a sounding board which encouraged reflection on, and consideration of, different interpretations of events in the field. As an example, we participated in reflexive dialogue through peer debriefing sessions immediately following school visits where we would share our recollections and discuss the key critical incidents that we had identified from our field notes. Rossi and Tan (2012) believe critical friends are important, as they provide both an insider and an outsider view of the action as it unfolds.

Considering this dual insider-outsider perspective further, Milligan (2016) suggests that it can be regarded as a balancing act between a researcher’s
active positioning and the ways in which their role is defined by how the participants view the researcher. Given that I shared a similar background to the participants as a physical education teacher, I had a certain degree of what Robinson (2013) terms ‘insider knowledge’. However, I was conscious of the fact that I was also an outsider who was conducting research with teachers in their schools and writing about their experiences.

It was also important to consider how I was viewed by the teachers and how power relations might influence knowledge construction (McNess et al., 2013), given that I had previously taught three of the teachers during their teacher training. For example, early in the induction programme the teachers were often looking for Mark and I to lead the development of their HBPE units. Drawing on Kemmis and McTaggert (2008), we attempted to re-address this power relationship by reinforcing teachers’ experiential knowledge, such as regularly reassuring them that they were the experts in their respective schools and consequently knew what worked best for their students. Next, I provide an overview of the respective physical education curricula at both schools and the specific place of health within these curricula.

**The Physical Education Curriculum**

Physical education was a compulsory curriculum subject at both schools, and students had a minimum of two hours allocated to the subject on their timetables per week. Both physical education programmes were structured according to what Siedentop (1996) terms the Multi-Activity model, with predominantly sport-focused activity units taught over a relatively short duration. Specifically, physical education at Maple School was organised in half term units of six - eight lessons, with students receiving 60 minute lessons twice weekly. At Sycamore School, the curriculum was divided into discrete units of 4 lessons, with two separate activities each week; one activity for a double lesson and the other activity for a single lesson. Double lessons, of 100 minutes duration were usually timetabled outdoors, whilst 50 minute single lessons usually took place indoors. Regarding the range and breadth of activities on the physical education curriculum, students at Sycamore School experienced up to eighteen different activities over the course of a school year, with the majority of these being games-based activities.
Whilst there was less breadth at Maple School, the curriculum similarly demonstrated a predominance of games-based activities, with invasion games particularly dominant.

Curriculum design at both schools was overseen by the respective subject leaders, although there was an opportunity for all department members to have some input during planning meetings prior to the start of each new academic year. Typically, the timetable organisation involved teachers being assigned a specific activity and space for each of their classes, but having autonomy over the actual activity content. All students were taught in single gender classes, with the groups generated according to teacher assessments of students’ prior attainment. Whilst movement of students between classes was encouraged, this appeared to occur infrequently during the academic year. In both schools, physical education lessons at Key Stage 3 (aged 11–14 years) were timetabled in half year groups. Thus, four classes of students were taught at any one time (i.e. two separate boys’ and girls’ classes respectively).

The Place of Health within the Physical Education Curriculum

‘Health and fitness’ was a designated area of the physical education curricula in both schools. This consisted of short, four lesson units at Sycamore School, centred on a combined ‘fitness for performance’ and ‘fitness for life’ philosophy, as described in Chapter Two. These units involved students learning about different training methods, such as continuous, interval, fartlek and circuits, the effects of exercise on the body and how to lead healthy active lifestyles. Students were also taught how to plan a training programme during Key Stage 3 in preparation for GCSE study. At Key Stage 4, students had the opportunity to engage with some lifetime activities such as aerobics, zumba (girls only) and weight training. In addition, health-related learning was permeated through the teaching of games units but this was primarily limited to developing knowledge of how to warm up and cool down safely and effectively. At Maple School, there was also a heavy focus on fitness and training activities during the teaching of health units over half term blocks (usually six lessons). Similar to practice at Sycamore School, health-related learning was also embedded through activities such as orienteering and cross country in particular.
Prior to the commencement of Phase Two: *Teacher Induction to HBPE*, I arranged a separate preliminary visit to both schools. These visits, which involved meetings with the respective subject leaders for physical education, were conducted primarily to begin building positive relationships with the teachers based on mutual respect and a recognition that professional learning was a shared process, factors which have previously been identified as crucial for collaborative CPD (Bell et al., 2010; Cordingley et al., 2015). Further, the visits allowed me to provide teachers with a detailed overview of the study and to gain an early understanding of both school contexts. Moreover, in preparation for Phase 2: *Teacher Induction in Health-Based Physical Education* all of the participating teachers were asked to complete a written survey to help identify their starting points in terms of HBPE. This data were then used to inform the design of the induction programme to help ensure that it was pertinent for the teachers as learners (Armour et al., 2015; Brandl-Bredenbeck & Kampfe, 2012; Cordingley et al., 2003).

**Teacher Survey**

Drawing on the work of both Alfrey et al. (2012) and Castelli and Williams (2007), a survey was constructed to elicit information about teachers’ philosophies/beliefs, their teaching backgrounds, recent prior CPD experiences and the physical education provision at their schools, particularly in relation to health. Specifically, questions were grouped into categories covering the above (Appendix 2). It is argued that providing teachers with the opportunity to examine their own beliefs and prior learning should be included as key components in the design of CPD programmes to ensure that the content is relevant and can be personalised to participants’ needs (Bechtel & O’Sullivan, 2006; Cordingley et al., 2007; Gorard & Makopoulou, 2012). Responses to the survey were then used to shape the development of the professional learning meetings and also acted as an important reference point for the individual teacher interviews conducted later in the study.
Phase 2: Teacher Induction to Health-Based Physical Education

Phase two of the research involved the teachers participating in an induction programme for HBPE over a three month period. The programme was delivered separately during the summer term of 2012 at Sycamore School and over the winter/spring terms of 2012/13 at Maple School. Each school’s programme had a dual purpose; 1) to familiarise teachers with the HBPE model and 2) to develop their skills in practitioner research. From the outset, I endeavoured to create an autonomy supportive learning environment in an attempt to meet the teachers’ basic psychological needs for autonomy, competence, and relatedness discussed in Chapter 2. Aelterman et al. (2013) suggest that this learning environment improves enjoyment and consequently supports the application of learning in teachers’ own classrooms. To meet the need for autonomy, I promoted active engagement, provided teachers with choice when recording their reflections and also encouraged them to raise any concerns with respect to implementing the HBPE model. The teachers’ feelings of perceived competence were supported by providing continued discussion and specific examples of what the model might look like in practice. Meanwhile, relatedness satisfaction was endorsed through collaborative planning, peer observation and teachers discussing their emerging findings with each other to help identify any essential modifications for the next meeting (or the next mini cycle). During implementation there were frequent examples of these discussions between teachers in different contexts, such as before and after lessons in the PE office, when team-teaching and during departmental meetings.

Both inductions were structured around a series of three school-based professional learning meetings, with each meeting loosely themed around Metzler’s (2011) proposed framework for pedagogical models discussed earlier. Consequently, the meetings focused on introducing the teachers to the HBPE model’s ‘Foundations’, the ‘Teaching and Learning Features’ and the specific ‘Implementation Needs’ for the particular school contexts. Table 3.8 provides an overview of the aims and content covered during each professional learning meeting.
Table 3.8 Overview of Professional Learning Meetings

<table>
<thead>
<tr>
<th>Meeting 1</th>
<th>Meeting 2</th>
<th>Meeting 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to the HBPE project</td>
<td>Review of post-session tasks</td>
<td>Review of post-session tasks</td>
</tr>
<tr>
<td>Teacher reflections</td>
<td>The ‘Teaching and Learning Features’ for HBPE</td>
<td>Progress on planning HBPE units &amp; lessons</td>
</tr>
<tr>
<td>Introduction to Models Based Practice</td>
<td>HBPE ‘Implementation Needs and Modifications’</td>
<td>Logistics for implementation</td>
</tr>
<tr>
<td>The ‘Foundations’ for HBPE Practical Activity</td>
<td>Picture a HBPE lesson</td>
<td>Data required from teachers and students</td>
</tr>
<tr>
<td>Practitioner Research</td>
<td>Moving forward</td>
<td>Reflection on Induction programme</td>
</tr>
</tbody>
</table>

Supplementing the professional learning meetings, the teachers were encouraged to engage with relevant research as noted earlier and also some reflective activities which were designed to promote sustained learning throughout the induction programme. Further, these activities provided the teachers with an opportunity to trial elements of the HBPE model with their classes and engage with the action research process through a continuing cycle of interaction between theory, practice and reflection (Reason & Bradbury, 2008). In keeping with the principles of PAR, the reflective activities were planned collaboratively with teachers to help foster a climate of shared ownership as Armour and Makopoulou (2012) have advocated. Specific examples of these reflective activities are provided in the following section where I describe each of the three professional learning meetings in detail.

**Professional Learning Meeting 1**

The first professional learning meeting began with the teachers reflecting on their prior experiences of teaching health within physical education, the goals of their current health units and the most frequent activities taught within these units. The initial findings from the teacher surveys described earlier in the chapter were also shared. This was followed by an overview of models-based practice and a rationale for a HBPE pedagogical model. Next, the developmental stages of the HBPE model were outlined before focusing on the model’s Foundations. Specifically, this comprised discussing the underlying theory of self-determination, the major theme of ‘valuing a physically active life’ and the
assumptions about teaching and learning explained previously. The meeting concluded with an explanation of the Physical Education Practitioner Research Network (PEPRN), an online professional development and curriculum innovation forum developed at a University in England with the intention of providing a platform for sharing practice. All of the teachers were invited to join PEPRN to share their experiences of engaging in the induction programme and to stimulate online discussion throughout the study. In order to develop their skills as practitioner researchers, the teachers were encouraged to trial some of the critical features for HBPE with colleagues in their schools.

Table 3.9 Post Meeting 1 Reflective Activities

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Teach a lesson trying to employ the ‘teacher’ benchmarks. Ask a colleague to observe you using the checklist. (NB. Remember that this does not have to be a HBPE lesson as it is the behaviour we are looking for and not the activity)</td>
</tr>
<tr>
<td></td>
<td>a) Reflect on which benchmarks you did/did not demonstrate</td>
</tr>
<tr>
<td></td>
<td>b) Identify how you might adapt to include more teacher benchmarks</td>
</tr>
<tr>
<td></td>
<td>c) Reflect on the suitability of the benchmarks for achieving the HBPE LOs</td>
</tr>
<tr>
<td>2.</td>
<td>Trial the ‘student’ benchmarks with one of your classes. Ask a colleague to observe the students using the checklist.</td>
</tr>
<tr>
<td></td>
<td>a) Reflect on which benchmarks the students did/did not demonstrate</td>
</tr>
<tr>
<td></td>
<td>b) Identify how you might adapt to include more student benchmarks</td>
</tr>
<tr>
<td></td>
<td>c) Reflect on the suitability of the benchmarks for achieving the HBPE LOs</td>
</tr>
<tr>
<td>3.</td>
<td>Carry out an audit of your PE curriculum and extra-curricular provision using the template provided</td>
</tr>
<tr>
<td></td>
<td>a) List all activities offered across your PE curriculum</td>
</tr>
<tr>
<td></td>
<td>b) List all activities offered across your extra-curricular provision</td>
</tr>
<tr>
<td></td>
<td>c) List other activities that could feasibly be delivered on the school site</td>
</tr>
</tbody>
</table>

Professional Learning Meeting 2

The second professional learning meeting focused on the key Teaching and Learning features of the HBPE model. It began with a review of the reflective activities from the first meeting, in particular the extent to which some of the critical features had been demonstrated in their practice. For example, one teacher reflected that during his lesson ‘giving pupils choice for their work’ and
'linking learning to pupils’ existing activity interests' went well, whilst making reference to the physical activity guidelines for young people and ‘setting challenges or activities for pupils to do out of hours’, were areas he identified for future development. Based on their contextual knowledge and understanding, the teachers were asked to visualise how the HBPE conceptual framework might be translated in their respective schools. Specifically, the teachers wrote a paragraph describing what an observer might see in one of their HBPE lessons in terms of both teacher and student behaviour. Following the discussion which ensued, the following extract, jointly written by Mark and I, was shared with teachers to support their understanding:

Throughout the lesson, a supportive learning environment is evident. Students have a degree of ownership over their learning and choose tasks/activities that are of interest to them. They engage with effort and enthusiasm and are encouraged to demonstrate progress against self-referenced targets. The teacher regularly makes reference to physical activity guidelines and promotes out of class physical activity. Students are reminded to support the engagement of others, including friends and family members, in physical activity. They are also taught to become knowledgeable and informed participants, who understand the benefits of an active lifestyle and how to participate safely and effectively.

(Sammon & Bowler, 2012)

During the meeting, there was also some interesting dialogue on how the teachers might structure the learning environment, align learning activities with the HBPE learning outcomes, and promote physical activity out of class. In terms of the reflective activities, teachers were encouraged to continue developing both their confidence with the HBPE model and their skills as practitioner researchers. Further, in preparation for the final professional learning meeting, the teachers were encouraged to jointly plan draft units of learning and some associated lessons for their prospective HBPE programmes. Table 3.10 provides a description of these reflective activities.
Table 3.10 Post Meeting 2 Reflective Activities

1. Continue to hone your skills in achieving both the teacher and student benchmarks

2. Trial the use of a lesson evaluation tool - the 'Written' Post-Lesson Teacher Analysis (PLTA) and/or 'Verbal' PLTA (using a voice recorder) to reflect on your lessons as we are keen to find out which methods you prefer?

3. Draft units of work and lessons for the classes you will teach

Professional Learning Meeting 3

The third professional learning meeting concentrated on the specific 'Implementation Needs' for HBPE in the respective school contexts. As with the previous meeting, discussion began with the reflective activities, in particular the positives and/or challenges which the teachers experienced when engaging with these activities. Following this discussion, the teachers raised a number of questions concerning implementation, such as how to assess learning in the affective domain, how to monitor students' physical activity levels and how to effectively promote physical activity both in and out of class. Consideration was also given to the modifications that could be made to the HBPE model without losing its fidelity, while simultaneously encouraging teacher autonomy.

Together with the teaching of eight lesson units, it was agreed that health-related learning would be permeated across all areas of the physical education curriculum, as advocated by Harris and Cale (2018). Specifically, this permeated health-related learning involved referring to the physical activity for health guidelines for children and young people (CMO, 2011), promoting out of class activity and encouraging students to monitor their own activity levels. Further, different methods of data gathering for both teachers (e.g. post lesson reflections and monitoring benchmarks in lessons) and students (e.g. surveys, interviews and activity diaries) were discussed. Finally, a start date was agreed for the implementation of HBPE units.
Phase 3: Implementation of Health-Based Physical Education

Sycamore School

At Sycamore School, HBPE was taught over eight lessons units to classes of girls and boys in both Year 8 (aged 12-13 years) and Year 9 (aged 13-14 years) respectively. Lessons (all singles) were 50 minutes duration and alternated each week between indoors and outdoors due to timetable constraints. Activities during the HBPE units for both year groups included running games, boxercise and skipping, whilst Year 9 students also received an introduction to strength and conditioning in the school multi-gym. Tables 3.11 and 3.12 provide an overview of the HBPE unit aims and unit framework respectively.

Table 3.11 Sycamore School HBPE Unit Aims

<table>
<thead>
<tr>
<th>Sycamore School Health-Based Physical Education Unit Aims</th>
</tr>
</thead>
<tbody>
<tr>
<td>To support students to...</td>
</tr>
<tr>
<td>1. Manage and monitor activity levels to meet/exceed the minimum PA guidelines</td>
</tr>
<tr>
<td>2. Identify the characteristics of a healthy active lifestyle</td>
</tr>
<tr>
<td>3. Demonstrate a positive attitude to physical activity within and beyond the lesson</td>
</tr>
<tr>
<td>4. Encourage other students in a positive and supportive learning environment</td>
</tr>
<tr>
<td>5. Make personal progress against physical activity, exercise, health or fitness goals</td>
</tr>
<tr>
<td>6. Demonstrate safe and effective technique in a range of physical activities</td>
</tr>
<tr>
<td>7. Identify the effects of different activities/exercise on health and fitness</td>
</tr>
<tr>
<td>8. Apply a range of tactics in running challenges</td>
</tr>
<tr>
<td>9. Understand that different people will be motivated by and value different activities</td>
</tr>
<tr>
<td>10. Transfer and evidence learning and skills beyond the lesson and into leisure time</td>
</tr>
</tbody>
</table>
### Table 3.12 Sycamore School HBPE Unit framework

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Sycamore School Health-Based Physical Education Unit framework</th>
</tr>
</thead>
</table>
| **Lesson 1** | Introduction to Health-Based Physical Education unit, PA guidelines and benefits of an active lifestyle  
Boxercise |
| **Lesson 2** | Characteristics of a healthy active lifestyle  
Apply a range of tactics in running challenges  
Running Challenges |
| **Lesson 3** | Effects of physical activity/exercise – short-term  
Boxercise |
| **Lesson 4** | Effects of physical activity/exercise – long-term  
Apply a range of tactics in running challenges  
Running Challenges |
| **Lesson 5** | Ways of tracking physical activity, health or fitness  
Fitness by Chance |
| **Lesson 6** | Common barriers to physical activity and strategies to overcome these  
Apply a range of tactics in running challenges  
Running Challenges |
| **Lesson 7.** | Strategies to encourage peers and family to be more active  
Circuits |
| **Lesson 8.** | Reflect on key learning throughout the unit  
Physical Activity Games (including running, tag and exercise games) |

**Maple School**

Teachers at Maple School, meanwhile, worked with two classes of Year 7 boys (aged 11-12 years) over a six lesson unit. All lessons were 60 minutes long, took place indoors in the school gymnasium and were predominantly focused on getting students sufficiently active through circuit-based activities. Although activities were initially teacher-directed, students had the opportunity to design their own activities as they progressed through their HBPE units. Tables 3.13 and 3.14 provide an overview of the HBPE unit aims and unit framework created by the teachers at Maple School.
Table 3.13 Maple School HBPE Unit Aims

<table>
<thead>
<tr>
<th>Maple School Health-Based Physical Education Unit Aims</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To support students to...</strong></td>
</tr>
<tr>
<td>1. Work towards, meet and exceed the physical activity guidelines for young people</td>
</tr>
<tr>
<td>2. Improve their motivation, confidence and competence in selected activities</td>
</tr>
<tr>
<td>3. Recognise the benefits of physical activity on physical, social and mental health</td>
</tr>
<tr>
<td>4. Monitor and record activity levels and set self-referenced targets for improvement</td>
</tr>
<tr>
<td>5. Identify where and how to get involved in selected physical activity opportunities</td>
</tr>
<tr>
<td>6. Understand the effects of different types of physical activity on health and fitness</td>
</tr>
<tr>
<td>7. Identify strategies to promote components of health-related fitness</td>
</tr>
<tr>
<td>8. Develop leadership skills in supporting others to be active</td>
</tr>
</tbody>
</table>

Table 3.14 Maple School HBPE Unit Framework

<table>
<thead>
<tr>
<th>Maple School Health-Based Physical Education Unit Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lesson 1</strong></td>
</tr>
<tr>
<td>Introduction to HBPE unit, PA guidelines and benefits of an active lifestyle</td>
</tr>
<tr>
<td>Choice: Boxercise / Rowing / 1v1 or 2v2 Basketball</td>
</tr>
<tr>
<td>Students monitor activity levels with pedometer</td>
</tr>
</tbody>
</table>

| **Lesson 2**                                             |
| Recap of PA guidelines. Introduce ‘how active are most children?’ Discussion on student activity levels during week. Students to set self-referenced goal for pedometer steps |
| Choice: Boxercise / Circuit / Rowing / Running / 1v1 or 2v2 Basketball |

| **Lesson 3**                                             |
| Introduction of heart rate monitors to determine MVPA |
| Introduction to heart rate activity zone for aerobic health and fitness development |
| Choice: Boxercise / Circuit / Rowing / Running / 1v1 or 2v2 Basketball |
| Identification of where and how to be active in local community |

| **Lesson 4**                                             |
| Introduce common barriers to physical activity and strategies to overcome these |
| Choice: Boxercise / Circuit / Rowing / Running / 1v1 or 2v2 Basketball |

| **Lesson 5**                                             |
| Strategies to support others to be active (peers and family) |
| Choice: Boxercise / Circuit / Rowing / Running / 1v1 or 2v2 Basketball |

| **Lesson 6**                                             |
| Reflect on key learning throughout the unit |
| Personalised skill and health-related circuit |
The unit aims and framework for HBPE developed at both schools demonstrated evidence of planning for the five learning goals (movers). In particular, the habitual, enthusiastic, confident and informed movers goals featured explicitly, although there was less emphasis given to the critical mover goal. For example, students were taught the physical activity guidelines for young people, the benefits of physical activity, the characteristics of a healthy active lifestyle, the short and long-term effects of physical activity on health and fitness, and strategies for monitoring their own physical activity levels. In contrast, there was less evidence of teachers explicitly promoting the critical mover goal, although strategies to help students overcome typical barriers to physical activity participation were discussed during the HBPE units and students were also encouraged to support their friends and family members to be active.

Throughout their teaching of HBPE, the teachers were encouraged to engage with the action research process after each lesson through, what Casey et al. (2017) refer to as a series of self-reflective cycles. Specifically, these self-reflective cycles involved teachers trying to understand and enhance their practice based on the positive aspects and the challenges which they identified in their written, or audio recorded, reflections using a Post Lesson Teacher Reflection (PLTR) tool.

**PLTR Tool**

The primary aim for employing a PLTR tool was to generate rich data on the teachers’ on-going experiences of implementing the HBPE model in order address Research Question Two i.e. What was the impact of teachers’ learning on their practice over time? Further, the tool was designed to support them in their lesson evaluations and to determine perceived fidelity in relation to the HBPE critical features. Therefore, I created a laminated pocket card with the PLTR framework on one side and the HBPE model’s critical features on the other side (Appendix 4). This pocket card acted as a frame of reference for the teachers to draw on both during and after their lessons, as reported later in Chapter Four. Specifically, the PLTR asked teachers to reflect on the aims of their lessons, the positives/challenges experienced and to identify key priorities for their own teaching and their students' learning. Teachers also reflected on the extent to which they incorporated the critical features in their practice.
Building on the work of Dyson (1994), the PLTR tool was developed following an extensive process of piloting with both trainee and in-service teachers. The piloting process resulted in minor changes being made to the original tool before it was presented to the teachers in this study. For instance, Question 1 ‘What were your goals for the lesson?’ was viewed as confusing and it was suggested that this question would be better phrased as ‘What were your aims for the lesson?’ Whilst replacing the word ‘goals’ with ‘aims’ might appear quite trivial, those involved in the pilot agreed that ‘aims’ better reflected the language that teachers in England were used to and therefore aided their understanding.

**Mid-Unit Evaluations**

In addition to completing their PLTRs after each lesson, the teachers were asked to write a short evaluation mid-way through their HBPE units in order to analyse the overarching main cycle (i.e. the unit) and preview future practice as suggested by Ax et al. (2008). This evaluation consisted of some open-ended questions focused on the highlights and challenges that the teachers had experienced during their teaching of HBPE to date. Further questions sought to explore whether they had observed any impact on their students' learning and the extent to which the critical features had been embedded in their practice (Appendix 6). Following the collation of these evaluations, I shared my initial analysis of the emerging findings with the teachers to help inform their practice over the remainder of the HBPE unit and also to gain insight into their interpretation of the data. By prioritising participant-driven data over my own assumptions during the data collection, Milligan (2016) proposes that the outcomes will be more realistic and trustworthy. The issue of trustworthiness is discussed more fully later in this chapter.

**Individual Interviews**

Interviews are especially beneficial in qualitative research as they provide us with access to the views of others on particular experiences. Moreover, it is suggested that interview can help us to gain new and detailed insights from the perspective of the participant (Adams, 2010; Hastie & Hay, 2012). Similarly, Cohen et al. (2011) note that interviewing allows the exploration, construction and negotiation
of meanings in a natural setting. Semi-structured interviews was chosen as a method to help generate rich data and answer my research questions as ‘it allows depth to be achieved by providing the opportunity on the part of the interviewer to probe and expand the interviewee’s responses’ (Rubin & Rubin, 2005, p.88). Whilst Davies (2007) lends support to the view that semi-structured interviews are good at capturing the depth and intricacy of participants’ experiences, he advises that the interviewer needs some level of training or practice in order to avoid prompting answers.

Specifically, this method was employed to gather focused and detailed accounts of teachers’ experiences throughout the entire HBPE-CPD programme (i.e. both during the induction and the implementation phases). According to Sparkes and Smith (2014), a recognised strength of semi-structured interviews is that they can provide participants the opportunity to reveal more about their experiences than structured interviews, although it is recognised that there may be barriers between the interviewer and the participant which result in certain experiences not being shared. A further advantage of interviews highlighted by Berg (2007) is that data can be reviewed multiple times to help produce an accurate report.

However, it is acknowledged that interviews, like any research tool, can present a number of challenges and potential limitations. Primarily, the interviewing process can be complex and time-consuming with regard to the data collection and analysis as they need to be transcribed and coded. Additionally, their effectiveness often rely on the inter-personal skills of the interviewer, such as listening attentively and encouraging the interviewee to talk freely (Cohen, Mannion & Morrison, 2011). Hammersley and Gomm (2008) point out that interviewees may only discuss what they think the interviewer wants to hear and thus it is important to be aware of the potential for subconscious bias. Further threats to validity can include the use of leading questions and the researcher’s preconceived ideas influencing the interview discussion. However, Newton (2010) suggests that internal validity can be enhanced by adopting a participatory approach where the transcribed interviews are co-created and evaluated.

Primarily, my research focus informed the design of the interview schedules. Planning, therefore, involved identifying key areas relevant to my research
questions and then nesting sub-questions within these. Drawing on the work of Rubin and Rubin (2005), who propose that interviews evolve through seven distinct phases, the creation of the interview schedule or guide was carefully designed. For example, I devised a warm up question on the most positive aspect of the whole HBPE experience in an attempt to relax the teachers and get them talking freely from the outset. Furthermore, a conscious decision was made to design open questions to allow for flexibility to ask additional questions where appropriate and also to help create a co-constructed conversation with teachers (Sirna et al., 2008; Westcott & Littleton, 2005).

A draft interview schedule was initially designed and discussed with both my critical friend (Mark) and my research supervisors. Following some adjustments based on their suggestions, a revised schedule was then piloted with two practising teachers of physical education ‘to test practicality with regards to content, clarity and methodological issues’ (Brandl-Bredenbeck & Kampfe, 2012 p.183). Feedback from these teachers confirmed that the interview schedule was effective in facilitating some good discussion, although they did raise the need to rephrase some questions to enhance clarity. For example, one of the questions What were your outcome expectations and did the programme match these was viewed as too vague and hence replaced with How successful was the pre-implementation professional development programme in preparing you to teach HBPE according to the model’s design? In addition, the question, To what extent do you now implicitly or explicitly embed the benchmarks in your practice was re-written to focus more specifically on each of the individual critical features (benchmarks). During your unit, to what extent did you embed each of the specific benchmarks in your practice?

Learning from the piloting process, I also decided to systematically cluster questions around five broad lines of inquiry to improve the structure of the schedule and to aid future data analysis. Consequently, the interview schedule included distinct sections on 1) the initial ‘Teacher Induction’ phase; 2) teachers’ beliefs with respect to teaching health; 3) their teaching practice; 4) contextual factors which may have facilitated and impeded the implementation of HBPE and 5) any legacy in terms of teaching and learning.
In terms of the logistics, each teacher was interviewed at two distinct points during the research process; initially following the completion of the HBPE Implementation phase (Appendix 5), and then twelve months later during Phase 4: Sustaining HBPE Beyond the ‘Honeymoon’ (Appendix 7). Given my wish for methodological naturalism (Sparkes & Smith, 2014), and specifically in an attempt to minimise the potential disruption for the teachers, the interviews were arranged at a time convenient for them during their working day. A key concern was that realistically I had only one real window of opportunity to conduct the interviews with each teacher in their respective schools. Consequently, a number of important considerations needed to be taken into account before, during and after the interviewing process “in order to maximise the collection of rich and useful data” (Sparkes & Smith, 2014, p.93).

Based on these considerations, a timetable was drawn up before the interview days at each school and agreed by the respective physical education subject leads. For logistical reasons, my critical friend (Mark) and I both conducted the interviews at Sycamore School, with the seven teachers divided at random between us, whereas at Maple School I conducted all of the interviews. To enhance trustworthiness, standardisation occurred during the first teacher interview at Sycamore School. This involved Mark and I jointly conducting the interview and afterwards engaging in reflective discussion, where we reinforced aspects of good interview technique, such as being an active listener, managing silence and not asking too many questions at once. In addition, we reminded each other to allow the teachers to guide the conversation as the focus of the interview was on their experiences. All interviews took place in a quiet room, lasted between fifteen and fifty minutes in duration and were recorded using a digital audio recorder. Following the interviews, the data were then subsequently uploaded and stored securely on a password protected computer on leaving the school site. Furthermore, and as recommended by Adams (2012), I also wrote extensive field notes detailing the context and the key features which I considered to be noteworthy.
Focus Groups

Focus groups are an increasingly popular method of data collection among qualitative researchers as they are economical on time and thus more cost effective compared with individual interviews (Savin-Baden & Howell Major, 2013). Whilst Shenton (2004) suggests that focus groups and individual interviews have some common methodological limitations since they are both forms of interview, he also acknowledges that their discrete characteristics can also be viewed as strengths. Focus group interviews were primarily selected as a method to gain a collective view of students' learning experiences from multiple perspectives and thus triangulate data gathered from the teacher interviews and PLTRs to help answer Research Question Two. A further factor was to examine the social interaction between students and to reduce the potential for intimidation as recognised by Cohen et al. (2018).

However, Sparkes and Smith (2014) highlight a number of particular challenges presented by focus groups, such as the skilled management of group dynamics to ensure that all individuals have an equal opportunity to participate in the discussion. Furthermore, some individuals may be reluctant to share their experiences in a group situation and/or may be unduly influenced by their peers when articulating their thoughts. In an effort to identify and address these potential challenges, the focus group schedule was piloted with ten students aged 11-12 years, prior to implementation in the field. For example, acting on advice from Rubin and Rubin (2005) mentioned previously, a couple of starter questions were included in an attempt to build rapport with, and relax, the participants and this proved a positive strategy. These questions specifically referred to asking students to recall the main activities that they experienced during their HBPE units and what reasons their teachers gave for doing HBPE (Appendix 8).

In designing the interview guide, a number of avenues were explored such as a group mind map to illustrate participants' understanding of why young people participate in physical activity. Furthermore, similar to a strategy employed by Bisset (2009) to describe a continuum of behaviour from amotivated to intrinsically motivated, it was considered to show the students a number of
different images and ask them to select which one best describes their motivation to be physically active.

Similar to the teacher interviews described earlier, the focus groups followed a semi-structured, open-ended format and were conducted at two points during the research process; the first focus group interview took place following the initial implementation of HBPE in each school and then there was a second focus group interview 12 months later. These focus groups involved a total of 41 students (21 students at Sycamore School and 20 students at Maple School). On both occasions, a sample of students was selected by the teachers based on their progress in relation to the five HBPE learning goals (movers), which were explained earlier. This selection process was conducted in an attempt to select students from across the attainment and motivation spectrum. The focus groups were jointly moderated by Mark and I at both schools and largely followed the same format as the teacher interviews, with standardisation occurring during the first interview. As interview data can be characterised by inaccuracies due to recall issues, it is advised that they should be supplemented with other methods to obtain richer data and help validate findings (Cohen et al., 2018). Consequently, participant observations were also employed as a research method to provide a live account of teacher and student behaviour and interactions during the implementation of HBPE in both schools.

**Participant Observations**

Savin-Baden and Howell Major (2013) suggest that observation can be an effective data gathering method to understand how or why events occur within a natural setting, which in the case of this research were teachers' classrooms. It is advised that when employing this method researchers need to carefully consider their position in relation to the participants and the various ethical dilemmas that may arise (Cohen et al., 2018). On a similar vein, Thomas et al. (2011) legitimately argue that the presence of a researcher with a camera may affect participant behaviour and thus provide unreliable results, although this argument is considered inconclusive by Quennerstedt (2013). To limit the potential of adversely affecting participant (both teachers and students) behaviour during lesson observations, I endeavoured to reduce the sense of intrusion by maintaining a low profile.
Lesson observations were planned to be conducted at two points over the course of the taught units (i.e. the first and last lessons). This sample of taught lessons was video recorded using a digital camcorder which was positioned in a fixed spot on a tripod for indoor lessons and hand-held for outdoor lessons. In addition, a battery microphone was used to record the teacher's voice. Whilst it is recognised that the use of video when conducting lesson observations can improve accuracy because a recording can be watched multiple times, it is also contended that video may lose vital contextual information about the classroom when filmed from a single or even multiple perspective(s) (Ofsted, 2018). In addition, teachers were encouraged to peer observe and record each other’s practice where possible throughout the implementation phase to gain further insights into teaching and learning.

Validity is viewed as a key strength of participant observation as when studies take place in natural settings such as classrooms, results are more likely to be a true representation of life events. Participant observations also allows the researcher the flexibility to enter the environment with an open mind to gain insight into people's actual behaviour, which reduces the risk of making biased judgements. In contrast, participant observation also present a number of potential limitations or challenges (Cohen et al., 2018; Sparkes & Smith, 2014). Firstly, it is recognised that participant observation may rely on the sole subjective interpretation of the researcher and consequently the findings may not be objective. Secondly, it can be a time-consuming process, both in terms of carrying out the actual observations and then in analysing the large amount of resultant data. A third limitation concerns the notion of ‘observer effect’ where the participants (both teachers and students in this case) may behave differently due to the researcher’s presence.

**Documentation and Email Communication**

Supplementing the primary methods of data gathering were some secondary sources, such as documentation from both schools and email communication. Together with the most recent school Ofsted inspection reports, key documents gathered included details of the physical education curricula, such as the timetable structure, units of work, lesson plans and assessment policies.
Throughout the research process, email was used as a means to facilitate an ongoing dialogue with the teachers as co-participants. In addition, these emails provided me with regular updates on the teachers’ progress during the HBPE-CPD programme and also afforded them the opportunity to contact me with any questions or issues they had. The following section describes Phase 4 of the research design.

**Phase 4: Sustaining HBPE beyond the ‘Honeymoon’**

Twelve months after the initial implementation of HBPE in their schools, my research colleague and I returned to the respective school settings to interview all of the teachers for a second time and to conduct further focus groups with selected students. In conducting these interviews we followed the same process as took place during Phase 3: *Implementation of Health-Based Physical Education*. For example, to enhance trustworthiness, standardisation again occurred between us during the first interview at Sycamore School, there was a specific focus on exploring the extent to which elements of the HBPE model had become embedded in teachers’ practice over time in order to address Research Question Two. It is important to mention that over the twelve month period between the initial *Implementation of Health-Based Physical Education* (Phase 3) and *Sustaining HBPE Beyond the ‘Honeymoon’* (Phase 4), there were a number of staff changes at Sycamore School. Specifically, these changes involved one teacher leaving the school, the subject leader for physical education moving into a senior leadership role and a teacher returning from maternity leave to assume the subject leadership. At Maple School, however, there were no staff changes which resulted in both teachers engaging in a second cycle of implementing the HBPE model in practice.

**Reflective Field Journal**

To support researchers to reflect on their role within the research process and the subsequent impact on participants’ lived experiences, Etherington (2004) recommends the keeping of a research journal. It is viewed as important for participant observers to keep detailed field notes to capture a record of thoughts, questions and observations as they happen and to stimulate reflective thinking on the research process (Stanley, 2001). Indeed, the researcher’s notes have been
described by Schatzman and Strauss (1973) as ‘the vehicle for ordered creativity’ (p.105). During my school observation visits I kept a field journal to record what Tripp (1993) refers to as ‘critical incidents’. Hastie and Hay (2012) describe critical incidents as ‘those features of a particular context that participants find significant or important’ (p. 86). As I observed lessons, I aimed to record these critical incidents as precisely as possible. To facilitate this, I decided to employ Rolfe et al’s. (2001) Reflective Model framing my observations of critical incidents around three key questions: What? So what? and Now what?

Exploring these key questions in more depth, the first question What? refers to what happened and what information I planned to take forward for further analysis. For example, what action did the teacher take and what were the consequences for their students’ learning? Once I had carefully completed the descriptive account, the second question So what? supported me in attempting to gain a comprehensive insight of my observations in relation to the literature. For example, so what could/should the teacher and/or the students have done to make the learning environment better? During the third phase, Now what? which Rolfe et al. (2001) view as the most important for improving practice, the practitioner reflects on action, contemplates ways of improving the situation, and reflects on the consequences of action. This guided me to consider the broader issues which arose and what steps or actions were required to further improve teaching and learning. During data analysis, my reflective field notes were further complemented with details of informal conversations with the teachers that took place during school visits. The next section provides specific detail of the data analysis process and explains how themes were generated.

Data Analysis

Thematic analysis is the process of identifying notable patterns or themes within qualitative data (Maguire & Delahunt, 2017). It is viewed as a flexible method rather than a methodology, which means that it is not tied to a particular epistemological or theoretical perspective (Braun & Clarke 2006; Clarke & Braun, 2013). Moreover, Charmaz (2011) suggests that theories are constructed as a result of the researcher’s interactions with the field and its participants. Consequently, there is co-construction of the data by both the participants and
The goal of a thematic analysis is to identify themes and use these to help address the specific research questions. Braun & Clarke (2006) distinguish between a top-down or theoretical thematic analysis that is driven by the specific research question(s) and a bottom-up, or inductive one, that is more driven by the data itself. In conducting a thematic analysis, I drew on Braun and Clarke’s (2006) framework to guide the process. Briefly, this process involved the steps of becoming familiar with the data, the generation of codes, searching for themes and finally reviewing and defining these themes (Table 3.15).

**Table 3.15 Overview of Thematic Analysis Process**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
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<tbody>
<tr>
<td>Step 1</td>
<td>Becoming familiar with the data</td>
</tr>
<tr>
<td>Step 2</td>
<td>Generating initial codes</td>
</tr>
<tr>
<td>Step 3</td>
<td>Searching for themes</td>
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<tr>
<td>Step 4</td>
<td>Reviewing and developing themes</td>
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(adapted from Braun & Clarke, 2006)

**Step 1: Becoming Familiar with the Data**

The primary sources of data included the survey, interviews, PLTR, lesson observations and field note reflections. This data provided key evidence to address my two research questions, which were referred to constantly throughout the analysis process as a validity tool to ensure data was both relevant and appropriate to the aims of the study:

1. What were teachers’ reported learning experiences during their engagement in a collaborative and sustained CPD programme for HBPE (HBPE-CPD)?
2. What were teachers’ views of impact on their practice and implications for their students over time?

To begin familiarising myself with the data I initially examined the surveys which provided background details on teachers’ perceived importance of, and their confidence to teach, health in the physical education curriculum. The data also provided a picture of teachers’ prior experience of HBPE and any form of
engagement in CPD within the previous three years. Throughout the implementation phase, I read through and/or listened to the PLTR data multiple times as teachers sent these files through to me on a weekly basis. This data provided an on-going account of teachers’ experiences, in particular the positives and the challenges of teaching HBPE. Once all of the teacher interviews were transcribed verbatim and checked for accuracy, I also read and re-read the written transcripts. During this process, I made comments in the margins of written data to reflect anything which I considered particularly interesting or significant in relation to my research focus/questions. These loose annotations, as termed by Sparkes and Smith (2014), included both descriptive comments and emerging questions and subsequently helped in the organisation of ideas for further analysis (Silverman, 2006).

**Step 2: Generating Initial Codes**

Following this familiarisation process, I had some initial ideas about codes which I discussed with both my critical friend (Mark) and my research supervisors. For example, in relation to Research Question One (RQ1), the informal sharing of ideas between teachers, adopting an unfamiliar role and the challenges of finding time for reflection in busy school environments were issues which arose repeatedly. Similarly, in relation to Research Question Two (RQ2) highlighting the physical activity guidelines, how much choice to offer students and peer support regularly surfaced. Next, I worked through the data coding all of the text that was relevant to my research questions through a process of constant comparison. Appendix 9 provides a worked example of an extract with my codes in the margins. I then began to organise the data in a meaningful and systematic way, for example creating a table to collate all of the survey data (Appendix 10). Additionally, I downloaded all of the email communications with both schools into a word document and ordered them chronologically into two broad time-phases i.e. implementation phase and the post-honeymoon phase to provide a narrative of the virtual engagement with teachers throughout the study.

**Step 3: Searching for Themes**

As explained earlier, a theme is a pattern that captures something significant or interesting about the data and/or research question(s) (Maguire & Delahunt, 2017). On closer examination of the codes, it was clear that some of them
merged together into a theme. For example, in relation to RQ1, codes such as autonomy to plan curriculum, shared ownership and co-construction of ideas captured an interesting picture of teachers actively engaged in the learning process. In contrast, other codes including finding time challenging, multiple demands and competing agendas suggested an emerging pattern around the time pressures that teachers experienced.

Furthermore, and to reflect the focus of RQ2, codes including teachers as positive role models, prioritising MVPA and active homework challenges were forming a pattern around physical activity promotion. Moreover, there were multiple codes referring to elements of choice and peer support suggesting a theme around autonomy supportive teaching. At the end of this step, the codes were organised into preliminary themes that described patterns in the data relevant to my research questions. Appendices 11 (RQ1) and 12 (RQ2) provide a detailed overview of these preliminary themes in relation to each of the Research Questions respectively.

**Step 4: Reviewing and Developing Themes**

During this phase, I reviewed, modified and developed the preliminary themes that I had identified in Step 3 to check for clarity. Maguire and Delahunt (2017) stress that themes should be both coherent and distinct from each other and, as such, I considered whether the preliminary themes overlapped and if there were any emerging sub-themes. For example, and reflecting the key focus of RQ1, *Factors Challenging Pedagogical Change* emerged as an overarching theme in light of the various pressures and conflicts which the teachers reported. Subsequent analysis resulted in two sub-themes being generated from this overarching theme, namely *Time* and *Competing Organisational Demands*. A detailed overview of these revised themes is presented in Appendix 13.

Likewise, considering the emphasis of RQ2 was to investigate the impact on teachers' practice, the preliminary theme of *Promoting Activity* was replaced with the revised theme of *Promoting Habitual Movers* to more closely reflect arguably the key learning goal of the HBPE conceptual framework. In addition, two sub-themes were created, namely *Activity During Lessons* and *Activity Beyond the Lesson*, as the data suggested that an interesting pattern had emerged for each
of these different contexts which warranted further individual analysis. Appendix 14 provides a detailed overview of these revised themes in relation to RQ2 and an overall summary of the changes that I made at this stage of the data analysis are presented in Appendix 15.

Drawing on the work of Creswell (2007), it was extremely important from an ethical perspective that these themes accurately reflected the teachers’ words and actions. Therefore, in keeping with the traditions of PAR, a collaborative approach to the research process was employed where teachers were actively involved in the interpretation of the data (Robinson, 2013). For example, a summary of the emerging findings was shared with the teachers, who were provided with a follow-up opportunity to discuss these outcomes. As discussed earlier in the chapter, Milligan (2016) proposes that by prioritising participant-driven data over researcher assumptions, the outcomes will be more realistic and trustworthy. Having discussed the data analysis process in detail, this leads me to explain how I addressed a number of ethical considerations, including informed consent, confidentiality, anonymity and trustworthiness.

**Ethical Considerations**

**Informed Consent**

Informed consent is based on the idea that individuals should have the opportunity to agree or refuse to take part in a study based on them receiving comprehensive details about its nature and purpose (Sparkes & Smith, 2014). Adhering to the Guidelines for Ethics published by the British Educational Research Association guidelines (BERA, 2018), I obtained written voluntary informed consent from all of the participants and their respective head teachers before the research began (Appendix 16). Prior to informed consent being gained, all teachers were provided with a detailed information letter, which clearly outlined the nature and purpose of the research and their right to withdraw from the study at any time, without explanation or prejudice (Appendix 17).

In line with advice from Sparkes and Smith (2014) that informed consent should be regularly negotiated and re-established with participants during a study, I provided the teachers with updates throughout the research process and
routinely checked with them that they were still happy to be involved. Further, to demonstrate engagement with process consent, I discussed with the teachers how they were represented in my interpretations of the data. Indeed, I was acutely aware of my ethical responsibility to all of the participants (i.e. teachers and students) and to their schools, in particular not to report findings outside of my research remit.

**Anonymity and Confidentiality**

The confidential and anonymous treatment of participants’ data is considered a key ethical concept in qualitative research (BERA, 2018). The essence of anonymity is that ‘we do not name the person or research site involved…that will enable the individual or research site to be identified by others’ (Walford, 2005, p.85). Consequently, I had an important responsibility to act in such a way as to preserve participants’ identities and to ensure their anonymity. However, Sparkes and Smith (2014) point out that sometimes there is a discrepancy between the ‘promise’ of anonymity and the ‘reality’ of practice. Indeed, it is highlighted by Cohen et al. (2017) that employing unique personal data in research can actually identify the provider, thus creating a challenge in terms of preserving anonymity.

Being mindful of these particular challenges, I attempted to protect the identity of both the individual teachers and their schools by using pseudonyms during the collection, analysis and presentation of data at research conferences. Kaiser (2009) notes that issues of anonymity and confidentiality can become part of an on-going dialogue between researchers and participants to determine whether they wish to remain anonymous or would rather be identified in the research. For example, one school confirmed that they were happy to be identified although I subsequently took the decision to apply a pseudonym to both schools after consultation with my research supervisors and the ethical guidelines for educational research (BERA, 2011). In complying with the legal requirements in relation to the storage and use of personal data as set down by the Data Protection Act (1998), I informed the participants why their personal data was being stored and who would have access to it. Furthermore, all hard copies of data were stored securely in a locked filing cabinet and electronically on a secure, password protected, computer during the course of the research process.
Steps to Minimise Negative Impact on Participants

Recognising that the participants may have experienced some discomfort during the research process, I took all necessary steps to put them at ease. For example, during the teacher interviews, and as discussed earlier in the chapter, I began with a warm up question on the most positive aspect of the whole HBPE experience to try and relax participants. Further, during lesson observations I did my best to reduce the sense of intrusion on both the teachers and their students by maintaining a low profile. I also sought to minimise the impact of workload on teachers by offering choice in how they recorded their post lesson reflections. Finally, I acknowledge that no incentives were used at any point during the research process to encourage participation, apart from the opportunity to be involved in the development of a new pedagogical model for HBPE. The remainder of this chapter focuses on how I tried to adhere to the four criteria for qualitative research, originally proposed by Guba (1981), in my pursuit of a trustworthy study.

Trustworthiness

Taylor & Medina (2013) explain that the trustworthiness criteria include: *credibility* (did the researcher undertake prolonged immersion in the field, check his/her interpretations with his/her informants, and display a process of learning?), *dependability* (did the researcher engage in open-ended or evolving inquiry?), *transferability* (is there sufficient rich description for the reader to compare his/her own social context with the social setting of the research?), and *confirmability* (can the research data be tracked to their source?).

*Credibility* relates to the extent to which the data are an accurate representation of the context that was studied. Lincoln and Guba (1985) argue that ensuring credibility is one of the most important factors in establishing trustworthiness and stress the close ties between credibility and dependability, arguing that, in practice, a demonstration of the former goes some distance in ensuring the latter. I argue that credibility in my study was achieved through the employment of multiple data gathering methods across different sites to provide differential layers of collaborative evidence, or triangulation (Miller & Glassner, 1997; Patton,
2002). In line with Gorard and Makopoulou (2012), I believed that using multiple methods would provide a more complete picture of teachers’ experiences engaging in the HBPE-CPD programme and the subsequent impact on their practice. Similarly, Dependability was met by using ‘overlapping methods’ (Shenton, 2004), such as the individual interviews and focus groups. In terms of transferability, my goal was to provide a thorough and rich description of the research context, together with the central assumptions.

Returning to credibility, there are two recognised threats – researcher bias and researcher effect. Whilst bias is impossible to eliminate, as discussed earlier in this chapter, the second threat to credibility involves researcher effect, where the researcher’s presence in the setting may influence participant behaviour. I attempted to manage this threat and reduce the ‘novelty effect’ by spending a significant amount of time in the field and developing a good professional relationship with the participants by minimising the space between us (Corbin et al., 2009). This involved being flexible in my approach with regards to the school visits and providing teachers with sustained encouragement and support throughout the HBPE-CPD programme. However, a constant challenge involved not imposing my own vision of how the HBPE model might look like in practice, as a key aim of the research was for the teachers’ to draw on their local expertise and to lead on developing their own bespoke units of learning.

To further address both credibility and confirmability, and as explained earlier, I participated in frequent peer debriefing sessions with Mark (my critical friend) throughout the study. Smith and McGannon (2017) suggest that adopting critical friends presents an opportunity for reflexive dialogue during the research process and, as recognised by Sparkes and Smith (2014) his role was to act as a confidante to offer different explanations for events as they unfolded. Specifically, we discussed and reviewed emerging themes at the end of each phase of the data collection (i.e. Induction, Implementation and Post ‘Honeymoon’ phases). Further, I engaged in regular meetings with my research supervisors which provided me with a sounding board to test my emerging ideas and interpretations (Harvey, Cushion & Sammon, 2015; Shenton, 2004). I viewed these meetings to be important in avoiding a reliance on my own interpretations, thereby reducing the potential for bias when analysing the data as Backman and Kyngas (1999)
advocate. Moreover, to enhance credibility, participants were asked to conduct member checks of the data as noted earlier. This process specifically involved the teachers reviewing my findings to verify whether I had accurately reflected their experiences. Indeed, Culver et al. (2012) advise that employing member checks is the most crucial technique for achieving credibility.

Critical for confirmability is an ‘audit trail’, which Shenton (2004) explains allows an observer to trace the research process. As such, I kept an ‘audit trail’ through written memos and notes constructed over the course of the study. In line with Patton’s (2002) recommendations, this process provided both an in-depth description of the data analysis procedures and ensured the data presented were representative of the participants’ responses, rather than my own views. Moreover, as explained previously, triangulation was employed to reduce the potential for researcher bias and I acknowledged my beliefs underpinning the decisions that I made and the rationale for the methods adopted (Miles & Huberman, 1994).

**Conclusion**

In this chapter, I initially considered the paradigm debate concerning the various starting points for research and provided a rationale for employing a qualitative approach within an interpretivist philosophy to best explore teachers’ experiences of engaging in pedagogical change. Further, I clarified how my prior life experiences, formerly as a teacher and, more recently, as a teacher educator, helped to shape my assumptions and beliefs. Next, I justified why PAR was employed as my methodology, which involved teachers evaluating their practice using a PLTR tool and collaboration with colleagues. In keeping with the traditions of PAR, I employed a collaborative approach to the research process that involved the teachers in the co-construction of the data.

I then produced an overview of my research design which was divided into four distinct phases over the course of three years as follows: 1) HBPE Conceptual Model Development and Teacher Recruitment, 2) Teacher Induction to Health-Based Physical Education, 3) Implementation of Health-Based Physical Education and 4) Sustaining HBPE. The HBPE Conceptual Model evolved from a
four step process including the creation of draft ‘Foundations’ and draft ‘Critical Features’ respectively. The Teacher Induction programme included a series of school-based professional learning meetings, supplemented by reflective activities to develop teachers’ understanding of the model and their skills in practitioner research. During the implementation phase, teachers were encouraged to engage with the action research process through a series of self-reflective cycles after each lesson. These self-reflective cycles involved teachers in trying to understand and enhance their practice based on the positives and challenges identified in their lesson evaluations.

Data gathering and analysis were inter-related processes, with the initial analysis of data used to shape future data gathering through a repeated and cyclical process of comparative analysis. Finally, a number of ethical considerations were addressed, including informed consent, confidentiality, anonymity and trustworthiness. Looking forward to the results chapters, Chapter Four explores the learning experiences of the teachers during the HBPE-CPD programme, whilst Chapter Five reports on the impact on teachers’ practice over time in the two respective schools.
CHAPTER 4
Moving Towards HBPE-CPD as a Collaborative and Sustained Venture

Introduction

This chapter presents and discusses the findings specifically linked to Research Question One: What were teachers’ learning experiences during their engagement in a collaborative and sustained CPD programme for HBPE (HBPE-CPD)? The first section of the chapter Section One explores Teachers’ Prior Experiences of Health-Related Learning in terms of their engagement with relevant professional development. Section Two considers how the induction phase, including the school-based professional learning meetings and the reflective activities facilitated ‘buy in’ to the HBPE model. Section Three explores Teachers’ Engagement with Practitioner Research, in particular their commitment during the induction period and when implementing the HBPE model. Section Four examines the key factors which supported teachers’ learning and their engagement throughout the professional learning programme. This included active learning, the continued external support and the strong collaborative working cultures at both schools. Finally, Section Five highlights the key challenges that the teachers experienced throughout the HBPE-CPD programme, especially in relation to the constraints of working in busy school environments.

Section 1: Teachers’ Health-Related Learning Experiences

The literature highlights a general lack of teacher engagement with relevant health-related CPD, with many physical educators not perceiving a need for further professional development in this area (Alfrey et al., 2012; Cale, 2000; Armour & Yelling, 2004; Castelli & Williams, 2007; Armour & Harris, 2008; Kulinna et al., 2008; Harris, 2010; Harris, 2013). Consequently, this section draws on survey data to explore teachers’ health-related learning experiences prior to engaging in the HBPE-CPD programme.

Findings from the surveys revealed that eight out of the nine teachers had poor prior experiences of health-related learning. Specifically, five teachers could not
recall any health-related learning during their own school days, whilst seven viewed their initial teacher training (ITT) to have been poor in preparing them to teach health. This supports previous findings (e.g. Harris, 2014) and, whilst acknowledging the small sample size in this study, suggests more work needs to be done in ITT. Moreover, no teachers had engaged with any relevant HBPE-CPD in the three years preceding the survey. These findings reflect those of Alfrey et al. (2012) and Harris (2013), who exposed teachers’ general lack of engagement with forms of relevant health-related learning. The teachers provided a number of reasons to explain this lack of engagement, with the perceived cost, time away from school and competing interests such as “I wanted to develop in the area of rugby’ cited. This suggests that HBP-CPD was not always perceived as a priority and also points to competing organisational commitments and time pressures as an additional challenge, in line with previous research (Brydon-Miller & Maguire, 2009; Ellis & Loughland, 2016; Keay & Lloyd, 2011).

A lack of awareness of where to access health-related CPD was also reported as problematic by some teachers, “no courses offered by schools and not realising that there are courses available’. These findings, which endorse concerns raised frequently in the literature (Alfrey et al., 2012; Armour & Harris, 2013; Castelli & Williams, 2007; Harris, 2013), suggest a lack of opportunity and also a potential limited understanding on teachers’ part on where to engage with HBPE-CPD. In addition, the findings point to a need for CPD providers to reconsider how best to ensure that teachers are kept well informed of HBPE-CPD opportunities and may help to explain the apparent over-reliance on their general ‘life experiences’ to develop health-related subject knowledge (Harris, 2013; O’Sullivan, 2005; Tsangaridou, 2006). Despite this general lack of preparation to teach health, and in keeping with previous research (Alfrey et al., 2012; Cale, 2000; Castelli & Williams, 2007; Clarke & Hollingsworth, 2002), all of the teachers expressed confidence in their own HBPE practice, which primarily involved the teaching of fitness and training concepts.

In contrast, all teachers reported engagement in other forms of CPD during this time period. Consistent with the literature (Armour & Makopoulou, 2012; Harris, Cale & Musson, 2011), this engagement largely involved teachers’ attending external courses to update their subject knowledge in activities such as athletics
and games and also to support their teaching of examination physical education. Drawing on the work of Armour and Harris (2008), these findings suggest that developing their health-related subject knowledge was not a high priority for the teachers prior to their engagement with the HBPE-CPD programme. The findings also support the reservations expressed by many authors (e.g. Alfrey, et al., 2012; Armour & Harris, 2013; Castelli & Williams, 2007; Harris, 2013; Kulinna et al. 2008) over the quality of teachers’ subject knowledge to effectively promote physical activity and thus support one of the overarching aims of the National Curriculum for Physical Education (DfE, 2013), namely for all students to lead healthy, active lives.

Reflecting on teachers’ prior health-related experiences and engagement with HBPE-CPD, and recognising that they were being presented with a new conceptual framework for HBPE, highlights a need to acknowledge Cochran-Smith’s (2003) warning that there was undoubtedly much to learn (and unlearn) during the HBPE-CPD programme. Initially, some teachers reported information overload, whilst others struggled to visualise how this conceptual framework might be translated in practice:

The amount of information was massive, so I’m sure as you develop it will become more concise with more bite sized chunks. (Ciara Interview 1)

Remember stuff that I’d learned before, trying to remember like you say the mastery climate, trying to think about psychological, how children learn, trying to remember sort of this – because you can forget it.

(Luke Interview 1)

My initial stumbling block I think was how are we actually going to make this happen in practice? We were all sort of, I don’t really get this…how can I put this into practice? (John Interview 1)

When considering the lack of clarity which John experienced in visualising the HBPE model in practice, it should be remembered that the model was being adopted in a school environment for the first time. Furthermore, with a primary focus on promoting positive behaviours to embrace an active lifestyle, the HBPE
model represented a move away from practice previously dominated by a ‘fitness for performance’ approach and the teaching of activity content highlighted in the survey data. Moreover, as advocated by Armour et al. (2015), a key aim throughout the HBPE-CPD programme was for teachers to be encouraged as co-constructors in the further development of the HBPE model. Consequently, the model was being reviewed regularly throughout the programme in response to teachers’ experiences and drawing on their craft knowledge (Kemmis & McTaggart, 2008). It is therefore unsurprising that some teachers demonstrated initial uncertainty in terms of how this model was different to their previous health-related practice:

Is this health based model with the informing student movers or is this me teaching health related fitness from a different slant? Yeah, well, I think if you look at our health and fitness unit work, it was very much similar to—you know, the boxercise was part of the health and fitness anyway because it was just about getting them active and enjoying.

(Terry Interview 1)

The results highlight some misconceptions in the teachers’ understanding of the HBPE model generally and its primary goal in supporting young people ‘to value a physically active life’. Patricia explained that her first reaction was that she had simply, “done all this before, just in a different format’ (Patricia Interview 1). She felt that HBPE was simply a new expression for teaching fitness and suggested that expanding the curriculum time from four to eight lessons was the most noticeable difference:

Seriously, it’s just another term for me for delivering fitness. It’s just terminology. We’ve always delivered fitness, but we’ve just always done it in a four week block and it’s whether or not we think in this department eight weeks is more beneficial. (Patricia Interview 1)

As experienced practitioners, both Patricia and Terry reported that they had previously taught health in many different guises such as ‘Health-Related Fitness’ and ‘Health-Related Exercise’. Consequently, and similar to conclusions drawn by McCaughtry et al. (2004), teachers’ prior experiences of teaching health may
have contributed to the uncertainty and misunderstanding that they initially reported during the HBPE-CPD programme. These findings support Guskey’s (2002) claim that teacher change can be a difficult process when adopting a new pedagogy and are consistent with prior research concerning the implementation of pedagogical models specifically (Casey, 2012; Goodyear, Casey & Kirk, 2016; Harvey et al., 2015). Consequently, and in an effort to create what Patton and Parker (2014) view as favourable conditions for lasting changes in practice, sustained support for teachers was viewed as a key ingredient throughout the HBPE-CPD programme.

Summary

In summary, most teachers had poor prior experiences of health-related learning, and demonstrated a lack of engagement in HBPE-CPD, highlighting limited opportunity and awareness of relevant professional learning. Some teachers reported initial uncertainty and misunderstanding of how the HBPE model was different to previous practice, suggesting that teachers’ prior experiences of teaching health may have been a contributory factor. The following section examines the extent to which teachers bought in to the HBPE model.

Section 2: Teacher ‘Buy in’ to HBPE

As explained in Chapter Three, the sustained nature of the HBPE-CPD design involved the teachers participating in a three month induction programme prior to implementing the HBPE model in their schools. This section discusses how the teachers were supported during this period of induction and how buy in to the HBPE model was facilitated through opportunities for the teachers to apply their learning in practice. Guskey (2002) argues that teachers must buy in to a new curriculum, or pedagogical development, if it is to be successful.

The induction phase was generally viewed positively by teachers across both schools, especially the time afforded during the professional learning meetings to share ideas with each other and engage in collaborative lesson planning, which subsequently enhanced their productivity as a group (Cordingley et al. 2003). Different examples of this collaborative planning process were reported at both
schools; at Sycamore School, teachers decided to divide up the workload and planned one lesson each in detail, which they then shared with colleagues who adapted accordingly:

because we had planned in detail a session each, so we sort of had a lot of chats about okay, how did you set that up and what you changed, and I actually talked to John a lot because he followed me on the activities.

(Molly Interview 1)

At Maple School, in contrast, both teachers jointly engaged in the initial unit planning and then subsequently planned lessons to reflect the needs of their respective classes. Furthermore, the meetings facilitated discussion around strategies to increase parents’ awareness of physical activity through various communication channels and also provided the teachers with opportunities to seek clarification on uncertainties that they experienced during the design of their HBPE units. These uncertainties included what activities were deemed suitable to support the model’s learning goals, the degree of student autonomy and how to prioritise learning in the affective domain, an expectation of the HBPE model.

Importantly, and similar to findings by Armour and Makopoulou (2012), teachers reported that these meetings allowed time to consolidate their knowledge and to develop a shared understanding of the HBPE model prior to implementation. Furthermore, providing an overview of the whole HBPE-CPD programme appeared to support their learning:

I liked that it was short, you know, we were in an hour…and then it’s almost well I’ve got a week to try and develop this, and then you come back in with that little bit more. (Luke Interview 1)

Well, having not really sort of known about it [HBPE] before, obviously, and then having sat down in those couple of sessions with yourselves, that was useful in terms of getting across what it is we're trying to get towards…it helped sort of consolidate our thinking, if you like.

(Terry Interview 1)
I was in on all the meetings so you got an overview of what you were going to be doing and then you’d look at the ideas that you were trying to implement... it gave you an idea of where you were going to be going with it, so it is quite good that way. Instead of just diving straight in and doing something it gives you that little bit of an idea of what it is that the whole programme’s about. (Patricia Interview 1)

Reflecting previous findings (O'Donovan et al., 2012; Zhu et al., 2011), teachers at both schools demonstrated an enthusiasm for implementing a new approach for health and were excited at the prospect of freshening up their respective physical education programmes. Moreover, the anticipated positive impact HBPE would have on students' learning appeared to support teachers’ adoption of the model:

I suppose I was hoping that it would add a new element to our department of something that we haven't delivered before, something that was fresh for all of us. The excitement, if that's the right word, of being involved in a new concept, a new idea and then benefitting from seeing those kids responding to that. (John Interview 1)

I think it [the HBPE model] definitely has merits in terms of trying to bring both aspects together, in terms of giving them the education of how things work and why and also about the need for the physical activity part of it. (Sean Interview 1)

These findings concur with the literature on teacher change which suggests that teachers often grow in confidence and are subsequently motivated to further adapt their practice when they actually witness a positive impact on student learning (Fullan, 2007; Guskey, 2002). This need, on behalf of the teachers, to see concrete evidence of their students’ learning, especially an increased participation in physical activity out of school, was voiced by the subject leader at Sycamore School:

What I'd be interested to see is, from your figures, you know, how many of them have actually taken on more outside of school, because I think that will be the sort of acid test really. (Terry Interview 1)
Although this reported emphasis on promoting physical activity out of school is advocated by many scholars (Harris & Cale, 2018; Hastie et al. 2012; Heidorn, Weaver & Beighle, 2016; Tannehill, Van Der Mars & MacPhail, 2013), the potential for the HBPE model to provide positive student learning experiences was also recognised by the teachers:

I had an idea the other day that HBPE would be great in the curriculum all through the year. It could be split into PE/HBPE with 80 mins a week on sport/game play and the other 80 minutes on HBPE where pupils turn up, music is playing and they enjoy just working towards their 60 minutes a day through different activities. (Molly Teacher Reflection)

Whilst this indicates a real enthusiasm for the HBPE model to help support students to achieve the daily recommended guidelines as advocated by the Chief Medical Officers in the UK (CMO, 2011) and more widely by the World Health Organisation (WHO, 2010), the absence of any reference to learning indicates a focus on physical recreation. Zhu et al. (2011) highlight that this recreation-orientated focus is quite common practice in physical education circles, with many teachers prioritising student entertainment over learning in an attempt to maintain high levels of engagement. Quennerstedt (2013), however, warns that this practice will not support students’ long-term learning or sustain their interest in physical education. It is important to clarify at this point that the HBPE conceptual framework, with its central theme of ‘valuing a physically active life’, was explicitly developed to go beyond physical activity participation.

Similarly, at Maple School, Colin indicated that he was motivated to engage in the HBPE-CPD programme by having an opportunity to update his current ‘health-related fitness’ units and by the potential he saw for the HBPE model to help combat obesity issues at the school. During one of my visits to the school, Colin’s head teacher also raised her concerns about the levels of student obesity and suggested that HBPE could be used to promote increased physical activity across the school. This positive endorsement for the HBPE conceptual framework to be a catalyst for a whole-school approach to physical activity appears to offer hope moving forward with the model and supports
recommendations in the literature (Harris & Cale, 2018; Haerens et al., 2016; Metzler, 2013). However, although the reported potential for HBPE to help address the school’s obesity issues is notable, afPE (2018) advise that physical education should not be viewed as a ‘silver bullet’ to solve the obesity or inactivity crisis, but rather seen as part of a wider school commitment to the promotion of active lifestyles.

Whilst Colin did express a desire for high levels of activity during physical education, he explained that this wish stemmed from an unease with the expectation to simultaneously pursue multiple (and diverse) learning goals. Consequently, and reflecting the thoughts expressed by some scholars (e.g. Cale & Harris, 2014; Kirk, 2010), Colin felt that there had been a lack of focus on what he believed to be physical education’s specific purpose i.e. the promotion of healthy active lifestyles:

I remember the first email that came out was pretty much about physical activity and it was something that I was concerned about, anyway, here in our school. We’ve got some obesity issues within the school and maybe it’s partly culture, but also I wasn’t scared of accepting that it could be partly our fault within our PE. And I knew that it was something that we wanted to tackle and it was a bit of an eye opener straight away. Here you go, here’s a unit of work that actually is going to get your kids being active...there was the potential of having a unit of work that could replace something that has become dated in terms of health related fitness there at the end of it, and that was a big buy-in... I just think seeing them all engaged, and just active for a guaranteed thirty minutes within the lesson, but actually it kind of opened your eyes to just how active the kids are within a PE lesson. There are so many other areas of the curriculum you’re trying to cover, different outcomes and objectives, that actually the fundamental one is them being active and healthy and that starts with them sort of hitting that minimum thirty minutes and that was number one.

(Colin Interview 1)

This emphasis on students being sufficiently active for at least 50% of lesson time is admirable and indeed reflects recommendations from afPE (2015). It is
questionable however, whether adopting a focus on ensuring high levels of activity during physical education alone will provide students with the motivation, knowledge, skills and understanding to value and engage in an active lifestyle, as endorsed by Whitehead (2016).

**Summary**

Teachers were motivated to engage in the HBPE-CPD programme by having an opportunity to revamp their teaching of health, to support whole school issues such as obesity and the perceived positive impact of the HBPE model on their students’ learning. The induction phase afforded teachers time to apply their learning in practice and supported them to develop a shared understanding of concepts prior to implementation of the model. In the next section, teachers’ engagement with practitioner research throughout the HBPE-CPD programme is explored.

**Section 3: Teachers as Reflective Practitioners**

This section begins by examining teachers’ engagement with reflective practice both during the induction phase and when implementing the HBPE model. As explained in Chapter Three, PAR was employed as a professional learning tool throughout the HBPE-CPD programme to support teachers during the process of initially learning to use the HBPE model and subsequently adopting it in their practice. PAR involved strategies, such as teachers analysing their practice and the frequent exchange of ideas with both their colleagues and myself as a critical friend. It was anticipated that there would be shared ownership, with teachers actively involved as co-learners and co-producers of knowledge (Enright & O’Sullivan, 2012; Reason & Bradbury, 2008).

**The Positives of Reflective Practice**

The analysis of data highlighted mixed success in terms of teachers’ engagement with practitioner research throughout the HBPE-CPD programme. On a positive note, it allowed teachers to closely consider the impact of their teaching on students’ learning and to reflect on their interactions with the HBPE model. The demanding nature of practitioner research, however, proved challenging for
teachers, especially when it was undertaken in addition to teaching a full curriculum timetable, extra-curricular commitments and wider school roles (Casey et al., 2009). Indeed, Smith (2007) suggests that these challenges often arise because teachers are constrained by a range of factors, including their own cultural perceptions and the schools where they work. Whilst teachers reported positively on the reflective activities in supporting their understanding of the HBPE model and how it might be translated in practice, engagement with these activities was highlighted as an issue early during the induction phase at Sycamore School:

not all teachers had made time to engage with the reflective activities primarily due to other competing priorities. It does raise the question whether I am asking them to do too much work? (Field Journal Reflection)

Although reflection is recognised as a key feature of CPD programmes in schools (de Vries et al., 2014; OECD, 2015; Timperley, 2011), results indicate that being asked to reflect on the impact of their learning in practice was not something the teachers were accustomed to and this represented a new development:

I think it probably was a new professional development tool for me. Because in the past I've just done either mini tasks within sessions, very rarely are you sent off to do something...so yes, that was something that was new. (John Interview 1)

However, and supporting research by Keay and Lloyd (2011), John viewed engaging in deliberate critical reflection of his practice as the most beneficial aspect of the entire professional learning programme. Consequently, during his implementation of the HBPE model later in the CPD programme he made a conscious effort to record his reflections immediately after every lesson where possible, although he did concede that this was often rushed:

One thing I found really useful, hand on heart, it has probably made me the most reflective of what I've been doing in a unit of work... the reflective thing was definitely the standout for me, having that time to do that. You know what it's like, you just don't have the time and even just
that two minutes at the end of a lesson to just review got you thinking about right so next week make sure I'm hitting that or that's the focus for next week. (John Interview 1)

Specifically, and in line with previous research (Robinson, 2013), teachers felt that, “doing the reflective tasks helped me think of new ideas’ (Molly Interview 1). Teachers’ reported positive experiences of being encouraged to formally reflect on their practice indicate its importance as part of a sustained CPD programme. Furthermore, having opportunities to apply learning in their own contexts prior to the implementation phase was viewed positively by teachers. These findings support the need to embed learning in teachers' own practices and therefore ensure that teacher CPD is contextually relevant (Borko, 2004; DfE, 2016; Timperley & Alton-Lee, 2008). They also concur with research by Casey (2014), who suggests that teachers’ confidence with using pedagogical models is enhanced when they have opportunities to translate theory to practice.

During the induction phase of the HBPE-CPD programme there were many examples of teachers attempting to translate the conceptual framework as presented to the practice of their own classrooms. For example, during the second professional learning meeting at Sycamore School, Terry revealed how he had devised an out of class challenge for students to create their own active game at home. Meanwhile, Ciara and Karen both reported that they had been encouraging their students to meet the daily physical activity guidelines for young people, as advocated by the Department of Health (CMO, 2011). Teachers felt that it was beneficial to video record a lesson where they trialled the student and teacher critical features (benchmarks), as this provided them with a clearer understanding of their practice. Indeed, Ciara reported that this reflective activity was, “an eye opener to what you were doing within your lesson’ (Ciara Interview 1), whereas at Maple School Luke appreciated the opportunity to do a ‘dummy run’. Consequently, he believed that through trialling elements of the HBPE model he was able to build his confidence and correct any major issues prior to implementation:

In a way it worked, as in I got better. It might not have worked at first, but I kind of found the pitfalls before I actually went into the unit…”Oh, I don't
really think that worked,” and it informed me. So it is good to do a bit of almost like a dummy run I suppose in a way of a bit of the pitfalls, anything that I would change. (Luke Interview 1)

This evidence indicates the importance of actively engaging teachers as learners (Birman et al. 2000) who were encouraged to co-produce new ideas in relation to the HBPE model and what it might look like in practice. Furthermore, the continual and active nature of the HBPE-CPD programme supported reflective practice (Armour et al., 2015). Having opportunities to trial the model provided the teachers with early and regular feedback and having sufficient time to consolidate the implementation of new ideas as advocated by Penuel et al. (2007) supported teachers’ learning (and engagement) during the induction phase.

Teachers reported a number of factors which aided their engagement with the reflective process, in particular using the Post Lesson Teacher Reflection (PLTR) tool and having choice in how to record their reflections. Considering the PLTR tool first, both Terry and Molly felt that the creation of a pocket-sized, portable card supported them to reflect on their lessons in a focused and structured manner:

Yeah, it was useful because it prompted me… I just went, yeah, the aims were this, it went well, or didn't go well, and it sort of prompts you what you want to say next, really. So yeah, it was helpful. (Terry Interview 1)

Furthermore, in line with Aelterman et al. (2013), having autonomy in how to record their reflections supported teachers’ engagement with their post-lesson reflections. After trialling both written and verbal (and voice recorded) reflections during the induction phase, most teachers stated a preference for voice recording their reflections due to the convenience of completing them at the end of lessons:

I changed from written to voice due to convenience – I found I started with the written and I couldn’t sustain that, so…doing it through voice was a lot easier for me because as the kids were packing away or changing, I did my reflection straight away. (Molly Interview 1)
James also reported better engagement with the practitioner research process once he switched from written to voice recorded reflections. He noted the influence of colleagues and expediency as the central contributory factors in this decision:

I did type the first one and then everyone else was recording them, and it is a lot quicker to do them that way than to sit down and think and type. (James Interview 1)

Terry also strongly endorsed voice recording his reflections to the point where he was considering their use to support whole school practice:

if we had to fill the form in, I dare say, for me, you wouldn't have had every single one of them, but to do the voice thing, no problem at all. So I liked the voice memo when you're doing it. I'd definitely do the voice memo thing again, and I'd do that as like – you know, like learning walks. You know, I'm thinking about whether to do something similar when we do learning walks in school. (Terry Interview 1)

This reported development points to the potential for some of the teachers’ learning from engaging in participatory action research to become practically embedded in daily practices over time, as previously advocated (Goodnough, 2010; Goodyear & Casey, 2015). While teachers highlighted many positives of working as reflective practitioners, a number of challenges also emerged which are discussed next.

The Challenges of Reflective Practice

Other teachers, however, were less enthusiastic and suggested that making time for recording their post lesson reflections was a constant challenge:

I hated them…they were time consuming. Although saying that, when you first start teaching you do it all the time, but normally when I finish a lesson it's a one moment thought – that didn’t work that well and I need to change that, I must do that one again at some point because it was really effective – and it’s sort of quite short, snappy thoughts, whereas you had
to go through and sort of think in words being thrown at you which I found quite time consuming. It was not great for me. (Patricia Interview 1)

Patricia’s remarks appear to run contrary to research (Glotova & Hastie, 2014; Sum et al., 2016) which highlights the process of formalising teachers’ reflections in order to sustain their motivation and interest during the implementation of a new pedagogy. However, this evidence also points to the demanding nature of PAR and a recognition that teachers need both time and space when they are involved in pedagogical change (Keegan, 2016; Wiliam, 2014), an area that will be explored further later in the chapter. Of further note, Patricia was a part-time member of the physical education department, who had other subject teaching responsibilities elsewhere in the school. Consequently, she reported limited time for either formally recording her reflections after lessons or for discussing practice with colleagues during the school day, a factor which may help to explain some of the challenges that she experienced:

Right we’re on this next, how did it go for you? Did you do anything in particular? But it was, again, very short, snappy – not long discussions – because my lessons followed. I then follow it with another lesson and then Humanities and so I’m not always here to then follow on the conversation, so it may have gone on, but I’m often rushing off to another subject. (Patricia Interview 1)

In addition, Patricia’s timetable appeared to be problematic in terms of supporting her engagement in a collaborative community, a key factor advocated by Morgan et al. (2010) for the sustained employment of new ideas. Other teachers such as Molly felt that having to teach multiple classes proved challenging in terms of having to complete four lessons reflections each week during the implementation phase. Time to reflect on practice was also raised as a constraint by James:

Mainly just time, time to – everything’s always a rush here – it’s break and then you’re doing something, kids are coming to the door. It’s easy to let it just go past and then you say, “Oh I’ve got to do that” and then something else will come up. That’s the only thing, it’s just having the time to reflect. (James Interview 1)
Considering the time challenges raised by these teachers, and drawing on previous findings, (e.g. Aubusson et al., 2009; Dyson, 2002; Weston, 2016) it indicates that the school environment may have inhibited their ability to sufficiently reflect on practice. Despite Groundwater-Smith and Mockler’s (2007) recommendation that practitioner research should involve concentrated time and energy in order to be conducted well, unfortunately, there was no dedicated time built in to teachers’ workloads to recognise their engagement in curriculum innovation. It is acknowledged, however, that creating space for this additional time poses a real challenge in England at present, especially when evidence highlights squeezed school budgets, increasing class sizes and a teacher recruitment crisis (National Audit Office, 2016). Furthermore, the lack of directive for teachers working in England to demonstrate formal evidence of engagement in CPD, in contrast to their peers internationally (OECD, 2014) may also be an inhibiting factor.

**Summary**

The continued and active nature of practitioner research supported most teachers to consolidate their ideas, to reflect on their interactions with the HBPE model and to closely consider the impact on students’ learning. However, the time consuming nature of formally completing post lesson reflections proved challenging for all of the teachers on top of existing work demands. This provides further support for teachers to be afforded dedicated time and space for pedagogical change. The following section examines the key factors which emerged to support teachers’ learning and engagement throughout the HBPE-CPD programme.

**Section 4: Facilitating Pedagogical Change**

From the outset of the HBPE-CPD programme, there was a clear expectation for teachers to be actively engaged in their own learning, as identified earlier. Furthermore, there was also a recognised need to draw on teachers’ expert knowledge of their school contexts in order to create suitable HBPE units for their students (Kirk, 2013; McLaughlin & Talbert (2008); Kirk & Macdonald, 2001).
Accordingly, a primary goal was to work in partnership with teachers actively engaged as co-producers.

**Teachers as Active Learners**

Armour et al. (2015) argue that for sustained change in practice to occur, teachers need to be reconceptualised as learners, who are encouraged to be co-constructors in the development of new health pedagogies. In the context of this study, teachers were actively engaged throughout the HBPE-CPD programme by leading on the planning process of designing bespoke units of learning for HBPE, which reflected their own unique contexts (Casey, 2014; Frapwell, 2015). Whilst there was a strong emphasis during the HBPE-CPD programme on encouraging teachers to engage with the learning goals and critical features of the HBPE model, findings reveal that this was not always possible.

A combination of fragmented planning and internal timetable pressures, both previously highlighted by Ellis and Loughland (2016) as potential barriers to learning, resulted in teachers at Sycamore School prioritising the activity content rather than the HBPE model during their implementation. This was reported by Terry when he explained the extent to which he had embedded the HBPE model, ‘so it’s more content of activity and task than pedagogical theory’. (Terry Interview 2). The desire to focus on content was further noted by Ciara when she indicated that colleagues had taken the decision to each plan a number of individual lessons which they could then share online. Whilst teachers maintained autonomy to adapt these plans, Ciara said it was helpful when lessons were demonstrated (often in the case of Sycamore School by colleagues who had taught the lesson before). The expectation that the teachers would implement plans written by their colleague, whilst perhaps ideal in theory, created inconsistencies in the quality of teaching and learning during the implementation of HBPE. She went on to suggest that some lessons did not necessarily follow on logically from prior learning, thus negatively impacting on the PAR process and also highlighted timetable pressures as a key challenge:

Everyone put their plans on to the server so we could all access it, but often reading a plan isn’t the same as doing a plan or seeing a plan and
so it was harder maybe for some people to put those areas into reality as successfully as the person who wrote it... Well I'll know once I've read the plan for next week. Because they didn't link, they were quite standalone which was maybe a mistake – not a mistake but a weakness – because we didn't all deliver them in the same order because of the facilities available. You can't take one standalone thing and think, “How do the habitual, confident learners fit into that?” It was kind of, “Right, this is the activity, this is what I would like to do. How can I adapt it or put those learners and objectives into that?” You can’t hit – well I didn’t hit all five in one lesson – it would be a case of two or three maximum.

(Ciara Interview 1)

Ciara’s experiences are indicative of the fragmented nature of the curriculum design process at Sycamore School. They also suggest that planning in this way may have hindered teachers’ understanding of HBPE and their subsequent implementation of the model in practice. Although all of the teachers engaged in curriculum planning, there was an articulated focus on the activity content as the starting point, rather than beginning with the HBPE model’s learning goals. This finding highlights the continued popularity of an activity-driven curriculum in physical education despite serious reservations concerning its potential to positively support health outcomes (Armour & Harris, 2013; Kirk, 2013; Haerens et al. 2016).

Although there was evidence that some teachers welcomed the opportunity to re-evaluate their role in the learning process (Barrett & Turner, 2000; Clarke & Quill, 2003), others found this expectation difficult. Both curriculum leaders, however, reported that being actively engaged in their own learning was helpful in aiding their understanding of how the conceptual framework might be translated in practice. Colin, for example, stated that having ownership of the planning process and designing units of learning for HBPE aided his conceptual understanding:

Originally, I thought we were going to be given something, but actually writing it has allowed us to certainly understand it. (Colin Interview 1)

This finding is in keeping with calls for teachers to be actively engaged as
learners during the professional development process so they can embed knowledge in their own contexts (Armour, 2010; Birman et al., 2000; Borko, 2004; Darling-Hammond & Bransford, 2005; Petrie & McGee, 2012). Further, it suggests an expectation on Colin’s behalf that he was going to be provided with pre-prepared materials, such as lesson plans and resources, a practice he revealed was common during his prior CPD experiences. In agreement with Goodyear, Casey and Kirk (2016), I contend that this type of ‘top-down’ support would not have been helpful in designing a contextually relevant curriculum. Furthermore, and drawing on the work of Attencio et al. (2012), it is recognised that such an approach often results in superficial participant learning experiences and does not support teachers to become innovative practitioners. In support of this, Colin recounted that actively engaging in a mock practical lesson during the induction phase helped him to visualise the HBPE model and subsequently provided a template to support his planning.

Being in the practical setting sort of helped me see the theory in practice…I think, actually, that mock lesson kind of tailored quite a lot of our lessons and our planning and we kind of kept to that process pretty much from day one. We tinkered around with ideas, but I think that was good and had I not seen that, I think the planning process would have been quite arduous, actually, and it could have been a bit of a turn off for me, thinking oh on top of current workload. (Colin Interview 1)

Indeed, Colin further expressed that engaging in this practical lesson scenario helped to create a sense of community between the teachers and researchers: ‘It also created a relationship between you guys and us as a support network for us as well’. Together with the reconceptualization of teachers as learners, advocated by Armour et al (2015), and the expectation that they would be actively involved in the co-construction of their own professional learning, evidence indicates that a further supportive factor was the sustained external support provided by two researchers throughout the HBPE-CPD programme.
**Sustained External Support**

Sustained external support is recognised as a key component in the process of teachers making positive changes to their practice (Bell et al., 2010; Cordingley et al., 2015). Indeed, Kemmis and McTaggert (2008) stress that the role of individuals external to the school community, such as a university teacher educator/researcher in this study, is one of service to teachers. Many physical education researchers (Goodyear & Casey, 2015; MacPhail et al., 2008; O’Donovan et al., 2010; Sinelnikov, 2009) point to the importance of on-site support in helping teachers translate a pedagogical model from theory to practice in their school contexts. Indeed, the sustained external support appeared to help John overcome the initial lack of clarity that he experienced trying to visualise the HBPE model in practice:

> Then when we had the second session we started to get more ideas and it became a bit clearer...we got the idea and we got the concept but then to put that into, right go and plan it. You sort of think well how can I plan this? That's probably when we asked for more direction from you really.  

(John Interview 1)

Similar to findings from Goodyear, Casey and Kirk (2016), who examined how the adaptation of Cooperative Learning was dependent on the support provided by a researcher external to the school community, evidence indicates that the adoption of the HBPE model was partly dependent on the continual external support that the teachers received throughout the CPD programme. At Maple School, for example, Luke particularly valued the level of support throughout the challenging implementation phase, especially the regular school visits to observe his teaching. Specifically, he felt that this support provided him with reassurance that he was doing well and encouraged critical reflection on his practice through participation in a learning community (Deglau & O’Sullivan 2006; Goodyear & Casey, 2015; O’Donovan et al., 2010). This is a positive finding, especially when a number of researchers (Casey, 2012; Cruz, 2008; Robson, 2002; Rust & Myers, 2006) propose that teachers often find it difficult to initiate pedagogical change, primarily due to a lack of confidence. Moreover, Luke felt that the ongoing nature of the support helped him to manage his learning in bite-sized
chunks and prevented him from becoming overwhelmed with information:

It was good support...nice that I had someone here to bounce ideas off, good to have you here every lesson so that at least you saw the progression...Well, I’m doing this, is this all right? and you’d say, Yes, sounds great, I look forward to seeing it, or, Yes, just have a think about that. That was vital in regards to little short clips and made me think actually yes, you’re right there, maybe I don’t need to do that, maybe I should move in this direction. (Luke Interview 1)

Luke also appreciated the weekly virtual support he was offered such as the feedback on his practice, the planning advice and links to relevant readings and resources on health-related learning, which Tannehill, van der Mars, and MacPhail (2015) advocate as important forms of CPD. Highlighting this virtual support more specifically, the following written feedback emailed to Luke is an example of my response to him when he asked for some reassurance that he was teaching the HBPE model as intended:

As I discussed with you last week, I thought there were loads of positives in your lesson, especially the enthusiasm of both you and your students. It was also great to see you constantly reinforcing the minimum 60 minutes per day physical activity recommendations throughout the lesson, although maybe you could have gone into a little more depth in explaining the difference between moderate and vigorous intensity e.g. get students to experience brisk walking and record how they feel in terms of breathing, body temperature etc. then to experience some vigorous physical activity, again record how they feel and note the differences? The activity diaries look great and hopefully students will be engaging with them over the week. (Email communication)

It must be acknowledged, however, that providing teachers with a high level of on-going support throughout their adoption of HBPE proved extremely challenging in terms of the time and the energy invested. In addition to over two hundred email communications with the teachers, significant time was invested arranging the school visits, planning the professional learning meetings and
observing lessons. Whilst time challenges have previously been highlighted by Attard and Armour (2006), the importance of support in encouraging teachers’ critical reflection has also been recognised during PE-CPD programmes (Armour & Makopoulou, 2012; Harris, Cale & Musson, 2011) and therefore warranted this considerable investment of time. The following section examines how collective participation facilitated teachers’ learning during their engagement in the HBPE-CPD programme.

Collective Participation

Clear evidence emerged of a strong collective participation in both schools during the HBPE-CPD programme. However, and as explained earlier, it is important to reinforce that collaboration between the participating teachers occurred in each respective school, rather than across schools, due to the sequential nature of the study design. For example, collaboration between Colin and Luke was frequently observed during visits to Maple School. Often, both teachers were actively engaged in what Kemmis and McTaggert (2008) describe as a social process of collaborative learning during their teaching of HBPE:

It is great to see lots of discussion between Luke and Colin during the lesson sharing ideas and then implementing them in practice. (Field Journal Reflection)

Indeed, subsequent analysis of the lesson observation data revealed that Colin was supporting Luke as a critical friend during his teaching. Another example of this social process of collaborative learning was provided by Luke, who explained that both Colin and himself frequently filmed each other teaching and then watched these lessons together:

He would come in and watch my lessons, I would come in and watch his. That was another reason why we picked those two boys' groups. I was actually free, so on the lesson he taught I was free and on the lesson I taught he was free, so we could film each other. So we'd watch the lessons together. There was a time when he wasn't very well and I took the lesson because we'd been working so closely together, deciding what
would work for my group and what would work for his. We also had discussions where we actually moved off towards the end of the unit in different directions. Not because we were disagreeing but because we felt one group needed to go in one direction and another group needed to go in another, so it kind of worked quite well with that. (Luke Interview 1)

Findings illustrate that engaging in this form of mutual collaboration supported both of the teachers to gain a shared understanding of one another’s practice, which subsequently facilitated sustained learning throughout the HBPE-CPD programme (McLaughlin & Talbert, 2008). Indeed, this evidence of sustained learning supports growing evidence that encouraging collective participation in professional learning communities has real potential to develop physical educators as continual learners (Armour & Makopoulou, 2012; Goodyear & Casey, 2015; Jess & McEvilly, 2013). Teachers also reported their collaborative engagement as an important motivational feature, a finding which concurs with many authors (Armour & Makopoulou, 2012; Deglau & O’Sullivan 2006; Goodyear & Casey, 2015; Keay & Lloyd, 2011; O’Donovan et al., 2010). This was particularly evident at Maple School where Colin explained that having Luke as a critical friend supported his motivation to adopt the HBPE model:

Yeah, I think had I been doing it on my own, I think I wouldn’t have been as motivated……we were having some amazing conversations that actually we then planned the next session and we had a sort of – a spinal structure for the next session, but he would then tailor his to his type of kids and I tailored mine to mine.

We had other people within our team who were looking at it, going oh okay, looks all right. The kids look like they’re having a lot of fun, but actually it looks like a bloody whole lot of work. You need to keep talking about it and you keep having to email people, and you keep writing things up. (Colin Interview 1)

A strong collaborative culture was viewed as especially important to help sustain motivation in an environment where some department colleagues [not involved in the study] were sceptical about the perceived additional workload This perception
that innovation is labour intensive, has been cited by a number of scholars (Casey & Dyson, 2009; Goodyear & Casey, 2015; Halton, 2004; Harvey & Jarrett, 2014; Hastie et al., 2011; Kirk, 1986; Robson, 2002) as a key reason why teachers do not sustain pedagogical change.

From the beginning of the HBPE-CPD programmes in both schools, teachers demonstrated an enthusiasm to support each other’s practice. This finding runs contrary to research by Goodyear and Casey (2015), who reported that teachers were initially reluctant to discuss practice with their colleagues when learning to implement the Cooperative Learning model. Moreover, and in contrast to other findings (Goodyear, Casey & Kirk, 2016), data analysis suggests that peer support in this study went beyond the sharing of ideas and involved teachers critiquing each other’s practice. Molly confirmed that she valued this collective participation between colleagues, which involved learning conversations frequently occurring in the physical education office after lessons “we always came in and had a chat about what went on’ (Molly Interview 1). John also reported how these learning conversations helped to evolve practice, with future lesson plans subsequently being adapted as a result of colleagues’ prior experiences:

We come in from lessons and say I’ve just done this and I didn’t really like it for this reason, the next person would probably go out and say oh I’ve adapted that slightly… So yes, we definitely support each other in there and discuss a lot of the things together. (John Interview 1)

Furthermore, evidence indicates that teachers were also gaining new ideas through their collective participation in activities such as peer teaching:

We always pow-wow before and after a lesson...loads of people are really good at sharing their ideas if they come up with stuff. So I remember when Exercise Murderer came in, so like Wink Murderer and Ciara came in the office and she was like showing us and we’ll all have a go at it. And we tend to be in and out of each other’s lessons quite a lot, we’re very open like that, so I think a lot of us will watch each other’s or be in and out and see good stuff...So I’m in charge of the training of all the multi-gym
and new equipment that comes into the school. So anything fitness equipment, so like fitness hula-hoops, I’ll bring it in. I’ll try and teach the staff some of the moves and how to do it. Skipping, I’ve taught them like box skipping and if I bring anything in, like free weights or bar bells I always go through with them how to use the equipment, that’s part of my role. (Molly Interview 2)

In contrast to findings which report that teachers rely heavily on their general ‘life experiences’ to develop health-related subject knowledge (e.g. Alfrey, Cale & Webb, 2012; Harris, 2014; O’Sullivan 2005; Tsangaridou 2006), Molly held a number of accredited fitness qualifications, which supported her in the peer teaching of colleagues. Despite the constant informal collaboration between colleagues at Sycamore School during the HBPE-CPD programme, a need for more allocated time to specifically share practice was reported:

It’s not been very formal it’s been more a case of chat across a room, “What have you done? What did you do last week? Oh that’s a good idea” and then doing it. It’s the same with most of our lessons unfortunately; I think if teaching could be improved in one way it would be more time to share practices. (Ciara Interview 2)

Returning to the advice of both Keegan (2016) and Wiliam (2014) that teachers need both time and space when they are involved in pedagogical change, this unfortunately was not the case. Indeed, participation in the HBPE-CPD programme was an extension to teachers’ existing work commitments, which reflect concerns raised by Weston (2016) and will form part of the focus for the next section of this chapter.

Summary
This section has highlighted how actively engaging teachers in the co-construction of pedagogical change supported their understanding of the HBPE model. Teachers valued the continued nature of the external support throughout the HBPE-CPD programme, reporting that it provided them with reassurance during the challenging implementation phase and helped them to critically reflect on their practice. However, providing teachers with this high level of support
proved challenging in terms of the time and energy invested. Collective participation, which involved the informal sharing of ideas and critiquing each other’s practice through peer observation also supported teachers’ learning. What follows is a consideration of the challenges that the teachers experienced in terms of their learning throughout the professional development programme.

**Section 5: Factors Challenging Pedagogical Change**

Teachers faced some challenges during their engagement in the HBPE-CPD programme as they were “learning new knowledge, questions and practices, and, at the same time, unlearning some long-held ideas, beliefs and practices’ (Cochran-Smith, 2003, p.9). However, it is important to reinforce that the teachers were attempting to change their practice, in addition to existing, and at times competing, work commitments. As discussed earlier in the data analysis section, the ‘busyness’ culture of schools emerged as an over-arching theme in terms of challenging teachers’ engagement in the HBPE-CPD programme. This over-arching theme was devised of two sub-themes, namely time challenges, including the time consuming nature of pedagogical innovation and competing organisational demands on the teachers. Consequently, this section initially explores some of the time challenges experienced by the teachers and then follows with a focus on the competing organisational demands, such as different roles and work priorities.

**A Lack of Time**

Literature on educational change (Fullan, 2007; Priestley, 2011) recommends that teachers should have time and space to reflect on and adapt their practice through continuous and collaborative learning. Perhaps, unsurprisingly, findings from this study revealed problems when teachers did not have the necessary time to fully engage in the HBPE-CPD programme. Terry for instance, confirmed that a lack of time was the single biggest inhibitor to his engagement ‘I think, you know, the impeding is always going to be the time factor really’. John also reported difficulty in finding time to engage with the peer observation reflective activities during the induction period, despite his best intentions:
I think if I remember off the top of my head, I think I only did one observing somebody else teaching seeing how they trial. Again down to a time constraint really more than a will to only do one. (John Interview 1)

Time constraints were also raised by both James and Molly as challenges in completing the post lesson reflections and add weight to the argument that the busyness culture of the school was an inhibitor in terms of teachers being afforded sufficient time to reflect on their practice:

Mainly just time, time to – everything’s always a rush here – it’s break and then you’re doing something, kids are coming to the door. It’s easy to let it just go past and then you say, “Oh I’ve got to do that” and then something else will come up. That’s the only thing, it’s just having the time to reflect. (James Interview 1)

I mean, the singles are so rushed and then before we know it, we’re getting valuables out and making sure the kids are not late to lesson. Having four sessions was tough. That’s four reflections a week.

(Molly Interview 1)

Time pressures were not solely confined to teachers at Sycamore School, with Luke (Maple School) also highlighting this as a constraint, particularly in terms of his engagement with the virtual external support:

You know, there were a few times when there have been a few emails that I’ve read and thought I’ll get back to it and then I haven’t.

(Luke Interview 1)

It is widely accepted that innovation usually requires additional work and consequently is time consuming (Casey & Dyson, 2009; Keegan, 2016). Thus, it is not surprising that the labour intensive nature of learning to teach HBPE was a challenge reported by teachers. Moreover, and reflecting the literature (Aubusson et al. 2009; Ellis & Loughland, 2016), findings reveal that a perceived lack of time seemed to be a ‘taken for granted’ constraint in terms of teachers' engagement in
the HBPE-CPD programme. This lends support for a change in the school culture in England, especially in reducing unnecessary teacher workload, which is now recognised by the government as a big challenge (DfE, 2018).

The findings also lend support to the argument of many scholars (e.g. Casey & Dyson, 2009; Dyson, 2002; Gubacs-Collins & Oslen, 2010; Pill, 2008) that engaging in pedagogical change is often a time consuming and labour intensive process. Indeed, these challenges are often cited as key reasons why teachers do not sustain pedagogical change beyond the honeymoon period of implementation (Goodyear & Casey, 2015; Halton, 2004; Harvey & Jarrett, 2014; Hastie et al., 2011; Robson, 2002). Further, whilst research (Dyson, 2002; Dyson et al, 2010; Pill, 2008) suggests that teachers often need different organisational and management skills to successfully implement pedagogical models, this may be a necessity when teachers are the early adopters of a new PE-for-Health pedagogy. For example, in designing the HBPE conceptual framework described earlier in Chapter Three, it was anticipated that teachers would primarily be facilitators of learning as advocated by Goodyear and Dudley (2015). However, during their implementation of the model in practice, there were times when teachers took direct control of the learning environment. This teacher-led approach resulted in less autonomy for students in choosing activities 'I don’t think we offered a real variety of activities…again I think it would depend what you were doing' (James Interview 1). However, the approach was deemed appropriate to model good practice and provide students with ideas for their future learning, as Patricia illustrates:

Oh we put a programme together and this week I was on this one and next week I was on that one, and so there was no choice in that respect, but there were two lessons where we did an activity and the following week they did their own so they had choice in basing their physical activity on ideas, on games. It has a very positive one, but I think they need a grounding to get an idea of what it is.’ If you just threw in, “Right you’re going to go off and do some games”, and just like “What kind of games?” Having done a week before of three or four different activities with me, they had an idea of where it was going and they were discussing them leaving the lesson - because I’d already put them into their groups so
stayed in them – and they were already discussing what games they could put in. (Patricia Interview 1)

Consequently, as teaching and learning during the HBPE units involved a combination of teacher and student-led activities depending on the particular context, the teachers’ role involved them as much more than just facilitators of learning. This highlights the potential for the HBPE model to allow teachers the flexibility for local adaptation in order to best reflect their specific contexts, a key factor strongly endorsed by Kirk (2013). Together with the time and managerial challenges experienced by teachers, competing organisational demands also emerged as an issue throughout the HBPE-CPD programme.

**Competing Organisational Demands**

Keay and Lloyd (2011) have previously highlighted the many competing organisational demands that can negatively impact on teachers’ engagement with professional learning activities. Over the duration of the HBPE-CPD programme, and across both schools, specific demands emerged as challenges for teachers which included examination pressures, extra-curricular commitments and additional management responsibilities. A clear example of these organisational demands surfaced in the form of a school Ofsted inspection during the first two weeks of implementing HBPE at Sycamore School. Despite their best intentions, this additional external pressure whilst implementing pedagogical change predictably diverted teachers’ attention away from engaging with the practitioner research process, in particular the completion of their post-lesson reflections. Further, use of the HBPE model was temporarily suspended by some teachers in favour of tried and trusted practices, thus reinforcing Lawson's (1988) argument that the emergent pedagogy (in this case HBPE) is often immersed into traditional practice (fitness and training).

Exploring reasons for this temporary suspension, some teachers revealed a lack of perceived confidence with teaching the model and an associated fear that this would not be viewed positively if they were observed by the inspectors. The confidence issues expressed by these teachers are hardly surprising when this factor is well documented as a key inhibitor during pedagogical change (Casey,
2012; Cruz, 2008; Robson, 2002; Rust & Myers, 2006). Indeed, it is hardly surprising that some teachers reported a lack of confidence with the HBPE framework given that they were the first adopters of this new PE-for-health pedagogy. Moreover, research evidence suggests that it can take years to become fully conversant with the complexity of pedagogical models (Casey, 2012, Dyson, 2002).

Supporting findings reported by Brydon-Miller and Maguire (2009), the pressure of raising examination grades was also reported by some teachers as a challenge. This was particularly true at Sycamore School, where teachers were involved in the preparation of multiple classes for examinations. Evidence suggests that new pedagogies, such as HBPE, may be difficult to implement effectively in schools unless the multiple competing pressures on teachers are reduced:

You know, the fact is that when we’re doing it in the summer term, we’ve got all the A-level and GCSE – well, GCSE exam revision commitments, the A-level, AS and restarting the summer term, sports day, etc.

(Terry Interview 1)

Other teachers, such as John, had significant whole school pastoral roles, in addition to their responsibilities as a teacher of physical education. For example, an email he sent during the HBPE-CPD programme illustrates the pressure he was under trying to juggle many competing demands. Further, his remarks strengthen the argument that time was in short supply in a busy school working environment (Aubusson et al., 2009):

Sorry for the delay in getting back to you. Hectic is an understatement here. Ofsted, yr7 parents evening, sports awards evening, open evening....non-stop! (John email)

The sheer volume of the competing organisational demands on some of the teachers at Sycamore School were also experienced later during the induction phase of the HBPE-CPD programme. Due to various other commitments, the third professional learning meeting had to be postponed at late notice:
And then we had that issue, if you remember, when we didn't manage to meet up, and I think it was our fault, not yours, where we didn't meet up to go through the schemes of work. And I think on reflection that would have helped because we could have shown you this is what we've planned and then, you know, would you change any of this? (Terry Interview 1)

Whilst this meeting was re-scheduled for the beginning of the new school year, teachers inevitably had less time to address any outstanding planning issues prior to implementing their HBPE units. It also became clear during the meeting that momentum seemed to have been temporarily lost in terms of teachers’ understanding of the model. Consequently, these competing school demands appeared to impact on teachers being able to plan detailed units of learning which closely reflected the HBPE conceptual framework’s key learning goals.

**Summary**

Teachers experienced a number of challenges during their engagement with the HBPE-CPD programme primarily due to the busyness of their working environments. Specifically, these challenges centred around finding sufficient time to adopt a new pedagogy in their practice on top of existing work demands. Competing organisational demands, including additional roles and responsibilities and external pressures also impacted on teachers’ experiences throughout the HBPE-CPD programme, particularly in addition to existing workloads.

**Conclusion**

This chapter presented and discussed teachers’ learning experiences during their engagement in the HBPE-CPD programme. Findings reveal that the induction phase was positive in terms of affording the teachers time to conceptualise the HBPE model, over-come some initial confusion and develop a shared understanding prior to implementation. Trialling elements of the model in their practice enhanced their confidence and gave them an opportunity to observe the potential impact of the model on their students’ learning which helped to facilitate buy in. These findings highlight the benefits of providing sustained support and
conditions for teachers to apply learning in their own contexts when adopting a new pedagogical model.

There was mixed success in terms of the teachers’ engagement with PAR during the HBPE-CPD programme. Whilst some teachers demonstrated a real commitment to engage with the PAR process, others struggled citing the demanding nature of practitioner research and the associated time pressures as key inhibitors. The findings similarly revealed varying degrees of teacher engagement in the co-construction of pedagogical change. Whilst teachers generally welcomed this opportunity, reporting that it enhanced their conceptual understanding of HBPE, leading on unit planning presented challenges. All of the teachers reported that being centrally involved in curriculum design ran contrary to their prior CPD experiences, illustrating a new way of working.

The sustained nature of the external support helped the teachers to critically reflect on their practice and prevented some from becoming overwhelmed with information, particularly during the induction phase when there was much to learn. However, providing teachers with this level of sustained support proved demanding in terms of the energy and time required. A strong collaborative approach in both schools helped to support the teachers’ learning with peer support emerging as an important feature in maintaining teachers’ motivation throughout the HBPE-CPD programme. Nevertheless, the labour intensive nature of adopting a new conceptual framework on top of existing time pressures and competing organisational pressures was a real issue for teachers and negatively impacted on the learning experiences of some teachers. These findings add to the existing literature which advocates an over-haul of school CPD in England to afford teachers sufficient time and energy to invest in curriculum and pedagogical development.
CHAPTER 5

*The Impact of Health-Based Pedagogical Change*

Introduction

The aim of this research was to examine teachers’ reported learning experiences during their engagement with a new PE-for-Health pedagogy and the subsequent impact on their practice over time. Consequently, the focus of this chapter is to present and critically discuss the findings in relation to Research Question Two: What were teachers’ views of impact on their practice and implications for their students over time? More specifically, the chapter focuses on the extent to which the teachers adopted the HBPE model in their practice, with a particular focus on the specific critical features of the model.

Section One: *Moving Towards a ‘Physical Activity for Life’ Philosophy* explores whether there were any noticeable changes in teachers’ philosophies over the course of the HBPE-CPD programme. Section Two: *Promoting Habitual Movers* highlights both the positive impact on teachers’ practice, such as an increased focus on promoting physical activity out-of-class, the evidence of inclusive practice and teachers’ enthusiasm during their HBPE units. Furthermore, a tension around pursuing MVPA in lessons is considered. Section 3: *Promoting Informed Movers* explores how teachers developed their students’ knowledge and understanding of health-related learning, such as referring to the physical activity guidelines for children and young people and highlighting how and where to engage in physical activity. Next, Section Four: *Creating a Need Supportive Learning Environment* examines the findings in relation to evidence of teachers employing the three identified psychological needs for autonomy, competence and relatedness support in their practice. Section Five: *Promoting Critical Movers* examines the extent to which the teachers discussed barriers to participation, strategies to overcome barriers and whether students were encouraged to promote physical activity in their family environments. Section Six: *Transferring Health-Related Learning across the Curriculum* explores any transfer of learning which occurred as a result of teachers’ engagement in the HBPE-CPD programme to other curriculum areas within physical education and Section
Seven: *Sustainability Beyond the Honeymoon* focuses on whether there were any sustained changes in the teachers’ practice beyond the initial point of implementation.

**Section 1: Moving Towards a ‘Physical Activity for Life’ Philosophy**

This section examines the impact of teachers’ learning during the HBPE-CPD programme on their health-based philosophies. Initially, findings from the survey data are discussed to identify teachers’ philosophies prior to the CPD and then consider any reported changes which occurred following their over the course of the HBPE-CPD programme. Data from the surveys revealed a diverse range of responses concerning the goals of health in their respective physical education curricula. For example, whilst some teachers believed the goals of HBPE were to ‘teach pupils about being healthy’, others reported a more limited focus on ‘types of training and effects on the CV system’ and ‘to encourage fitness through games and apply some theory in preparation for GCSE’. Further replies from teachers included viewing health-related learning as a means ‘to encourage fitness through games and apply some theory in preparation for GCSE (examinations)’.

Indeed, there seemed an over-reliance on developing students’ knowledge and understanding of fitness and training concepts. As such, it is contended that this relatively narrow focus may limit the opportunities for students to learn about valuing and subsequently leading active lifestyles (Alfrey et al., 2012; Cale, Harris & Duncombe, 2016; Castelli and Williams (2007). Moreover, and similar to concerns expressed in the literature (c.f. Armour & Harris, 2013; Cale & Harris, 2009; Haerens et al., 2011; Harris, 2005; 2009; Harris & Cale, 2018), the potential for weak permeation of health learning may have resulted in a poor quality experience for students, particularly if the teaching of activity content took priority over health-related outcomes and knowledge.

Following the HBPE-CPD programme, both teachers at Maple School reported that it (the CPD) had helped to explicitly re-position the promotion of healthy active lifestyles at the heart of their practice. Specifically, Colin reported that employing the HBPE conceptual framework provided a structure to follow and
supported his practice. Mirroring evidence in the literature (Cale & Harris, 2009; Harris, 2005; Haerens et al., 2011), he revealed that health-related learning had now been elevated in his practice. Previously, in contrast he reported a weak focus on health in favour of activity content and the teaching of sport when permeated through other areas of the curriculum (Harris, 2005; Haerens et al., 2011; Kirk, 2010). Further, he articulated a strong conceptual shift in his practice from a sport/activity driven focus to one centred on promoting healthy active lifestyles. This shift from a heavy ‘fitness for performance’ philosophy towards the promotion of active lifestyles is encouraging, especially in light of findings from the surveys discussed earlier where teachers’ previous health practice appeared to be heavily dominated by a fitness philosophy. For most of the teachers, evidence suggests that adopting the HBPE model assisted in positioning physical activity promotion at the forefront of their practice.

I think you get lost with a lot of the other objectives and areas of PE if you’re teaching via activity and hoping that the health aspect will come along as sort of a side issue. But actually following a model, it is almost – it is the model and how the activities work around that model and I think that’s got to be key. I really do believe that now and maybe I didn’t believe that before. I felt that maybe, you know, I’ll teach my sport, I’ll teach this activity here and, you know, I’ll mention health within that activity. But now it’s more the other way round, you know, health and being active are in the lessons as a key element and the other parts of it, the fact that the sport is there, is a tag on. (Colin Interview 1)

Teachers at Sycamore School also reported that adopting the HBPE model represented a positive move away from a ‘fitness for performance’ philosophy, which appeared to be focused on the types of training and in particular a physiological approach to health, which the literature suggests has to date failed to support young people’s holistic development across the affective, cognitive and social learning domains (Armour, 2014; Lloyd & Smith, 2009). Further, many scholars argue that this narrowly focused health practice does not sufficiently educate young people to adopt active lifestyles (Alfrey et al., 2012; Armour & Harris, 2013; Cale & Harris, 2018; Castelli & Williams, 2007; Haerens et al., 2011). Evidence also points to the HBPE model providing an opportunity for
teachers to revamp what appeared to be an ad-hoc health curriculum:

Before was very much physiologically based and one lesson would be a circuit, one lesson would be a continuous run, one lesson would then be maybe looking at some effects of smoking on heart disease and that sort of thing. Then usually a muscular endurance type of activity and the HBPE unit has taken elements from that, but in my opinion is better placed to meet what we really want them to be doing. So yes, I think there are clear differences from what we’ve delivered before and I would argue that in the main HBPE is better than what we’ve done before…We still have the circuits obviously in HBPE, but I know from when I delivered them there was a different focus…on creating a circuit. Whereas, this time, I felt the focus was more on what do we benefit from doing a circuit? How could you do a circuit in your own house, in your own bedroom, a bit more of lifestyle as opposed to personal training knowledge?…So I think Health Based PE is good because it does get you thinking about us being here as PE teachers to promote them to try and be healthy and active and not just to teach them how to do a push pass in hockey.

(John Interview 1)

Whilst the physical education department at Sycamore School certainly provided an extensive extra-curricular programme prior to their adoption of HBPE, opportunities were largely restricted to participation in team sport activities. Having recognised this issue as a limitation of their previous enrichment provision, Molly spoke about how she had broadened her outlook beyond sport participation and had included new activities, such as walking, within the extra-curricular programme:

I think I was more a strong believer about them doing sport prior to you guys coming in. I obviously wanted them to be active but for me, it was always like right, what can we get in, you know, sport-wise? Whereas now, it’s kind of opened me up a bit more to we can – we’ve got a walking club now and things like that. (Molly Interview 1)
John also noted a greater emphasis on educating students to lead healthy active lifestyles throughout the unit, rather than prioritising the teaching of sport specific skills as commonly highlighted in the literature (Harris, 2005; Haerens et al., 2011; Kirk, 2010). This represents a positive finding in relation to the impact of the HBPE-CPD on shifting teachers’ philosophies. Of interest, was the subtle shift in focus reported from ‘fitness for performance’ i.e. creating a circuit to encouraging students to think of the benefits and how they could apply their learning at home. However, this was not the case for all teachers, with some teachers at Sycamore School still demonstrating strong fitness and training ideologies after their engagement in the HBPE-CPD programme:

I think actually teaching it is very much like teaching fitness that we’ve done in the past but we just say its HBPE so we can get a lot more into it.

(Patricia Interview 2)

So we do some circuit training and some boxercise inside the gym and again the boxercise stuff is very much about linking the type of training into how it might help their sports in terms of comparative fitness.

(Sean Interview 2)

Whilst all nine of the teachers demonstrated some shift in their philosophies from a ‘fitness for performance’ to ‘physical activity for life’ centred on prioritising physical activity participation, there were still remnants of prior fitness and sport dominated rhetoric. This evidence demonstrates that engagement with a new PE-for-Health pedagogy, such as HBPE, can support teachers to promote healthy active lifestyles as advocated by the NCPE in England (DfE, 2013).

Summary

Prior to engaging in the HBPE-CPD programme, the teachers demonstrated a wide range of responses concerning the goals of health in their respective physical education curricula, with a noted over-reliance on developing fitness and training for sport performance. Teachers reported a shift in philosophy towards promoting active lifestyles, although this was not unanimous.
Section 2: Promoting Habitual Movers

In adopting the HBPE model, one of the learning goals involves encouraging students to choose to lead an active lifestyle and participate in regular physical activity. The *habitual mover* learning goal arguably underpins the HBPE model, as Siedentop (1996) proposes that valuing a physically active life often translates in participation. Consequently, one of the model’s critical features explicitly highlights the expectation for teachers to promote physical activity. As explained in Chapter Three, recommendations for promoting physical activity include teachers demonstrating a passion and energy for PA, encouraging students to identify and meet PA targets, maximising opportunities for MVPA and setting ‘activity challenges’ beyond the lesson. Therefore, this section will initially focus on how the teachers promoted physical activity during lessons and some of the challenges that they encountered. Following this, the focus will then shift to teachers’ promotion of physical activity out-of-class or beyond the lesson.

*Promoting Physical Activity during Lessons*

Teachers across both schools highlighted a tension between attempting to keep students sufficiently active during lessons, whilst simultaneously developing their understanding of health outcomes, as Harris and Cale (2018) advocate. At Maple School, both of the teachers (Colin and Luke) noted this tension with Luke specifically reflecting after his first HBPE lesson that explaining the correct technique for both boxing and rowing, ‘could hinder their PA (physical activity) levels’ (PLTR Lesson 1). Further, Colin reported ‘a need to skip through the theory side of the PA guidelines,’ as his class were an:

> enthusiastic bunch who just wanted to move and long periods of inactivity switches them off, so they don’t listen to the theory. (PLTR Lesson 2)

Meanwhile, at Sycamore School, Sean appeared to appreciate the benefits of trying to address both the short and long term physical activity goals, but identified the lesson duration as a restraint in achieving this objective:

> We’re trying to get them active and keep them active as well as getting that message across. And I guess also with the time constraints here ups
the tempo in terms of trying to get things through to the students, but I think it definitely has merits in terms of trying to bring both aspects together, in terms of giving them the education of how things work and why and also about the need for the physical activity part of it.

(Sean Interview 1)

Reflecting on the HBPE unit as a whole, Colin (Maple School) acknowledged a further, but related, challenge, namely of attempting to achieve multiple learning goals during lessons. Drawing on the work of both Kirk (2010) and Haerens et al. (2016), it is proposed that the pursuit of diverse learning goals led to a lack of clarity and suggests some misunderstanding about the HBPE model's central theme of supporting young people to 'value a physically active life'. Similar to the tension highlighted by Sean, Colin also reported a struggle with trying to keep students active, whilst supporting them as informed movers:

I think they were the bits where we were having that battle with we’ve got a lesson, we’ve got loads to do, we want to get them to get their thirty minutes minimum but they’re buzzing and they’re loving it. At what point do we stop them and get them in, so it isn’t just all play, play, play and there is actually a little element of learning and creating that informal learning. (Colin Interview 1)

These findings highlight a need to further develop active pedagogies, as advocated by Harris and Cale (2018), where learning (including the physical activity guidelines) is embedded through active participation. Further, in line with Ellis and Loughland (2016), teachers seemed to sacrifice the HBPE learning goals in favour of ensuring their students were sufficiently busy, active and happy during lessons. In attempting to explain this primary emphasis on physical activity levels, it is suggested that unsupported calls by Ofsted (2013) for teachers in England to engage students in high intensity activity during physical education are unhelpful and may indeed put pressure on teachers to prioritise MVPA. Furthermore, in line with the afPE (2015) recommendation that students should be active for between 50% - 80% of lesson time, one of the strategies agreed during the HBPE-CPD programme to promote physical activity during the implementation of the HBPE model (and subsequently illustrated on the pocket
benchmarks explained in Chapter Three) was Maximise opportunities for MVPA. On reflection, highlighting this particular strategy may have only served to reinforce teachers’ pursuit of MVPA during lessons, rather than prioritise the process of being physically active, as stressed by McConnell (2010).

Both Colin and Luke, however, recognised this practice dilemma during their implementation of the HBPE model and agreed to adapt the structure of their subsequent lessons. Data from lesson observations revealed that this adaptation essentially involved an ‘interval style’ approach being employed, where bouts of high intensity physical activity were alternated with rest periods. During these rest periods, teachers specifically focused on developing students’ knowledge and understanding around the HBPE model’s informed and critical mover learning goals. Both teachers reported that this change in approach was positive in terms to keeping students sufficiently active in lessons and also supporting their development as informed movers.

The finding is important as it highlights the potential for teachers to simultaneously (and successfully) focus on both aspects of keeping students sufficiently active and also supporting the development of positive physical activity habits when teaching HBPE. That said, Tannehill et al. (2013) have proposed that attempting to address both aspects is challenging, due to the limited curriculum time students receive for physical education, typically less than 2% of a child’s waking time (Fox et al., 2004). Evidence suggests that the ‘interval style’ approach was a successful solution in terms of students’ learning in relation to the informed and critical mover goals of the HBPE model. However, this learning was not always embedded through meaningful physical activity contexts and points to a need for supporting teachers with new solutions such as active pedagogies (Harris & Cale, 2018). Some success was also reported by the teachers at Maple School in terms of employing strategies such as wearing pedometers, which they felt really motivated students to be active:

Incredible energy and effort from all pupils trying to achieve as many steps as they can measured on the pedometers they were wearing… many pupils working constantly even when not actually involved in task by running laps of the hall, star jumps on the spot. (Colin PLTR Lesson 1)
Similarly, Luke also considered the use of pedometers during lessons as a positive development in terms of encouraging students to be physically active. This finding supports previous research where pedometers have been used successfully to enhance young people’s physical activity levels (Lubans, Morgan, & Tudor-locke, 2009; Stathi, Nordin & Riddoch, 2006). However, it is worth reflecting whether there should be more emphasis on promoting out-of-class physical activity, which is next discussed.

**Promoting Physical Activity beyond the Lesson**

Shifting attention from physical activity during lessons, there was also a strong emphasis during the HBPE-CPD programme on supporting teachers to explicitly promote physical activity beyond the lesson. Indeed, two potential strategies to support teachers’ practice in this area involve setting ‘activity challenges beyond the lesson’ and communicating with parents/carers and community bodies. Reflecting on the data, Terry (Sycamore School) revealed that adopting the HBPE model had emphasised the importance of prompting out-of-school physical activity and that this feature had become engrained in his practice over time:

> The main thing I’ll take from it in terms of getting that sort of habit of, right, what are you doing after school, then? What are you doing outside of school? How are you going to do that? I think I sort of do that every lesson now... We do promote, not as much outside of school as we have done as a result of HBPE but, you know, we do try and make those club links. (Terry Interview 1)

Further, Terry felt that this goal was the highlight for him over the course of the HBPE-CPD programme generally and during his implementation of the HBPE model specifically. Terry’s colleague, Patricia, also noted the positive impact of discussing student engagement in out-of-school activity, a strategy she admitted was not common practice prior to her implementation of HBPE:

> I have one class that’s a low ability Year 9 group and talking to them about what they do outside of lessons and outside of school is something...
that I probably wouldn’t normally do, so actually discovering the majority of students do something, that was very positive. (Patricia Interview 1)

Mid-way through his implementation of HBPE, John noticed a big increase in students thinking about their physical activity level and subsequently exploring ways to be active out of school as a result of a greater emphasis by teachers during their HBPE units. Together with this more explicit signposting of opportunities to be active beyond the lesson, John proposed a number of other factors to explain this upsurge in students’ motivation to be active out of class. These factors included the novelty of HBPE and ‘the enthusiasm of the member of staff as well’ (John Interview 1). John’s observations support the call made by Armour et al. (2015) for physical educators to be enthusiastic in their teaching of health and to ensure that learning is relevant to their students’ lives:

Seeing kids do extra just because they think they should be doing extra. “I’ve gone to boot camp with my dad” and this sort of thing and that might have happened anyway, but I’d like to think that it was partly driven if not all driven by the fact that they are more aware of it in their lesson time really…Pupils are thinking about their physical activity and we are seeing a big increase in the ways in which they are trying to get to their 60 minutes and beyond…I have seen a massive improvement in the pupils’ ability to consider physical activity outside the classroom.

(John mid-unit reflection)

Similarly, mid-way through his HBPE unit, Terry also provided a powerful example of increased physical activity engagement out of class, with some students indicating that they had replaced sedentary activities, such as playing computer games, with active pursuits:

I asked the students at the end of week 4, how many of them feel that they had increased their activity levels by joining a club / doing more exercise in their own time and over half of the class raised their hands. I went around each of them asking them to give me an example of what they had done; one or two spoke about "less x box and more skateboarding and BMX", others gave actual clubs they had since joined.

(Terry mid-unit reflection)
Meanwhile, at Maple School, both Colin and Luke provided numerous opportunities for their students to be active in their leisure time, such as over a half term holiday and they also prompted students to engage in a world physical activity day. The strong focus on encouraging students to be active out-of-class is a positive finding, especially when there is worrying evidence of childhood inactivity, as highlighted in Chapter Two. Furthermore, research has previously reported teachers’ prompting of physical activity occurred in less than 2% of physical education lessons observed (McKenzie et al., 1997; McKenzie & Kahn, 2008). In particular, following active encouragement, Patricia noticed an increase in the number of quieter students, with low perceived physical confidence, who wanted to attend the school fitness suite after school. Molly similarly revealed that her Year 9 students had gone ‘mad for fitness room activities’, with up to thirty boys and girls regularly turning up to use the facility. This initiative was so successful that it created a predicament for the physical education department around how to best manage their after school provision, as frequently they struggled to cope with the number of students who wanted to use it.

The teachers’ perceptions of increased physical activity out of class were corroborated by some of the students themselves during focus group interviews which took place following the HBPE units. They recounted that ‘teachers encouraged us to do more clubs and play outside of school’ (Maple School Focus Group 1) and ‘teachers wanted to show us that it was easy to do this kind of stuff (physical activity) outside of school (Sycamore School Focus Group 2). In line with Hastie et al. (2012), these findings reveal the potential for teachers to support their students’ engagement in physical activity out-of-school. Moreover, with the reported increased marginalisation of physical education in some schools and the subsequent reduction in curriculum time (Harris & Cale, 2018; Youth Sport Trust, 2018), it seems all the more imperative for teachers to prioritise the promotion of physical activity out of class, as was emphasised throughout the HBPE-CPD programme.

Whilst there was no evidence of students using diaries to record their physical activity at Sycamore School, this initiative was used at Maple School and is an example of teachers’ learning from the HBPE-CPD being employed in practice.
Although Colin was pleased that students were engaging in at least one hour of daily activity, the findings suggest that participation was mainly limited to team sports such as football and cricket. Luke reported a similar trend with his class in terms of a heavy emphasis on sports participation, although evidence from lesson observations early in the unit revealed that many students were not active for an hour each day. This stimulated Luke to reinforce the importance of students completing their activity diaries correctly and also caused him to reflect that he ‘would like them to record more lifetime activities such as walking and biking’ (PLTR Lesson 2). The lack of reference to these forms of physical activity in students’ diaries is perhaps not surprising given a National Travel Survey in England at the time of the study (Department for Transport, 2013) revealed that less than half of children walked to school and only 2% cycled to school.

Moreover, the reported dominance of sports participation indicates that students may have held a narrow understanding of how they could be physically active, as previously highlighted by Armour (2010) and points to a need for a greater focus on this area during future HBPE-CPD programmes. Although Luke positively commented early in the unit that students’ activity diaries had supported them to ‘be more proactive in and outside school’ (PLTR Lesson 2), he later reported that this engagement with their diaries was not sustained:

> I still feel that the diary is the biggest problem at the moment which is affecting the progress maybe of PA out of lessons. I am sure they are performing more activities, however, I have no way of showing this. I feel the diary started well and they filled in two weeks, however I feel I missed an opportunity to mark these and allow the students to really feel these diaries are worthwhile. (Luke PLTR Lesson 5)

Reflecting on the above challenge, the fact that the diaries were not checked each week suggests that students potentially lost their motivation for engaging with them as the HBPE unit progressed. The overall lack of employment of diaries to record students’ activity levels in both schools during this research points to this strategy as an area to prioritise during future HBPE-CPD and the subsequent implementation of the model in schools. Indeed, it is suggested that offering rewards, such as team/house points, may have motivated more students.
to consistently engage with their diaries as reported by Hastie et al. (2012), and subsequently resulted in higher levels of participation in physical activity.

**Physical Activity for All**

With a noted focus on promoting inclusive practice, the seven guiding principles developed by Harris (2000) to support all children to realise active lifestyles were used as a catalyst to adopt a ‘physical activity for all’ philosophy for the HBPE model. Consequently, throughout the HBPE-CPD programme teachers were encouraged to demonstrate inclusive practice when adopting the HBPE model. Findings reveal the potential to break down some of the barriers to engagement and learning in physical education, especially the perception of some students that they are low attaining in comparison to their peers. For example, John suggested that implementing a common HBPE unit framework across different classes had a positive impact on the self-esteem of those students labelled as ‘low ability’ in physical education:

> Even though in this school we very rarely specifically focus on skill, the pupils are still in the main aware that's how PE is seen and how PE is assessed. Things like we have higher and lower ability groups they are under no illusions that the lower group is the weaker students physically. I think that unit in particular broke down a bit of that barrier and there wasn't necessarily that feeling of, oh well they're doing something different to us because they're the higher ability. (John Interview 1)

A further example of inclusive practice is provide by Colin, who explained that both he and Luke at Maple School encouraged students to engage in school extra-curricular clubs, especially those students who had not been previously involved and this targeted strategy seemed to have a positive impact on the sustained active engagement of these individuals out of class. ‘We were signposting a lot more about the clubs…and we did see quite a few of them actually getting involved and are still getting involved now’.

This outcome underlines the philosophy of health in PE, first advocated by Almond (1989) and also Pill’s (2008) recommendation for teachers to refocus on the learning of all children in physical education, not just the higher skilled
performers. Considering this call for inclusive practice further, Harris and Cale (2018) have recently outlined six principles linked to healthy active lifestyles which essentially propose that everyone is entitled to positive physical activity experiences and that all individuals can succeed in being active for life. Moreover, as both the NCPE in England (DfE, 2013) and the newly published Global Action Plan on Physical Activity 2018-2030 (WHO, 2018) explicitly promote inclusive practice, it is important that teachers are provided with HBPE-CPD opportunities which focus on encouraging all young people to be active.

**The Challenges of Behaviour Change**

Despite the many positive examples of inclusive practice during teachers’ implementation of the HBPE model, there were also a number of reported challenges, particularly in relation to the *habitual mover* learning goal. Ciara (Sycamore School) suggested that she found the *habitual mover* learning goal the most challenging to address ‘because to make somebody make a behaviour change is very difficult’. (Ciara Interview 1). Indeed, Harris and Cale (2018) highlight the importance of multiple health-related learning outcomes to support behaviour change in respect of physical activity. However, the literature identifies a lack of opportunity for teachers to engage with relevant behaviour change theories and strategies in relation to physical activity promotion (Cale et al., 2014; Haerens et al., 2011; Harris, 2014; McKenzie, 2007) and highlights the need for further CPD in this area. Supporting Hastie et al.’s (2012) argument that habitually leading an active lifestyle is a long-term process, Ciara further contemplated whether an eight week HBPE unit could positively influence the physical activity behaviour of students who were not regularly active. This is an insightful observation, especially in light of earlier calls by Dobbins et al. (2013) for school-based physical activity interventions to last for at least 12 weeks.

Karen (Ciara’s colleague) also acknowledged that in order to change students’ behaviour teachers needed to reinforce key messages throughout the year, ‘rather than just doing it for eight weeks and then going back to the old mindset’. (Karen Interview 1). The recognised limitations of relatively short HBPE units in terms of changing behaviour reinforces Kirk’s (2012) argument for longer blocks of learning in Physical Education. Indeed, Warburton and Spray (2017) query whether students will believe that they can sufficiently improve if a unit of learning
is only six to eight lessons in duration. Returning to the HBPE model, as the key goal is for young people to value a physically active life, and in line with Harris and Cale (2018), a combination of approaches to promote active lifestyles, such as teaching discrete units of HBPE and embedding health learning goals throughout the physical education curriculum are recommended.

Clear evidence emerged of teachers acting as positive role models for their students in terms of leading active lifestyles, with one particular example noted during a lesson observation mid-way through the implementation of HBPE at Maple School. ‘He provides some great personal examples of his physical activity engagement, such as going to the gym and cycling around a country park to illustrate activities beyond competitive sport’. Indeed, a number of Luke’s lesson reflections demonstrated positive comments in relation to students’ active engagement and effort during the HBPE unit. This was evident as early as the first lesson with students jogging on the spot in order to gain as many steps as possible (Luke PLTR Lesson 1). He also noted that ‘pupils are leaving the lesson with red cheeks, sweating and deep breathing because they are enjoying it’ (Luke PLTR Lesson 4). One student even suggested that ‘I think since my time here that’s the most active I have been in PE’ (Maple School Focus Group 2).

This positive evidence of high student physical activity levels during the HBPE units points to the potential for the model to help counteract the reported lack of activity during secondary school physical education (Aelterman et al., 2012; Fairclough & Stratton, 2006; Hollis et al., 2015). However, researchers (Armour, 2010; Fox et al. 2004; Harris, 2000; Haerens et al., 2016) consistently remind us that increasing activity levels in lessons alone is unlikely to result in long-term health behaviour change, as discussed earlier. This highlights the necessity to equip children and young people with the knowledge and skills to prepare them for a life of physical activity beyond the school gates.

**Summary**

Findings reveal that teachers’ learning during the HBPE-CPD programme was generally positive in terms of promoting physical activity, both during lessons and beyond class. Indeed, the latter was confirmed by teachers at both schools as a
new practice development. There was also an encouraging impact on the learning of all children in physical education, particularly those perceived as less skilled performers and points to the HBPE model’s potential to help stimulate inclusive practice. A noted tension however concerned the apparent pursuit of high intensity physical activity or MVPA at the expense of developing health-related learning during lessons, which indicates that teachers should have access to HBPE-CPD opportunities focused on exploring active pedagogies. Shifting attention away from physical activity promotion, there was also an expectation that teachers would support their students to be informed movers during the adoption of the HBPE model.

Section 3: Promoting Informed Movers

The HBPE model’s ‘Informed Movers’ learning goal, outlined in Chapter Three, specifically focuses on developing students’ learning in the cognitive domain, such as reference to the physical activity guidelines for young people, highlighting how and where to be active, the effects of physical activity and promoting safe and effective practice. The next section examines how the teachers supported their students to be informed movers during their implementation of the HBPE model.

Analysis of the teachers’ post lesson reflections (PLTRs) revealed numerous examples of students being supported as informed movers during their HBPE units at Sycamore School. These examples included students ‘being able to identify how physical activity contributes to a healthy lifestyle’ (Sean PLTR Lesson 1), ‘understanding how to participate safely and effectively in physical activity’ (Pauline PLTR Lesson 2) and ‘how physical education lessons could contribute towards their 60 minutes per day physical activity target’ (Molly PLTR Lesson 3). Indeed, Molly highlighted her students’ knowledge and understanding of the physical activity guidelines as a real positive outcome during her implementation of the HBPE model. Similarly, consistent references to the physical activity guidelines for children and young people in the UK produced by the Department of Health (CMO, 2011) reportedly became a new and strong feature of John’s teaching. Moreover, John felt confident that the classes he taught would “be better educated with regards to a physically active lifestyle as a
result of this unit of work’ (John mid-unit reflection). Whilst acknowledging that this endorsement was the view of only one teacher, it indicates that the HBPE model may have potential to help young people adopt active lifestyles and lends support for its further development as a legitimate PE-for-Health pedagogy. Furthermore, this evidence demonstrates a positive development in practice, as at the outset of the HBPE-CPD programme all of the teachers were reportedly unaware of these guidelines and subsequently did not make reference to them in their prior teaching.

From the beginning of their HBPE units at Maple School, it was evident that both teachers were determined to support students as informed movers. Indeed, an observation of the first lesson and subsequent analysis of planning documents noted that some of the key aims for this lesson included discussing the physical activity guidelines for young people and promoting safe and effective practice, which Luke later reported became embedded in his practice. Furthermore, Luke observed that his students, ‘can explain to you that we should be getting 60 minutes a day minimum’ (Luke PLTR Lesson 1), whilst Colin reflected that his class were calculating how they could exceed daily expectations for their own participation in physical activity:

They were all aware of 60 minutes minimum and were already working out that on top of 40 minutes in lessons they could add the 10 minutes of football at break and 20 minutes at lunch. (Colin PLTR Lesson 1)

Teachers’ positive recollections of students’ learning as informed movers were supported by evidence from lesson observations and also by the students themselves. Specifically, they revealed a good understanding of how they could achieve their daily one hour physical activity goal, with contexts such as clubs, leisure centres, in the playground, at home and active travel suggested as possible options (SMG Focus Group 2). Students also gave various responses regarding the benefits of being active ranging from leading healthy lifestyles to developing life skills such as ‘learn never to give up’ (SMG Focus Group 1).

Equally, however, teachers experienced challenges in supporting students as informed movers. As reported earlier, although there was strong evidence of
teachers regularly encouraging their students to be active throughout the implementation of the HBPE model, James had reservations about whether he sufficiently explored why students should be active daily. ‘We’re saying 60 minutes, but I don’t think in terms of my teaching I got across why we want 60 minutes and what the benefits are’. Furthermore, James held that embedding such deeper knowledge would not occur ‘unless you sit them down in a classroom and did a theory based lesson’. Similarly, Colin suggested it was ‘a case of a bit of a chalk and talk scenario’ in order to develop students’ knowledge and understanding of concepts. Thus, reflecting previously reported findings (Ko et al., 2006; McCaughtry et al. 2004), there may have been some misunderstanding regarding teachers’ translation of this aspect of the HBPE model in their practice. Specifically, as advocated by afPE (2015), teachers were encouraged throughout the HBPE-CPD programme to employ teaching approaches where health-related learning was embedded through meaningful physical activity. However, evidence indicates that the teachers collectively struggled to do this successfully during their units and suggests the need for the further development and adoption of active pedagogies (Harris & Cale, 2018).

Of further note, there was limited evidence from lesson observations and planning documents of teachers in either school promoting the other two physical activity guidelines for children and young people, namely muscle and bone strengthening activities and minimising extended sedentary time (CMO, 2011). This finding may be explained by considering Almond’s (1997) advice that the early adopters of a pedagogical innovation need time to assimilate new ideas in their practice. Further, drawing on some of the literature questioning physical educators’ ability to effectively teach health (Armour & Harris, 2013; Cothran et al., 2006) these apparent gaps in teachers’ subject knowledge suggest that they may not have gained a full understanding of the physical activity for health guidelines during the HBPE-CPD programme.

**Summary**

There were numerous examples of teachers from both schools supporting their students to be informed movers throughout their implementation of the HBPE model. A new and strong feature of all teachers’ practice involved them making
consistent references to the physical activity guidelines for children and young people, especially the one hour daily expectation, and this translated into positive reported outcomes for students. However, there was limited evidence of the other two guidelines being shared during lessons, which suggests some gaps in teachers’ subject knowledge. Teachers also demonstrated some misunderstanding in translating this critical feature in practice. Together with supporting students to be informed movers, a further key critical feature of the HBPE model involves teachers creating a need supportive learning environment, which is the focus of the following section.

Section 4: Creating a Need Supportive Learning Environment

Self-Determination Theory (SDT) suggests that teachers are more likely to motivate their students, and enhance their well-being, if they can support the basic psychological needs for autonomy, competence, and relatedness (Deci & Ryan, 2000; Ryan & Deci, 2017). Consequently, throughout the HBPE-CPD programme the teachers were encouraged to promote these basic psychological needs during their implementation of HBPE. In order to provide clarity, this section considers each of the three basic psychological needs in turn, beginning with autonomy support.

Autonomy Support

To foster autonomy support, Standage and Ryan (2012) propose strategies such as maximising the opportunity for choice and minimising ego involvement, earlier identified in Chapter Two. Similar to findings in the existing literature (Amado et al., 2014; Cheon et al., 2012), there was evidence from various sources to indicate that creating a need supportive learning environment during HBPE had a positive impact on students’ learning. For example, Molly noted an increase in students’ motivation during lessons and emphasised that they enjoyed the increased autonomy, especially creating their own activities and working towards personal goals. Increased autonomy was also highlighted by some students at Sycamore School who confirmed that their experiences during the HBPE units were ‘more enjoyable because we got some choice…it didn’t feel like you were doing PE’ (Focus Group 1). This is an interesting quote as it suggests that students were not used to having choice during their physical education lessons.
and demonstrates HBPE had a positive impact on students’ learning and enjoyment. Furthermore, other students at Sycamore School revealed that being taught HBPE had enhanced their self-confidence and motivated them to get fit ‘It has boosted my confidence and motivated me to get fit’ (Focus Group 2).

Students at Maple School also reported that having the freedom to choose their own activities had a positive impact on their confidence ‘because you’ve picked it I feel like confident’ (SMG Focus Group 2). Indeed, lesson observations revealed that when students were questioned by Luke on why they chose particular activities the most common response was because they were good at it. Although Luke identified ‘providing choice in response to students’ needs and interests’ as an area for development mid-way through his HBPE unit (Luke PLTR Lesson 4), he later described how ‘the students were making the decisions’ (Luke PLTR Lesson 5) and having the opportunity ‘to design what they enjoy and also take ownership’ (Luke PLTR Lesson 6). Indeed, observations of HBPE lessons by senior leaders at Maple School, as part of an internal monitoring programme, endorsed the levels of student ownership and their subsequent enjoyment as key strengths. This resulted in both Luke and Colin receiving an outstanding judgement in terms of the quality of teaching and learning observed during their HBPE lessons:

both myself and Luke had observations from senior management, and I think both of us came out as outstanding. And I think the biggest aspect of that was just the kids’ engagement, the kids’ ownership of the lesson, their understanding of what they were doing and, really, their enjoyment.

(Colin Interview 1)

The findings compare favourably with those of Aelterman et al. (2012), who associated autonomous motivation with students displaying high levels of effort and enjoyment during physical education. Indeed, Franco and Coteron (2017) highlight enjoyment to be one of the most important factors for increasing activity levels, an important consideration given that recent research has reported students being insufficiently active in physical education lessons (Hobbs et al., 2014; Hollis et al., 2015). It is suggested that students’ perceived competence was enhanced by them having a good deal of autonomy over creating their own
activities. This level of ownership appeared to positively impact on students’ engagement in lessons and subsequently supported their learning (Shen et al., 2009). This finding endorses the recommendation by Haerens et al. (2011) that physical educators must acquire new knowledge and skills in order to support individual behaviour change and motivation to be physically active. Furthermore, the potential for teachers to promote autonomy support in physical education through their adoption of the HBPE model and aided by a sustained HBPE-CPD programme is recognised.

Although providing students with autonomy during their HBPE units seemed to positively impact on their motivation and engagement, some challenges with providing a variety of activities for students were noted. For example, John (Sycamore School) believed that his Year 8 girls’ class enjoyed boxercise and circuits more than the running activities. Indeed, he noticed a lack of student motivation during some lessons, ‘some students chose the easy option of a shorter lap to further reduce time spent running’ (John PLTR Lesson 1). Similarly, both Molly and James reported a negative impact on students’ motivation when they were participating in certain running activities which appeared to create an overly-competitive learning environment. As the HBPE conceptual framework clearly advocates the establishment of a mastery climate, these findings highlight some of the issues that the teachers experienced when planning their units and cast doubt on whether all of the activities chosen were fit for purpose. However, again it must be reinforced that these teachers were the initial adopters of a new PE-for-Health pedagogy. It also raises the question whether the teachers needed more explicit support with curriculum design, as previously suggested in the literature (Huizinga et al., 2014; Petrie & McGee, 2012).

I don’t think the plans we came up with were suiting the model that you were trying to get across. Like I said when we had the group discussion, activities like Eat My Dust (a sustained running game)…where you’ve got a larger child who still isn’t going to win, they’re going to still get put off by coming last – you’ve got Formula One where it’s still competitive, it’s not individual progress. I think the ones we chose weren’t the best ones that highlight the model. (James Interview 1)
The employment of a multi-activity approach to designing their HBPE units was questioned by some teachers at Sycamore School. Specifically, Terry raised concerns around the number of different activities offered during HBPE. He describes a picture where learning appeared quite rushed and superficial, and did not allow teachers or students to explore concepts in any real depth. This finding lends weight to the reservations expressed by many authors (e.g. Armour and Harris, 2013; Kirk, 2013; Haerens et al. 2016; Siedentop et al., 1986) that designing curricula around a multi-activity model provides limited opportunity to develop students’ knowledge and understanding beyond basic levels. In response to this dilemma, John proposed that employing just one activity, such as Boxercise, to teach HBPE could have heightened students’ enjoyment, ‘we could even have done an eight week unit of HBPE on boxercise and they would have loved that’ (John Interview 1). Whilst a potentially valid solution to a multi-activity approach, it is worth considering those students who may not enjoy boxercise. Consequently, creating a balanced programme over a sufficient period of time would seem the most sensible approach, particularly in light of recent research by Sport England (2019) identifying enjoyment as the biggest driver of activity in young people.

Colin also felt that providing his students with choice positively influenced their enjoyment, although he reported a negative impact on their motivation to be active in some cases. Contrary to the experiences reported by the teachers at Sycamore School, however, this dip in student motivation occurred in games activities, rather than during running activities:

The activity was the pupils’ choice and most enjoyed it, but as with most games activities some of the pupils opted for roles within the team where they were able to become more stationary than previous lessons. (Colin PLTR Lesson 4)

Colin’s observation indicates that being less active during lessons was a negative occurrence. However, it is worth considering whether affording students the opportunity to self-determine their activity levels resulted in a more enjoyable learning experience and consequently enhanced their commitment to engage in physical activity in their leisure time, as previously reported (Cox & Williams,
The discussion now shifts to explore how teachers supported their students’ second basic psychological need for competence during the implementation of the HBPE model.

**Competence**

Competence concerns people’s need to feel a sense of mastery through effective interaction with their environment. To foster support for competence, planning activities that optimally challenge all learners and providing positive feedback is recommended. Terry reflected that he tried to create a positive learning environment in his HBPE lessons by focusing on students’ personal progress and effort. He did acknowledge though that that this move to a more mastery-orientated climate was a challenge for some students who ‘naturally made comparisons with each other’ (Terry mid-unit reflection). Indeed, Terry’s colleagues highlighted issues around the creation of a mastery learning environment. For example, Ciara reported ‘getting the right balance between competition and participation’ (Ciara Interview 1) as a key challenge during implementation, whilst Sean explained that he employed a competitive climate with a Year 8 boys’ class:

> Although it was a case of can you do more than your partner during circuit training with the Year 8 boys, there was very much a focus on how much they could do on their own, rather than competing against one another. (Sean Interview 1)

In contrast, Sean focused solely on personal progress and effort with his Year 9 students, who he suggested did not enjoy some of the competitive running activities such as ‘Formula One’ and ‘Eat My Dust’. Despite the perception that these sustained running activities were too competitive, it is important to note that they were designed to elevate learning in the cognitive domain by encouraging students to collaboratively solve tactical problems. A lack of enjoyment, however, was not reported by all students, with some expressing positive affective outcomes from these activities ‘I found that running was kind of my thing and I really enjoyed it’ (Student Focus Group 2). The difference in learning climate was in response to what Sean believed was best for the students in both of his respective classes. He sensed that students reacted well to the different focus on
competition, in particular the Year 9 boys in that ‘it was the hardest I’ve seen them work all year’ (Sean Interview 1). Sean’s reported experiences demonstrate his confidence in adapting the learning environment in response to his students’ needs and endorses Kirk’s (2013) recommendation that pedagogical models must allow teachers the flexibility for local adaptation.

Further evidence of encouraging students to work towards personal targets was provided by James who noted that his Year 8 boys’ class were excited when they had opportunities to beat their own score or time. These findings suggest that the learning climate may again have positively impacted on student effort and engagement and that students’ perceived competence was enhanced when teachers created an environment where they were rewarded for task mastery and personal improvement, as advocated by Cox and Williams (2008). In trying to promote a task mastery environment, Patricia provided an excellent example of engaging in one to one conversations with her students, explaining that she made more time for personalised feedback during her teaching of HBPE than in other physical education lessons:

we were in the multi-gym one day and they were doing that and I spoke to each one individually and said What is it you’re doing? So it was on an individual basis and you don’t always take that amount of time in PE lessons to do one-to-one. (Patricia Interview 1)

With an explicit expectation for teachers to support students’ basic psychological need for competence, this evidence illustrates the encouraging impact on practice during the HBPE-CPD programme. In addition to the teachers providing students with personal feedback, numerous examples also emerged of the students themselves promoting physical activity to their peers throughout the HBPE units.

**Peer Support**

The third basic psychological need for relatedness involves feelings of belonging, security and being respected by significant others (Franco & Coteron, 2017). Consequently, Standage and Ryan (2012) recommend strategies such as
promoting cooperation and peer support to nurture relatedness. In terms of adopting the HBPE model, teachers were guided by prompts to ‘encourage students to work collaboratively and sensitively’ and for students to ‘support peers to engage in PA (physical activity) within lessons’.

Providing an excellent example of a strategy to foster relatedness, the teachers at Sycamore School decided to elect a number of students in Key Stage 3 (Years 7 – 9) as ‘Physical Activity and Sport Champions’, whilst at Maple School two student ‘Physical Activity Ambassadors’ for each class being taught HBPE were appointed. As the titles suggest, the role of these subsequently appointed students involved promoting physical activity to their peers. At Sycamore School, both James and Molly strongly advocated peer support in terms of their students’ learning. Whilst James made specific reference to students helping each other in developing games and ideas, Molly ‘liked how the girls took control as the coaches and really helped their partners work out more’ (Molly PLTR Lesson 1). She later explained how peer support was being used more strategically to engage students in out-of-class physical activity:

I’ve tried to tag them up with other kids now, so with friends that are going to those clubs and saying like, go with your mate, it would be really good if you’re with your mate and you’ll have a laugh. (Molly Interview 2)

Furthermore, John reported positively on his students supporting fellow peers to be active in their leisure time. Specifically, this involved a group of students initiating their own running club after school, something John claimed that he had not witnessed previously and was a new development:

Yes there was definitely collaborative work coming from them with regards to the HBPE. I know that there were some students I think I mentioned before, that had set up an ad hoc running club on a Wednesday and me sort of stopping them and saying, what are you doing, why are you here? Oh we are just running we are just doing the nature trail. Why? Because it's for our 60 minutes…That's like an amazing shift in anything that we've ever seen before. (John Interview 1)
Both teachers at Maple School likewise reported a positive impact on students’ learning as a result of increased peer support, especially their enjoyment, motivation and subsequent engagement during HBPE lessons, findings which reflect the literature (Aelterman et al., 2012; Pulido et al., 2014):

I really feel the students enjoyed the lesson because they were setting targets that were realistic to them…allowing all pupils to learn and achieve high motivational levels. This was the best lesson out of five for the work rate. They all worked extremely hard and were very focused on achieving their goals. (Luke PLTR Lesson 5)

I think the kids felt they could speak to us pretty much on everything, but we got them to work in teams and work in pairs, pretty much throughout the whole unit. We had a consistent set up of teams and they were working on an overall challenge to Step to Rio…And I think just working in pairs, you know, and really encouraging them to encourage each other, they did it, actually. I didn't feel, as teachers, we had to really encourage them to do that. I felt they did that really, really well. (Colin Interview 1)

This finding is optimistic in terms of students working together in consistent groups to support their learning. Early in his unit, Colin noted that although students were encouraging each other ‘the competition element in some of the tasks was more of a motivator’ (Colin PLTR Lesson 2). However, he recognised that this over-competitive element presented a challenge for some students in terms of concentrating ‘solely on their own PA levels and not just the want of winning or achieving the extrinsic goals’ (Colin PLTR Lesson 3). Moreover, he highlighted that his class were very keen on team games and he found it a constant challenge to motivate them during other activities. Indeed, reflecting back to the literature, Armour and Harris (2013) suggest that promoting physical activity through competitive sport will not appeal to all children and thus may result in exclusive, rather than inclusive practice, as the HBPE model demands. In attempting to overcome these challenges, Colin turned to his ‘Physical Activity Ambassadors’ mentioned earlier to support their peers to be active. Students also provided evidence during a focus group interview that this peer support strategy appeared to have a positive impact on engagement in physical activity out of
school ‘I went to a club and told my friend about it and he came with me and started going regularly’ (Maple School Focus Group 2).

Similar to the findings of Aelterman et al. (2012), Luke identified a noticeable difference between the competitive nature of Colin’s students and his own class who ‘wanted more of the mastery climate’ (Luke Interview 1). He described how students were encouraged to work ‘collaboratively and sensitively in pairs’ (Luke PLTR Lesson 4) through a variety of means such as clapping, verbal praise and technical help. In fact, he judged this to be a particular highlight throughout the unit and believed that allowing students to choose their own partner was an important facilitating factor. This aspect was also endorsed by some students who acknowledged that ‘working with the same person is key…you know their strengths and weaknesses’ (Maple School Focus Group 1). Indeed, the students recounted that they were constantly reminded ‘to encourage our partners’ (Maple School Focus Group 1).

Students also indicated that focusing on personal improvement helped to foster an inclusive learning environment ‘when you’re competing against yourself, you are all equal’ (Maple School Focus Group 2). Importantly, Colin reported that students with additional learning needs had made the greatest progress during their HBPE units. Similar to findings revealed earlier, this evidence again highlights the promising impact on practice when teachers are supported by researchers to implement a new PE-for-Health pedagogy through a sustained CPD programme. Consistent with the view of Fernandez Rio et al. (2018), findings indicate that promoting self-determined motivation in physical education, as advocated throughout the HBPE-CPD programme, may be an effective way to positively impact on students’ learning as well as their levels of physical activity.

**Summary**

Providing choice during the HBPE units proved popular with students, but created its own challenges for the teachers. Striking the right balance between competition and participation was also identified as a key challenge. Teachers reported that their students’ competence was enhanced when they focused on personal improvement and effort, particularly those students who perceived
themselves as ‘low ability’. This finding provides further evidence of an inclusive learning environment being created when teaching HBPE and being supported by external researchers. Encouraging peer support was a strong feature of the teachers’ practice throughout the implementation phase and had a positive effect on students’ physical activity engagement, both in and out-of-class. These results confirm the positive impact of creating an autonomy supportive environment on students’ learning and motivation to be active during HBPE.

Section 5: Promoting Critical Movers

During the HBPE-CPD programme it was agreed that supporting their students to become critical movers, a key learning goal for the HBPE model, would essentially involve teachers encouraging their students to reflect on the barriers to physical activity participation, to help them devise strategies to overcome these barriers and to promote physical activity in their local environments, as advocated by Siedentop (1996). In this section, I initially focus on how successful teachers were in helping their students to overcome barriers to participation and then the discussion shifts to promoting family engagement in physical activity.

Overcoming Barriers to Participation

In considering how well teachers encouraged their students to reflect on the barriers to physical activity participation and helped them devise strategies to overcome these barriers, John confessed that he did not really focus on this aspect during his teaching of HBPE and subsequently identified it as a future personal target:

I didn't really cover how they would overcome potential barriers or what even potential barriers there might be for them…See that's probably something that I'd look to improve next time around. (John Interview 1)

Teaching students to overcome barriers to their own physical activity participation was also highlighted by Patricia as a challenge. For example, she reported that some disaffected girls in her Year 9 class had identified a number of barriers including peer pressure, social norms and cost, but the time constraints of short lessons had proved problematic in terms of developing these conversations.
These challenges encountered by some teachers suggests a need for more specific HBPE-CPD around socio-cultural issues and developing teachers’ skills to support their students’ learning in this area.

In contrast to the challenges experienced by both John and Patricia, Sean described how he found it relatively easy to incorporate discussions around individual barriers to participation with his classes, particularly when students were leading their own learning:

We discussed, like, the ideas in terms of barriers that might prevent them taking part in exercise, you know, and some of them would come up with things that prevented them. It was quite easy to come up with solutions to those barriers and getting them off the back of having so many extracurricular opportunities here that they could do. It’s really easy to get over those individual barriers with people when you go round and talk to people doing different activities. (Sean Interview 1)

Similarly, data from lesson observations and her PLTR reflections revealed that Molly also had developed a strong understanding of how to support students as critical movers. For example, during an end of unit plenary, she discussed strategies for how students might overcome barriers to their physical activity participation and reminded them of the numerous and diverse enrichment opportunities available at school. Indeed, this became a noticeable feature of Molly’s teaching over the course of adopting HBPE and once again highlights the model’s potential to positively impact on teachers’ practice. Shifting attention from the barriers to participation, there was also an expectation that teachers would encourage students to promote physical activity in their local environments, with family engagement subsequently emerging as a theme.

**Family Engagement**

There was a prominent recognition across both schools for the need to engage family members in promoting physical activity out of school. For instance, Patricia discussed the influence of parents in supporting positive adherence towards physical activity when she highlighted some students’ commitment to activities such as horse riding, which were not offered by the school. Furthermore, both
Molly and Terry revealed future plans for a ‘Family of the Week’ initiative and the creation of physical activity challenges for students and their parents to engage with at home. These initiatives may represent positive developments for both the HBPE model and the design of HBPE-CPD programmes going forward, particularly when researchers advocate the strong influence that parents can have on their children adopting an active lifestyle (Bauman et al. 2012; Biddle et al. 2015; Fernandez-Rio et al., 2018). Indeed, the importance of schools forging strong links with families is recognised and supports the adoption of a whole school approach to physical activity promotion which is increasingly being recommended by researchers (Harris & Cale, 2018; Metzler, 2013).

The findings reveal some students at Sycamore School demonstrating an increased awareness of promoting physical activity at home with their families following the HBPE units. For example, during a focus group interview one student reported that, ‘our teachers said get your parents to do an hour of exercise as well’ (Focus Group 1). Reflecting on his third lesson, John highlighted that nine of his students (nearly 40% of the class) had successfully engaged a family member in physical activity compared to just two students (9% of the class) in the previous lesson (John PLTR Lesson 3). Later in the unit, John provided an excellent example of students promoting physical activity in their home environments:

We have had highlights such as pupils coming up to me around school and telling me how they had achieved their minutes, pupils telling me that they have done 'x' activity with a family member...This is special!! The message is getting through! (John mid-unit reflection)

Both Molly and Terry also provided evidence of students supporting their family members to be active during their respective HBPE units. Indeed, Terry explained that encouraging students to positively influence others’ physical activity ‘was an angle that we've not explored really in our delivery, ever’ (Terry Interview 1). This confirms a new and potentially powerful development in practice as a result of teachers adopting HBPE during a sustained CPD programme with university researchers.
At Maple School, plenty of evidence emerged from both lesson observations and reflections that teachers explicitly supported their students as critical movers throughout their HBPE units. In terms of engaging parents, teachers discussed a number of strategies including regular newsletter updates, parent activity opportunities, using social media platforms such as Twitter and setting movement promoter challenges after each lesson. In relation to the latter strategy, a key aim of Colin’s second lesson was to ‘introduce the concept of being a physical activity ambassador to raise awareness with their own family’ (Colin PLTR Lesson 2). Later, he reported that encouraging students to formally record their own out of class activity in diaries had a really positive impact on engaging family members:

We had diaries that the pupils were filling out and I think they were pretty engaged in doing that. And you know, just through conversations, we were finding that they were engaging other people in their family, which is good. (Colin Interview 1)

However, engaging family members, especially parents, in physical activity out of school was also viewed by teachers as a key challenge due to cultural issues. Moreover, the difficulty of students behaving differently in school and at home in terms of their physical activity participation was highlighted:

So potentially they coming into school and act one way because that’s what’s expected of them, they go home and culturally they act a different way…so that is our biggest challenge to get it outside of school and get their parents to engage. (Colin Interview 1)

Sharing learning at home in relation to the promotion of physical activity was also highlighted by Luke as a challenge at times due to the ethnic diversity of his students, many of whom had English as an additional language.

But trying to get a family member, trying to implement it outside of school, especially with the language barrier, some children will have to learn what they’re doing in English, go home and then translate. (Luke Interview 2)
Recognising these potential barriers to physical activity participation caused Luke to prioritise on better supporting his students in this area. Illustrating this increased focus Luke provided an example of his students identifying a number of barriers such as their behaviour, the weather and family circumstances. Indeed, evidence from both lesson reflections and from student interviews suggests that this enhanced focus was successful, with students demonstrating that they ‘were able to support others to overcome barriers to participation’ (Luke PLTR Lesson 4).

Luke’s assessment of his students’ learning was strengthened by some of their responses during focus group interviews where they provided a number of potential solutions to overcome barriers such as ‘when you’re at home improvise with the equipment you have’ (Maple School Focus 1) and ‘go outside rather than play computer…have a timetable to be active’ (Maple School Focus 2). This evidence suggests that the HBPE units supported some students in gaining a good understanding of how to take personal responsibility for being active, as Whitehead (2016) advocates. Further, by the end of his HBPE unit, Luke felt that discussing potential barriers to participation was ‘definitely ingrained in me now’ (Luke Interview 1). This development in Luke’s teaching over the unit was also noted following a lesson observation:

He is beginning to foreground the learning goals in his practice and is referring back to them consistently during lessons. He also appears to be much more confident with his subject knowledge around promoting active lifestyles. (Reflective Field Journal)

This is a positive finding, although not entirely surprising given the HBPE model is centred on ‘valuing a physically active life’. Whilst units were designed with this focus in mind, nevertheless the literature highlights that outcomes specifically related to the promotion of active lifestyles are rarely prioritised by physical educators even during the teaching of health units (Haerens et al. 2011; Harris, 2009; Harris & Cale, 2018). Further, Luke expressed confidence in teaching the HBPE model during his initial adoption, which appears to be at an earlier stage than evidence reported in the literature. Goodyear and Casey (2015), for instance, revealed that teachers only began to feel confident at the end of their
second unit when adopting the Cooperative Learning pedagogical model. There are also claims that it can take years for teachers to feel confident employing a new pedagogy and teachers are unlikely to fully commit to change until they see clear evidence of a positive impact on their students’ learning (Armour & Yelling 2007; Casey, 2012; Deglau & O’Sullivan 2006; Dyson, 2002; Guskey, 2002; Patton & Griffin 2008). Returning to Luke’s reported confidence with teaching HBPE, it is important to note that he was a recently qualified teacher who had rated his teacher training good in preparing him to teach health. Consequently, this evidence supports calls by researchers for a greater focus on health during PEITTE (Alfrey et al., 2012; Harris, 2013).

Encouraging students to become critical movers was not positively reported by all teachers at Sycamore School, however, with Sean admitting that setting ‘movement promoter challenges’ in particular was not yet embedded in his practice:

A couple of the groups I gave them that task in terms of trying to get sort of parents or other people involved that way. But I think with it being such an almost like a one-off on a couple of occasions, for something like that to be really effective and powerful, it’s got to be done consistently that way, you know, just the habits that people get into. (Sean Interview 1)

Sean’s lack of consistency in setting ‘movement promoter challenges’, may in part be explained by the fact that he was a new teacher at the school and thus had not experienced the complete induction phase. As such, he did not have the opportunity to trial elements of the HBPE model in his practice prior to implementation. Similar to findings by Casey (2014), this illustrates that a sustained HBPE-CPD programme, which involves an induction period, may help support teachers’ translation of a new pedagogical model in their practice. In addition, one of Steve’s colleagues described some washout in terms of students engaging their family members in physical activity. Initially, he felt that there was plenty of enthusiasm demonstrated by the students as HBPE was a new idea, but this enthusiasm appeared to wane as the novelty factor wore off:
At the start it was a fresh idea and they were all coming back and saying, “Yeah I got my brother to do this” and by week four you would ask, “How many of you are still doing it?” You would still get maybe three or four hands up, but in terms of them taking it on and still – by the end of it less than fifty per cent were still getting people involved. (James Interview 1)

Reflecting back to the challenges reported earlier by Luke concerning students’ engagement with their physical activity diaries, this reduction in student motivation for promoting physical activity in their home contexts as the HBPE unit progressed may also be explained by the fact that supporting students to be critical movers was not yet embedded in his practice. As evidence (McKenzie & Kahn, 2008; Stratton et al., 2008) suggests that very few physical educators signpost physical activity beyond lessons, this points to more specific CPD for teachers in helping them to prioritise this aspect of their practice.

**Summary**

There was mixed success in terms of the teachers supporting their students as critical movers, with evidence highlighting that this learning goal was inconsistently implemented by teachers across both schools. For example, finding time to discuss the barriers to physical activity participation was reported by all teachers to be a challenge, especially as they did not want to compromise their students’ activity levels during lessons. Evidence confirms that some teachers did make a conscious decision to develop this aspect of their practice as the HBPE units progressed. A new and important development involved all of the teachers explicitly encouraging their students to positively influence peers and family members to engage in physical activity, although some cultural challenges were noted. Having explored the extent to which the teachers embedded the critical features for the HBPE model in their practice, the next section reports on any transfer of learning which occurred beyond teachers’ teaching of HBPE to other curriculum areas in physical education.
Section 6: Transfer of Learning across the Curriculum

Embedding health goals within a predominantly sport-focused curriculum has long led to teachers adopting diverse approaches to the teaching of health (Harris, 1995). Consequently, throughout the HBPE-CPD programme the teachers were encouraged to permeate their newly acquired health-related learning both through other activity areas within the physical education curriculum and across their respective schools more broadly.

Data from interviews with teachers revealed strong evidence of positively transferring practice beyond the teaching of their HBPE units. John highlighted the importance of embedding an enthusiasm for being active as a key feature of his colleagues’ practice across the PE curriculum:

> I think for us as a department we need to ensure that we maintain that enthusiasm for being active, irrespective of whether we’re on a HBPE unit or what. (John Interview 1)

Further, he reported that teachers were reinforcing student learning in relation to the physical activity guidelines in other curriculum areas and also signposting students to extra-curricular clubs in school. From a personal perspective, John noted that he was ‘more conscious of the benchmarks and have brought elements to all of my lessons not just the HBPE lessons’ (John mid-unit review). Sean also demonstrated a strong desire to promote physical activity throughout his practice explaining that ‘in everything that I’m doing I want the kids to be as active as possible’ (Sean Interview 1). Indeed, supporting a recommendation by Harris and Cale (2018), findings indicate that teachers demonstrated an increased focus on outcomes linked to the promotion of active lifestyles:

> I think it’s definitely made me think, even when I’ve got like plenaries now, I don’t always necessarily do a plenary on the skill. I mean, we had the Year 7s for the wet weather and at the end of the session, I sat them all down and I asked them who does 60 minutes and, you know, why was it important to raise our heart rates in this session even though the weather was wet outside?...And we did a hands up of who went to clubs and who
bikes to school, rides to school, and then I set them the homework of right, if your friend hasn’t got their hand up, then take them. So I think for me, it’s now I’m going to try and integrate it more in all my groups because I think it is really important. (Molly Interview 1)

As discussed earlier, this shift in teachers’ philosophies was a noted feature during the HBPE-CPD programme. Ciara also provided a specific example from a Badminton unit with a Year 10 girls’ class where increasing students’ activity levels, rather than technical skill development, became a key lesson objective and subsequently changed her practice:

Can you maintain your activity levels at moderate to vigorous for 50% of the lesson? That then becomes something more that they are going to tag on to than the skill…So those kinds of questionings and objectives have come across the board, so yes it has impacted on my delivery.

(Ciara Interview 1)

Further examples of teachers transferring their learning across the curriculum were provided by both Colin and Luke who described using pedometers as a motivational tool to promote physical activity during lessons at Maple School:

I think we had a tennis lesson where I did a standard tennis lesson, the kids were not great with the tennis in terms of – they get it over the net, but there’s not a lot of movement. It’s so static. So I just said for the next lesson let’s stick with the same group, in fact, let’s put pedometers on them and the marked difference the minute we put the pedometers on them…a lot more movement. (Colin Interview 1)

I just started to think of things and you started to tweak other lessons as well, not even my HBPE unit but we’ve started to talk about putting pedometers on kids just in a cricket lesson, you know, those sorts of things. So from you giving us that information I started to actually develop it into other units before I’d even found success with this one.

(Luke Interview 1)
Both teachers reported an immediate positive impact on students’ movement levels once they were given pedometers. However, this practice of prioritising the counting of steps does raise questions as to whether students were also equipped with the knowledge and skills to be active for life, as many scholars advocate (Armour & Harris, 2013; Cale & Harris, 2018; Haerens et al., 2011; Siedentop, 1996). A mid-unit review though revealed that the teachers were in fact referencing the physical activity for health guidelines throughout their practice:

I must have mentioned so many times about the PA guidelines to not just the group that I was working on HBPE, but other groups. I found myself doing stuff that I was doing in the HBPE lessons with my other groups...so that’s quite strong. (Colin mid-unit review)

As Colin openly admitted that he was unsure of these guidelines prior to beginning the HBPE-CPD programme, the fact that he later embedded them in his wider practice is viewed as an encouraging development. This evidence again suggests the real promise for a sustained HBPE-CPD programme to support teachers’ health-related learning and to help fill some of the gaps in their subject knowledge identified in the literature (Armour, 2010; Armour & Harris, 2013; Cothran et al., 2006; Castelli & Williams, 2007). Furthermore, the shift in practice in terms of elevating physical activity promotion across the curriculum is a positive finding, especially in light of the strong reservations that prioritising the teaching of activity content does not effectively support the achievement of health-related outcomes (Armour & Harris, 2013; Kirk, 2010; Haerens et al. 2016). Indeed, this reinforcement of learning beyond the HBPE unit was acknowledged by some students during a focus group interview “Sir told us just because we’re finished the HBPE lessons, don’t forget about it. Carry it on, carry it on” (SMG Focus Group 1), and again illustrates how teachers attempted to embed health outcomes across the whole school.

Sharing Practice with the Wider School Community

Together with evidence of teachers transferring learning across the physical education, findings also exposed the sharing of practice with the wider school community at both schools. Luke provided a clear example during an interview,
explaining how he had planned a whole school assembly on HBPE and followed this up with an activity themed week:

   Every person that brings back a diary gets five House points for their inter-House competition. So it’s definitely me and Colin trying to roll it out now throughout the school... Staff will be in there as well, yes, and staff will have the opportunity to fill the diary out as well. Then Colin came up with the idea of the photo, get the family members, there might be extra points and that sort of thing. We’ve got four kids who are going to talk in assembly...and then they will say what they feel, hopefully they enjoyed it.
   (Luke Interview 1)

At Sycamore school, immediately following the success of the London 2012 Olympic Games teachers created posters illustrating the 60 minutes per day physical activity guideline with photos of high profile Team GB athletes. These were displayed in all of the classrooms across the school to support physical activity promotion, an innovative initiative which links with the PAL principles proposed by Harris and Cale (2018). Further developments included students bringing in photographs of being active with their families which arguably raised the status of HBPE and, as highlighted in the literature (Haerens et al., 2016, Metzler, 2013; Sallis, 2012) demonstrates the potential to positively support a whole school approach to physical activity promotion.

**Summary**

Good evidence emerged of teachers transferring some aspects of their learning from the HBPE-CPD programme to other areas of the curriculum, especially in relation to physical activity promotion both during lessons and out-of-class. Further, findings demonstrate that the teachers in both schools shared the HBPE model and promoted physical activity with the wider school community through assemblies and tutor time. This highlights the potential for a sustained HBPE-CPD programme to help embed health-related learning across the physical education curriculum and support the promotion of physical activity across the school. The final section of this chapter examines the extent to which teachers’ learning from the HBPE-CPD programme was sustained in both schools beyond
the initial phase of implementation and also considers any practice or curricular HBPE developments which occurred.

Section 7: Sustainability beyond the ‘Honeymoon’

As discussed earlier, the additional work and time consuming nature of curriculum innovation are often cited in the literature as key reasons why teachers, despite their best intentions, do not sustain pedagogical change beyond the implementation period (Casey, 2012; Goodyear & Casey, 2015; Halton, 2004; Harvey & Jarrett, 2014; Hastie et al., 2011; Robson, 2002). Therefore, when devising a unique focus for this study, it was deemed pertinent to explore the extent to which teachers’ engagement in a HBPE-CPD programme resulted in any noticeable changes in their practice beyond the initial implementation of the HBPE model i.e. the ‘honeymoon period’.

A Continuing Commitment to HBPE

Contrary to evidence in the literature, the results of this study reveal that 12 months after implementation both schools’ physical education curricula demonstrated more evidence of HBPE. Furthermore, teachers reported that students appeared more motivated to do physical activity in their own time and were still encouraging others to be active. Specifically, at Sycamore School this involved expanding across the entire Key Stage 3 curriculum, with all students in Years 7 – 9 experiencing a taught HBPE unit of eight lessons, with new activities such as hula hooping and skipping introduced. Indeed, on a positive note, HBPE remained as the only eight week unit in the curriculum with teachers advocating support for this increased unit length:

> Well, actually I think we should keep the health-based PE at eight weeks, and as I say that’s the only block we do, so our mentality towards that has already changed. There’s been more activities come in like hula hooping and…skipping club. (Molly Interview 2)

Drawing on the argument for longer units in physical education (Kirk, 2012; Dobbins et al., 2013) this continuation of eight week HBPE units, rather than the traditional four week units allocated to other areas of the curriculum, was a
positive move towards embedding deeper student health-related learning. Further, there was recognition of the model’s potential to add balance to a games heavy curriculum highlighted in the literature (Fairclough et al., 2002; Ofsted, 2013) and particularly engage those students previously marginalised by this relatively narrow focus on team sports.

Karen (Sycamore School) reported that changes in teachers’ philosophies in relation to their teaching of health and the out-of-class activities around physical activity promotion had been sustained:

We have definitely changed the way in which we think about it and how we deliver it to the kids and ensuring that it’s enjoyable and fun...we brought in homework challenges this year and some of them were, “Get a member of your family and take them on either a run or a bike ride,” or something like that. (Karen email communication)

This is an encouraging development as the literature suggests that the promotion of active lifestyles has relative marginal status within school physical education (Harris, 2010; Alfrey et al., 2012; Cale & Harris, 2013) and highlights the potential for a sustained HBPE-CPD programme to help address this shortcoming. John also demonstrated a personally strong commitment to HBPE in the longer term, suggesting that the model would now be firmly rooted in his future practice:

I believe that we will have it again in the future. I don’t feel like we’ve done it now so that will go...I value it, I think it’s good and I would hope that it was instilled. If I leave the school and go elsewhere I would hope that I would be saying to the subject leader there or if I was a subject leader that this is something I want to bring in. (John Interview 2)

A noted difference during this post-honeymoon phase highlighted by both John and Molly (Sycamore School) was an enhanced focus on encouraging students to create their own activities with minimal equipment, which they could easily replicate out of lessons:
Our main aim was to get them to think about how they can create these games and activities without all the expensive PE equipment that we have. And we’ve done that a little bit better this year. (John interview 2)

So they were given like a stimulus and then they went off and created their own routines and then delivered them to the other groups. They just loved it, absolutely brilliant. (Molly Interview 2)

Indeed, evidence suggests that providing students with more ownership and self-discovery during lessons, as advocated by Casey and MacPhail (2018), also became a sustained feature of practice at Maple School one year after the HBPE-CPD programme:

I’m stepping back a little bit more in my teaching, in terms of letting them lead a bit to the older ones. And I’m resisting to blow my whistle and bring them in and hit them with another several bullet points; whereas the practice might not be perfect but actually, they’re being active and I’m allowing that to roll a little bit more. (Colin Interview 2)

Luke also reported that the HBPE units at Key Stage 3 now involved students creating their own physical activity circuits and that they enjoyed having lots of choice and variety. Further, there was a strong emphasis on the habitual mover learning goal and Luke felt “a definite change in our department’s practice in regards to getting pupils being physically active’ (Luke Interview 2). Considering this continued emphasis on the habitual mover goal, evidence indicates that this was similarly the case at Sycamore School, with John expressing confidence that it had been embedded across the physical education team:

I’d like to think that we’ve instilled the habitual learner as a department as well as the individual teaching, the individual lessons in the hope that students are responsible for getting their sixty minutes. (John Interview 2)

Furthermore, out-of-class physical activity promotion become a priority target area on the physical education department improvement plan and was later embedded in the school assessment framework at Sycamore School. Illustrating
this new practice development, Patricia outlined plans for students to have a termly homework of participating in at least one extra-curricular activity each week and to involve parents in monitoring this engagement:

They’re given a homework sticker in their planners and at the end of the term – we don’t know how it’s going to work yet – they’re going to bring it back signed by a parent to say they’ve attended one extra curricula club every single week. (Patricia Interview 2)

As the literature highlights the positive impact of offering extrinsic rewards for students’ participation in physical activity beyond the lesson (Hastie et al., 2012), this initiative is viewed as a good example of how teachers’ learning from the HBPE-CPD programme 12 months earlier served to support the development of their practice. Attention now shifts to discuss the evidence on whether inclusive practice in relation to physical activity participation was sustained, as this underpins the model’s philosophy of ‘physical activity for all’.

**Promoting Inclusion**

Molly proposed having HBPE embedded in the PE curriculum throughout the year in order to provide an alternative option and to potentially enhance the learning experience of perceived low attaining students:

High ability, I think will go out and play sport in their own time. Lower ability kids, they don’t really like PE because they're not good at it. So all year, could they have a single of something they’re good at or can be good at? (Molly Interview 2)

I definitely see it as an area of work that’s worth carrying on with, especially at Key Stage 3, inasmuch as it really helps me engage with the students who aren't particularly team sports players. (Sean Interview 2)

In terms of encouraging participation in extra-curricular activities, Luke revealed that the programme at Maple School was now based on encouraging mass participation, rather than selecting school teams. ‘Our aim is to get as many
people playing for fun hoping that they make life long choices about sports they want to play’. This finding reveals a big shift in philosophy from the practice highlighted earlier in the chapter, where Colin explained that the physical education curriculum timetable was primarily structured around the inter-school competition calendar. The final part of this section explores how teachers adapted the HBPE model beyond the initial implementation phase.

**Adapting HBPE**

As discussed in Chapter Two, Curtner-Smith et al. (2008) identified three levels of adoption when teachers were employing a pedagogical model. These were categorised into the ‘full version’ of the model; a ‘watered down’ version, with some critical features missing; or a ‘cafeteria approach’, which merely incorporated some features into teachers’ existing practice. Results revealed that one year following implementation, there was recognition by some teachers that they had adopted a largely ‘watered down’ version of the HBPE model. Making explicit and consistent reference to the learning goals during her teaching was specifically highlighted by Molly as an area for development, whilst Karen documented the future challenge of adopting a less ‘watered down’ version of the model.

We will keep it in now probably, because it’s been fun, it’s been good and it’s been worthwhile, but it’s how we can make it a bit less watered down than we’re currently doing it…So I wouldn’t say it’s come in that much, as in the kids knowing the terminology but in the sense of like the informed movers, for example, we’re always getting kids at the end, giving them homework challenges to run round the nature trail or to get a parent involved or to join a sports club and so we’re doing that but I don’t necessarily think they know that they’re type of mover, if that makes sense. (Karen Interview 1)

Moreover, Karen explained that she did not embed the specific HBPE learning goals in her practice due to a perceived lack of confidence with the model. Indeed, research suggests that often teachers find it difficult to initiate change due to a lack of confidence (Casey, 2013; Cruz, 2008; Robson, 2002; Rust &
Myers, 2006). That said, it should be noted that Karen was not involved during the initial implementation of the HBPE model which may help to explain her confidence issues. John also admitted that he had engaged less explicitly with the learning goals and critical elements of HBPE in particular during the second implementation of the model, ‘I probably feel like that I’ve done that less this time round than the first time round’. (John Interview 2).

The teachers at Sycamore School, however, reported more confidence in adapting lesson content to the needs of their classes, rather than teaching a prescribed lesson plan, as discussed in Chapter Four. Although they used some of the initial activities again, such as the ‘Formula One’ running game, new activities including a basketball skills circuit were also incorporated into their HBPE units. Whilst research (Cale & Harris, 2005; Harris & Cale, 2018; Haerens et al., 2011; Penney, 2013) suggests that the submergence of health goals within a games-based activity may undermine the successful implementation of HBPE, it is also recognised that good permeation can actually help to embed health-related learning across the curriculum.

Although Terry appears to demonstrate some shift in his practice from explicitly highlighting fitness and training towards adopting a more implicit approach to developing fitness levels, there is no specific reference made to learning about valuing and adopting active lifestyles considered key by many authors (Haerens et al., 2011; Tannehill et al., 2013; Whitehead 2016) and as centrally positioned in the HBPE model.

From the point of view of am I using all these terminologies, habitual movers? Probably not to the kids. Do you know what I mean? Basically the way I sell it is we’re doing anything that’s fitness based, pulse raising, without them realising that they’re improving their fitness levels. I think that’s the key, rather than obvious fitness training, interval training, continuous training. (Terry Interview 2)

Sean further admitted that he ‘did shy away from the learning outcomes’ in favour of the physical education department’s own assessment framework (Foundation,
Improved and Advanced) discussed in Chapter Three. It is important to remember that Sean had recently joined the school and admitted to experiencing information overload at times. He also believed that students may have been confused by the HBPE learning goals, although a contributory factor may have been that these learning goals were not explicitly linked to the school assessment framework at Sycamore School during the initial adoption of HBPE. This lack of reference to the HBPE model’s learning goals during the post honeymoon period suggests that the teachers were employing what was referred to earlier as a ‘cafeteria approach’. However, it is worth noting Stran and Curtner Smith’s (2009) recommendation that teachers need to experience a ‘cafeteria’ approach before developing full use of a pedagogical model. Furthermore, it must be stressed again that these teachers were the first practitioners to translate a new PE-for-Health pedagogy, in the form of a HBPE conceptual framework, from theory to practice and thus attempt to bridge the research/theory practice gap in education.

Summary

Whilst there was good evidence that physical activity promotion for all had remained as a strong feature of teachers' practice, embedding the specific learning goals for HBPE had not been maintained, indicating a degree of model washout. However, teachers’ demonstrated increased overall confidence with adapting the model to reflect their specific contexts. There was encouraging evidence of a sustained commitment to HBPE, with more curriculum time and new assessment frameworks being implemented in both schools. Furthermore, all of the teachers reported that students had generally sustained their enthusiasm for being physically active in their leisure time and were still encouraging others to be active.

Conclusion

In terms of the impact of teachers' learning during the HBPE-CPD programme on their philosophies, evidence reveals that most teachers demonstrated a shift from a ‘fitness for performance’ philosophy to one centred on promoting lifelong physical activity participation. The potential for a sustained HBPE-CPD programme to begin to change teachers’ health-based philosophies is recognised although the programme was possibly not long enough to have an impact on all
Findings reveal that teachers’ learning during the HBPE-CPD programme was generally positive in terms of promoting physical activity, both during lessons and beyond class. Indeed, the latter was confirmed by some teachers as a new practice development. There was also an encouraging impact with teachers focusing on the learning of all children in terms of physical activity promotion which points to the HBPE model’s potential to stimulate inclusive practice. A noted tension however concerned the apparent pursuit of high intensity physical activity or MVPA at the expense of developing health-related learning during lessons, which indicates that teachers should have improved access to HBPE-CPD opportunities focused on exploring active pedagogies.

There were numerous examples of teachers from both schools supporting their students to be informed movers, with references to the physical activity guidelines becoming a new and strong feature of teachers’ practice. However, evidence suggests there were some gaps in teachers’ subject knowledge and they struggled at times to effectively support students as informed movers during their implementation of the model.

Providing choice during the HBPE units proved popular with students, but created its own challenges for the teachers. Striking the right balance between competition and participation was also identified as a key challenge. Teachers reported that their students’ competence was enhanced when they focused on personal improvement and effort, particularly those students who perceived themselves as ‘low ability’. This finding provides further evidence of an inclusive learning environment being created when teaching HBPE and being supported by external researchers. Encouraging peer support was a strong feature of the teachers’ practice throughout the implementation phase and had a positive effect on students’ physical activity engagement, both in and out-of-class. These results confirm the positive impact of creating a needs supportive learning environment on students’ learning in physical education.

There was mixed success in terms of the teachers supporting their students as critical movers. For example, finding time to discuss the barriers to physical
activity participation was reported by all teachers to be a challenge, especially as they did not want to compromise their students’ activity levels during lessons. Evidence confirms that some teachers did make a conscious decision to develop this aspect of their practice as the HBPE units progressed. A new and important development involved the teachers at both schools explicitly encouraging their students to positively influence peers and family members to engage in physical activity, although some cultural challenges were noted.

Good evidence emerged of teachers transferring some aspects of their learning from the HBPE-CPD programme to other areas of the curriculum, especially in relation to physical activity promotion both during lessons and out-of-class. Further, the findings demonstrate that the teachers in both schools shared the HBPE model and promoted physical activity with the wider school community through assemblies and tutor time. This highlights the potential for a sustained HBPE-CPD programme to help embed health-related learning across the physical education curriculum and support the promotion of physical activity across the school.

Findings revealed mixed results on teachers’ sustained learning 12 months after the HBPE-CPD programme. Whilst there was good evidence that physical activity promotion for all had remained as a strong feature of teachers’ practice, embedding the specific learning goals for HBPE had not been maintained, indicating a degree of model washout. However, teachers reported increased confidence with adapting the model to reflect their specific contexts. There was encouraging evidence of a sustained commitment to the model, with new developments including HBPE being extended in both the physical education curriculum and assessment frameworks. Overall, these results provide heartening evidence of the impact that a collaborative and sustained HBPE-CPD programme can have on teachers’ practice over time and warrant the exploration of further research possibilities in this area. The final chapter of this thesis proposes some potential avenues for research to build on this work.
CHAPTER 6: CONCLUSION

In this chapter I provide a summary of the findings of my study in relation to my research questions and explore the key themes emerging from these questions. The chapter begins by revisiting my research focus and highlighting the original contribution of this study to the field. In Section Two, I provide a summary of the key findings presented in Chapters Four and Five. Furthermore, some of the implications of these findings are considered such as how best to support teachers engaged in pedagogical change in busy school environments. Section Three focuses on my reflections from engaging in this research process, including the opportunities for professional growth, the challenges that I experienced during the research process and some potential limitations. In Section Four, I propose some possible directions for further research to build on this work centred on two related areas: 1) HBPE-CPD and 2) The HBPE Model before concluding the chapter with some final thoughts.

Section 1: Research Aims and Contribution

Specifically, the aim of the research was to examine teachers’ reported learning experiences during their engagement in the HBPE-CPD programme and their views of impact on their practice over time. This study provides an original contribution to the field as it presents unique insights into the complex, challenging and sustained process of supporting teachers to translate a new PE-for-Health pedagogy from a conceptual framework to their own classrooms. More specifically, this research was the first to support teachers’ understanding and adoption of a new framework centred on physical activity promotion. A noted strength was the use of an applied research intervention; one in which teachers went beyond knowledge acquisition and developed the pedagogical skills needed to change practice.

The research also offers acumen into the positives and the challenges which teachers faced as the first adopters of this novel conceptual framework, and offers a potentially new pedagogical model for HBPE. Furthermore, the study has revealed that fostering productive partnerships between teacher-researchers and teachers can help to bridge the gap between research and practice in physical
education and support young people’s physical activity engagement. Finally, the design of a number of original research methods in the form of a Post Lesson Teacher Reflection (PLTR) tool and interview schedules may support other teachers and/or researchers engaged in curriculum and pedagogical innovation, specifically in relation to HBPE or other PE-for-Health pedagogies.

Central to my inquiry has been a desire to help address the recognised lack of support for teachers to develop their pedagogy and practice in the area of HBPE. Exploring the impact on teachers’ practice after their initial implementation of HBPE was deemed important, as reviews of pedagogical models in physical education report limited evidence of their sustained use beyond the first implementation, or ‘honeymoon’ period (Goodyear & Casey, 2015; Harvey & Jarrett, 2014; Hastie et al., 2011).

As explained in Chapter One, my study is part of a wider research programme which has also involved reporting on the development stages of the HBPE model, the types of curricula designed by teachers and the subsequent impact of these curricula on students. Two key research questions underpinned my study and centred on gaining the perspective and views of teachers about their learning experiences during the HBPE-CPD and the subsequent impact on their practice. In line with this specific focus, and informed by the literature reviewed in Chapter Two, the following research questions were asked:

1. What were teachers’ reported learning experiences during their engagement in a collaborative and sustained CPD programme for HBPE (HBPE-CPD)?

2. What were teachers’ views of impact on their practice and implications for their students over time?

The next section provides a summary of the results presented in Chapters Four and Five in relation to my research questions and considers the main implications of these findings.
Section 2: Summary of Findings

The first part of this section summarises the findings presented in Chapter Four to address Research Question 1: What were teachers’ learning experiences during their engagement in a collaborative and sustained CPD programme for HBPE (HBPE-CPD)?

Teachers’ Prior Experiences of Health-Related Learning

The findings revealed that teachers generally had limited experiences of prior health-related learning, especially during their teacher training. Further, none had engaged with any recent and relevant HBPE-CPD, with the perceived cost, the time away from school and not knowing where to source meaningful opportunities reported as inhibiting factors. In contrast, all nine teachers demonstrated engagement in other forms of CPD, which highlights the lack of attention, and arguably status, given to HBPE-CPD and/or to developing health-related subject knowledge. Despite their poor experiences, and lack of engagement in HBPE-CPD, all of the teachers expressed a (perhaps misguided) confidence in their teaching of health.

Whilst these findings are not entirely surprising given the concerns raised in Chapter Two (e.g. Alfrey et al., 2012; Cale, 2000; Castelli & Williams, 2007; Harris, 2013), they emphasise the need for more work in this area to make HBPE-CPD opportunities more attractive and more accessible for teachers. It is argued that there should be a specific (and greater) focus on HBPE during initial teacher training to elevate its status and to better support new entrants to the profession in terms of teaching health well. Furthermore, in light of the time and cost of attending external courses, there is a need for more CPD to be school-based and to actively involve teachers working together in professional learning communities.

Teacher ‘buy-in’ to the HBPE model

The teachers in both schools reported that the sharing of ideas and opportunities to reflect on their practice during the induction phase facilitated buy-in to the HBPE model and enhanced their confidence with using it prior to implementation. Moreover, trialling elements of the model in practice throughout the induction
phase afforded teachers the chance to witness the impact on their students’ learning and supported their commitment to engage in pedagogical change. These findings highlight the benefits of supporting teachers through a sustained CPD programme and providing them with sufficient time to implement aspects of their learning in practice. They also reinforce the need to embed learning in teachers' own contexts (Borko, 2004; Timperley & Alton-Lee, 2008) and support a move away from the traditional CPD model, where teachers are often expected to adopt a new idea before they witness the impact on their practice. Whilst all of the teachers demonstrated initial enthusiasm for the HBPE model to add a new dimension to their physical education programmes, the levels of enthusiasm varied between individual teachers as the HBPE-CPD programme progressed. This was also reflected in the teachers' subsequent engagement in the study generally, to which I now turn.

**Teachers as Practitioner Researchers**

There was mixed success in terms of the teachers' engagement with PAR during the HBPE-CPD programme. Whilst some teachers demonstrated a real commitment to engage with the PAR process, others viewed having to formally reflect on their practice as a chore and were less committed. Engagement with PAR supported teachers to systematically reflect on their interactions with the HBPE model and closely consider the impact of their practice on students’ learning. Furthermore, having choice in how to record their reflections, using a specific PLTR tool, was well received by most teachers although it was noted by some that having a fixed structure actually constrained their reflections at times. The demanding nature of PAR proved challenging for all of the teachers, particularly in terms of the time commitment required for reflection on top of competing organisational demands.

**Co-constructors of Pedagogical Change**

The findings similarly revealed mixed success in terms of expecting teachers to be actively engaged in the co-construction of pedagogical change. Some teachers welcomed this opportunity, reporting that it enhanced their conceptual understanding of the HBPE model and subsequently supported their planning. Others, however, struggled with this idea of co-producing knowledge, especially
the expectation to assume ownership for creating HBPE units to reflect their bespoke contexts. All of the teachers reported that being centrally involved in curriculum design ran contrary to their prior CPD experiences, where generic pre-produced curriculum materials and resources had been a common feature. Consequently, in line with recommendations from both Huizinga et al. (2014) and Petrie and McGee (2012), these findings highlight a real need for CPD providers to consider how teachers may be empowered and supported to enhance their skills as curriculum developers. A move away from the apparent ‘spoon-feeding’ approach to CPD is also recommended, with teachers given opportunities to be actively engaged as partners in their own professional learning, rather than viewed as passive recipients of knowledge.

**Sustained External Support**

The teachers reported the sustained external support from the researchers as important in reassuring them during the challenging implementation phase of the study. The findings also revealed that the nature of this support throughout the HBPE-CPD programme helped the teachers to critically reflect on their practice. Further, the external support prevented some from becoming overwhelmed with information; a key consideration when there is much to learn and unlearn during the process of pedagogical change. On the other hand, and as previously reported (Attard & Armour, 2006; Goodyear, 2013; Goodyear et al., 2016), providing teachers with this level of sustained support proved demanding in terms of the time required, given the numerous school visits. Whilst sustained external support for teachers engaged in pedagogical change is viewed as a crucial aspect of CPD programmes, it may not always be practical without sufficient resources and points to the value of exploring the use of technology and other efficient strategies to facilitate this support.

**Collaboration**

A strong collaborative approach in both schools helped to support the teachers’ learning throughout the HBPE-CPD programme. Collaboration provided teachers with an opportunity to develop a shared understanding of practice and peer support was an important feature in maintaining teachers’ motivation, especially where colleagues not involved in the research were sceptical of the additional workload. Indeed, team teaching and informally observing colleagues’ practice
positively supported teachers’ learning particularly in terms of gaining new ideas to implement in their own teaching. Further, during the implementation of their HBPE units, all of the teachers reported sharing ideas between lessons in the PE office. Whilst the informal sharing of practice in this way was a noted feature, there was a reported lack of opportunity for sharing practice more formally. As participation in a learning community is viewed by many researchers as a key factor for the successful implementation of new ideas (Deglau & O’Sullivan, 2006; Morgan et al., 2010; O’Sullivan 2007; Parker et al., 2010), it is recommended that teachers should have increased protected time for collaboration.

**Factors Challenging Pedagogical Change**

On the issue of time the *busyness* culture of schools emerged as the key overarching challenge in terms of teachers’ learning and engagement during the HBPE-CPD programme. The labour intensive nature of adopting a new conceptual framework on top of competing organisational pressures, such as examination results and school sport was a real issue for teachers. Further, a lack of time was viewed as a ‘taken for granted’ constraint in line with previous research (Aubusson et al. 2009; Ellis & Loughland, 2016). These findings reinforce the advice of Casey and MacPhail (2018) for a balance between the aspirations of a new pedagogical model and the realities of school life, which can negatively impact on teachers engaging whole-heartedly in pedagogical change. However, it is argued that until this *busyness* culture is challenged and properly addressed, then new conceptual frameworks such as HBPE may only be superficially implemented in practice, if indeed at all. Thus, it is recommended that policy makers and schools explore ways to support teachers to engage in pedagogical change, which may include a reduction in their teaching ‘contact’ time and/or administrative duties. Indeed, this is a timely call given the UK government’s recent policy paper (DfE, 2018) which aims to remove unnecessary workload for teachers in order to help them concentrate on teaching and their own professional development.
The second part of this section presents a summary of the findings presented in Chapter Five to address Research Question 2: What were teachers’ views of impact on their practice and implications for their students over time?

**Shifting Philosophies and Practice**

During the course of the study there was a noticeable shift in the teachers’ philosophy and practice towards explicitly promoting active lifestyles. Specifically, engaging in the HBPE-CPD programme resulted in all of the teachers demonstrating a move away from a ‘fitness for performance’ approach to health. This highlights that sustained CPD can help teachers to challenge their preconceptions and expectations about HBPE and find alternative ways of teaching it. The teachers recounted favourably on students’ active engagement and effort during the HBPE units, especially those students previously labelled as ‘lower ability’. This positive finding, which was also reported during lesson observations, highlights the potential for HBPE to help promote inclusive practice in physical education.

Further, there was a reported upsurge in students’ motivation to be active out-of-class due to teachers’ explicit prompting of the opportunities available throughout their teaching of HBPE. As prompting out-of-class opportunities beyond school sport had previously not been a noticeable feature of teachers’ practice, the results illustrate the positive impact HBPE had in terms of physical activity promotion. However, teachers also recognised the limitations of relatively short HBPE units in trying to positively change students’ physical activity behaviour. This calls for a longer term approach to be considered during future implementation of the model, with units lasting for at least 12 weeks duration as recommended by Dobbins et al. (2013).

A number of practice dilemmas emerged during the implementation phase of the HBPE-CPD, such as the teachers prioritising activity content and high levels of student activity over developing knowledge around healthy active lifestyles, especially in relation to the model’s informed and critical mover learning goals. This heavy focus on teaching the activity and the seemingly relentless pursuit of high physical activity levels are some of the on-going challenges which have been reported in the physical education literature. Consequently, these
challenges reinforce the need for teachers to develop and adopt *active pedagogies* (Harris & Cale, 2018), where learning is embedded through meaningful movement contexts. It is also worth reflecting on Almond’s (1997) early advice in this area that the early adopters of a pedagogical innovation need time to assimilate new ideas in their practice, highlighting the importance of encouraging teachers to sustain pedagogical change through continued support.

**Promoting Informed Movers**

As a result of supporting students to be informed movers there was a new and increased focus from all of the teachers on regularly referencing some of the physical activity guidelines for children and young people during their teaching of HBPE. It is argued that this finding provides a clear example of how the HBPE-CPD programme positively supported the development of teachers’ health-related learning. However, whilst the need for students to engage in physical activity for at least one hour a day was heavily communicated by the teachers, the other guidelines concerning muscle and bone strengthening and minimising prolonged sedentary activity were afforded less attention. Hence, further HBPE-CPD is recommended to develop teachers’ knowledge and understanding of a range of health-related outcomes important for engaging children and young people in a physically active lifestyle.

**Creating a Need Supportive Learning Environment**

Consistent with Fernandez Rio et al. (2018), promoting self-determined motivation positively impacted on both students’ learning and their physical activity levels. Providing choice during the HBPE units proved popular with students, but created its own challenges for the teachers. Striking the right balance between competition and participation was also identified as a key challenge. Teachers reported that their students’ competence was enhanced when they focused on personal improvement and effort, particularly those students who perceived themselves as ‘low ability’. This finding provides further evidence of an inclusive learning environment being created when teaching HBPE. Encouraging peer support was a strong feature of the teachers’ practice throughout the implementation phase and had a positive effect on students’ physical activity engagement, both in and out-of-class. These results indicate the
positive impact on students’ learning of creating an autonomy supportive environment in physical education. That said, there is recognition that teachers should be further supported to develop a range of need-supportive strategies.

**Promoting Critical Movers**

There was mixed success in terms of the teachers supporting their students as critical movers. For example, finding time to discuss the barriers to physical activity participation was reported by all teachers to be a challenge, especially as they did not want to compromise their students’ activity levels during lessons. Evidence confirms that some teachers did make a conscious decision to develop this aspect of their practice as the HBPE units progressed. A new and important development involved the teachers at both schools explicitly encouraging their students to positively influence peers and family members to engage in physical activity, although some cultural challenges were noted at one school. In light of these findings, it is recommended that teachers are provided with future HBPE-CPD opportunities concerning the multiple determinants of physical activity behaviour and equipped with strategies to support students to address these. Further, the development of *active pedagogies* is again reinforced to encourage all teachers to support their students as critical movers in HBPE.

**Transferring Health-Related Learning across the Curriculum**

Clear evidence emerged from the data of teachers transferring aspects of their learning from the HBPE-CPD programme to other areas of the PE curriculum such as games, especially in relation to communicating the physical activity guidelines and prompting out-of-class physical activity. Teachers demonstrated a greater awareness of the need to encourage active lifestyles across the physical education curriculum areas, which led to a stronger focus on health outcomes being adopted in their practice. These findings illustrate that a sustained CPD programme involving external support can support teachers to adopt new ideas and change their practice over time, thus reinforcing calls for a different approach to teacher CPD beyond the *traditional* model discussed in Chapter Two. Furthermore, the reported sharing of practice by the teachers at both schools with colleagues and students through forums such as assemblies is testament to the wider success of this research beyond its initial remit.
**Sustaining HBPE beyond the ‘honeymoon’**

Twelve months after the HBPE-CPD programme finished, implementation of the HBPE model had been expanded in both schools. This expansion included disseminating the model to new colleagues and teaching it to a greater number of classes. Indeed, some teachers advocated HBPE running as a distinct curriculum area throughout the year to add balance to a games heavy curriculum, clearly demonstrating a sustained buy in to the model. The teachers also reported that students had generally sustained their enthusiasm for being physical activity in their leisure time and were still encouraging others to be active. These findings reveal the positive impact that good CPD can have on teachers’ philosophy and subsequent practice over time.

Most of the teachers reported increased confidence and subsequent flexibility in their planning to reflect the needs of their classes, which demonstrates the HBPE model’s potential to support local adaptation. However, a ‘watered down’ (Curtner-Smith et al., 2008) version of the HBPE model was evident in one school, with a lack of explicit reference to the specific learning goals and some critical features absent on both planning documents and in practice. As the external support was not a feature of the research design beyond the honeymoon, this reinforces calls for university researchers to work with teachers during the adoption of new pedagogies and help bridge the research/theory practice gap in education.

In the next section, I consider the impact of engaging in this research process on my own professional growth and propose some possible directions for further research to build on this work.

**Section 3: Reflections on the Research Process**

**Professional Growth**

As I write this conclusion, I am reminded of a quote that I read recently which stated that ‘Every ending is really just a new beginning’ (Anon). As such, although this particular research journey draws to a close after seven years, I am excited to start a new beginning as a post-doc researcher seeking to build on the
knowledge, skills and understanding that I have gained during this research process. More specifically, my engagement in the research has resulted in personal growth, both as a researcher and as a teacher educator. During this time, I have been extremely fortunate to have had the opportunity to apply some of my own learning to my work with teachers. For example, the research has been a catalyst for me assuming a leadership role developing PE-CPD across a university partnership.

This role has chiefly involved me working with primary teachers, who are subject co-ordinators for physical education, and supporting them to enhance physical education in their schools. Broadly in line with the design of the HBPE-CPD created to support the teachers in this study, the Partnership PE-CPD programmes have revolved around a different theme each year and are both collaborative and sustained in nature. They consist of three face-to-face professional learning meetings (one day per term), and provide opportunities for the teachers to apply, share and reflect on their learning back in their own school context. Over the past three years, some of this work has involved me introducing teachers to a number of different pedagogical models, including HBPE and then supporting them to implement these models in their practice. Initial evaluations of the impact on both the teachers’ practice and their students’ learning have been extremely positive and plans are in place to publish some of the findings. Furthermore, I have plans to develop the Partnership PE-CPD work, with a particular focus on providing opportunities for secondary teachers to become involved. As part of this process, I recently delivered a workshop on HBPE to secondary teachers at a CPD event for school mentors.

In addition to applying my learning with in-service teachers, engaging in this research process has helped to inform my practice as a teacher educator. As discussed earlier in Chapter One, I have shared the HBPE model with trainee teachers of secondary physical education on both undergraduate and postgraduate courses and also with students studying on a Sport and Physical Education undergraduate degree programme. Indeed, as the model continues to evolve, it has become embedded as a central element within a number of teacher education courses. Indeed, some students have implemented the HBPE model on school placements as part of action research projects and their learning
experiences have helped to inform my own thinking on how trainee teachers can be best supported to employ the model effectively in practice.

Throughout the research process, I have been fortunate to share some of my work with the wider Physical Education and Sport Pedagogy (PESP) community at a number of conferences. This has included presenting papers to researchers in PESP at both the British Education Research Association (Sammon et al. 2011; 2014) and the International Association for Physical Education in Higher Education (AIESEP) (Sammon et al., 2015) conferences. I have also presented a paper to practitioners at the Association for Physical Education (afPE) national conference, the focus of which was on how teachers were supported to implement the HBPE model in their practice (Sammon, 2016). Furthermore, a research colleague and I have co-created two video blogs (VLOGs); one provides a rationale for a HBPE pedagogical model and the other outlines what HBPE might look like in practice. These VLOGs are available online as a professional learning resource for both practitioners and researchers and were recently used to help inform a published paper on the HBPE model (i.e. Fernandez-Rio, 2016).

**Professional Challenges**

As explained in Chapter Three, there were initial difficulties in recruiting teachers for the study, which resulted in a significant amount of additional energy and time being devoted to this process. Later, there were challenges during the HBPE-CPD programme, especially when research plans did not materialise. An example included the postponement of a professional learning meeting at one school due to competing commitments and again reinforces the reality of conducting applied research in real world settings such as schools.

I acknowledge that the small-scale nature of the research involving nine teachers across two schools from one geographical region in England is a limitation in terms of generalisability (or external validity). For example, if this research had been conducted in different schools with different teachers, then the outcomes may not have been the same. A further recognised limitation of employing qualitative methods involved the potential for bias when I was interpreting data and drawing conclusions due to my role as a participant researcher.
This study was part of a broader research programme, with a colleague (Mark) concurrently writing a thesis on the development stages of the HBPE pedagogical model. The deliberate division that was created in order for each thesis to retain their unique focus, in hindsight limited the potential breadth of my work. For example, I would have liked to have explored in greater depth the impact of HBPE on student learning, however, this was a key aspect of Mark’s doctoral study. Finally, I recognise some curriculum design constraints, such as the relatively limited implementation phase of six to eight weeks, which ideally would have been over at least 12 weeks’ duration, as advocated in the literature (Dobbins et al., 2013).

Section 4: Future Directions

In the final section of the chapter, I propose some possible directions for further research to build on this work centred on two related areas: 1) HBPE-CPD and 2) The HBPE Model and I then offer some final thoughts to conclude.

HBPE-CPD

Moving forward, I believe that it is important to change the traditional ways of doing research and to explore the development of collaborative research practice partnerships. Consequently, researchers and teachers need to be encouraged to forge new ways of working together to capitalise on the complementary, as well as distinct, knowledge and skills that they can bring to these partnerships. As already discussed, plans are in place to expand the PE-CPD work that I lead at my university to develop such a research practice partnership with local teachers. In addition, I wish to explore possible collaborations with national organisations, such as afPE and the YST, to support teachers’ knowledge and understanding of the HBPE model in the hope that this will positively impact on their practice.

The HBPE Model

This research has acutely highlighted that developing new PE-for-Health pedagogies, such as a HBPE model, is a complex, challenging and lengthy process. It is clear that more research is necessary to better understand how teachers may be optimally supported to adopt and sustain the HBPE model in
their practice. Further, the generation of empirical data on the model’s use will require implementation in a wide variety of schools. For example, as part of my work as a teacher educator, I am keen to further encourage trainee teachers’ implementation of the model in different school contexts and to explore their experiences using action research as a professional learning tool. In terms of the continued development of the model, it has been reviewed and refined as a result of this research process and will most probably continue to be further adapted as more practitioners engage with it. This suggests a future focus on the fidelity of the HBPE model as it is modified by teachers to reflect their specific contexts.

With concerns for the health of primary aged children and the additional investment of the Primary PE and Sport Premium funding to help children lead healthy active lifestyles (DfE, 2017), it seems an opportune time to implement the HBPE model in primary schools and support practitioners in helping their children to realise a physically active life – something that the sustained use of a HBPE model in their schools could facilitate. Whilst the model was originally designed for use in physical education, future possibilities for research could involve examining the impact of employing the model in a cross-curricular context, as part of a whole school approach to physical activity promotion. It would also be interesting to further explore the differences between individual teachers engaged in adopting a HBPE model, including the impact on their philosophies, preferred teaching styles and perceived competence. In addition, as many primary schools have outsourced the teaching of physical education to external agencies, it makes sense to provide opportunities for these organisations to engage with the model and to explore any specific adaptations for the primary context.

Moreover, an aspiration is that the HBPE model may in time become recognised and established as a highly effective, research-informed approach to teach health in the physical education curriculum. In relation to scholarly activity, I have ambitions to co-author a book and design an online course to help practitioners (a) to develop their understanding of the HBPE model and (b) to support the sustained adoption of the model in their practice. Plans are also in place to share my findings from this study with the PESP community through conference presentations and publications in peer reviewed journals. Indeed, I aspire to be viewed as an authoritative figure in relation to PE-CPD generally and the HBPE
pedagogical model more specifically.

Some Final Thoughts…

Supporting teachers to adopt a new conceptual framework for HBPE through a collaborative and sustained CPD programme has encouraging potential to promote positive attitudes towards physical activity in their students. However, at a time when there are serious concerns expressed about inactive lifestyles, a concerted effort needs to be made by all in education (i.e. policy makers, school leaders, teachers, researchers) to collaboratively help all children and young people to ‘value a physically active life’. 
REFERENCES


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toward their students’ *Journal of Sport and Exercise Psychology* 34, no. 3 (2012): 365-396.


Cox, A., Smith, A., & Williams, L. (2008). *Change in physical education motivation and physical*


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confluences.


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intervention guidelines to increase physical activity of adolescents’. Health education research, 28(3), pp.523-538.


Sport England, 2019


### APPENDIX 1: Project Time-line

<table>
<thead>
<tr>
<th>Year/Month</th>
<th>January 2011 – April 2012</th>
<th>May - July</th>
<th>September - November</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Phase 1: HBPE Model Development and Teacher Recruitment</td>
<td>Phase 2: Teacher Induction to HBPE (Sycamore School)</td>
<td>Phase 3: Implementation of HBPE (Sycamore School)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year/Month</th>
<th>Dec 2012 – Feb 2013</th>
<th>Feb - May</th>
<th>September - November</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>Phase 2: Teacher Induction to HBPE (Maple School)</td>
<td>Phase 3: Implementation of HBPE (Maple School)</td>
<td>Phase 4: Sustaining HBPE (Sycamore School)</td>
</tr>
</tbody>
</table>

| 2014       | Phase 4: Sustaining HBPE (Maple School) |
APPENDIX 2: Presentation to Schools

Health-Based Physical Education
‘Valuing the Physically Active Life’

Health-Based Physical Education (HBPE) – What do we know?
(a) Physical activity can be a positive and enjoyable experience
(b) Physical activity is for all
(c) Everyone can benefit from physical activity
(d) Everyone can be good at physical activity
(e) Everyone can find the right kind of physical activity for them
(f) Physical activity is for life
(g) Excellence in HBPE is maintaining an active way of life (Harris, 2000, p. 18)

What will HBPE look like?
• ‘Valuing’ the physically active life
• Learning Domain Priorities (affective, cognitive, psychomotor)
• Developing pupils’ perceived competence and positive attitudes towards health
• Process not product driven
• Traditional vs lifetime activities (not sports-based skills)
• Lesson vs leisure-time activity levels (beyond the physical education lesson)
• Practical and self management components
• HBPE is NOT Health-Related Fitness (fitness training and testing)

What do we want to explore?
1. What are the major elements of a HBPE pedagogical model that ‘values the physically active life’ in relation to ‘Foundations’, ‘Teaching and Learning Features’ and ‘Implementation Needs and modifications’?
2. What teacher, school and community-based factors facilitate and impede the successful implementation and sustainability of programmes of HBPE?
3. Does the process of developing and implementing a HBPE programme influence teachers’ philosophies about learning and teaching and their use of teaching styles?
4. What is the impact of a programme of HBPE on KS 2 and KS4 pupils’ learning, motivation, intentions to be active and physical activity levels?

Where can I find out more?
APPENDIX 3: Teacher Survey

Whilst completing this survey, the term HBPE (Health-Based Physical Education) is used to define the teaching of health-related elements of Physical Education (e.g. HRE / HRF / HRPE).

**Background**

1. Male / Female (please delete) Qualifications: ______________________
2. Total teaching experience: __________________________________________
   Years ____   months ____
3. Time in current school:
   Years ____   months ____
   Type of school: middle / upper / secondary (please delete)

**Current delivery of HBPE in School**

4. Does your school currently include HBPE on its physical education curriculum?   Yes / No
5. Which of the following forms of HBPE does your school deliver? (tick all that apply)
   - Health delivered through other activities (Permeated). Examples of activity:
     ______________________________________________________________________
     ______________________________________________________________________
   - Health delivered in its own unit of work (Focused). Examples of activity:
     ______________________________________________________________________
     ______________________________________________________________________
   - Health delivered through a range of school subjects (Topic). Examples of activity:
     ______________________________________________________________________
     ______________________________________________________________________
6. How much time do you currently spend on HBPE across your school’s PE curriculum? (please complete the table below according to your type of school)

<table>
<thead>
<tr>
<th>Middle School</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Year 7</th>
<th>Year 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lessons</td>
<td>Hours</td>
<td>Lessons</td>
<td>Hours</td>
<td>Lessons</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary School</th>
<th>Year 7</th>
<th>Year 8</th>
<th>Year 9</th>
<th>Year 10</th>
<th>Year 11</th>
<th>Year 12</th>
<th>Year 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lessons</td>
<td>Hours</td>
<td>Lessons</td>
<td>Hours</td>
<td>Lessons</td>
<td>Hours</td>
<td>Lessons</td>
<td>Hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Upper School</th>
<th>Year 9</th>
<th>Year 10</th>
<th>Year 11</th>
<th>Year 12</th>
<th>Year 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lessons</td>
<td>Hours</td>
<td>Lessons</td>
<td>Hours</td>
<td>Lessons</td>
<td>Hours</td>
</tr>
</tbody>
</table>

7. What materials / resources does your department have to support the delivery of HBPE?
   - Schemes/units of work
   - Lesson plans
   - Teaching resources (please describe):

**Goals of PE and HBPE**

8. a). What do you consider as the key goals of physical education? (list up to 5)
   - ______________________________________________________________________
   - ______________________________________________________________________
b). What content and teaching approaches are used within your PE curriculum to achieve these goals?

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

9. a). What are your main goals of HBPE currently?

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

b). What content and teaching approaches are used within your HBPE unit(s) to achieve these goals? (please provide specific details of activities for each year)

Year __ -

Year __ -

Year __ -

Year __ -

Year __ -

Year __ -

Year __ -

Year __ -

c). How would you rate the importance of HBPE within your school’s PE curriculum?

Very important    Important    Not very important    Not at all important

d). How would you rate your confidence in teaching HBPE?

Very confident    Confident    Not very confident    Not at all confident

Previous Experience of HBPE

10. Have you experienced HBPE…

a). As a pupil? Yes / No

If yes, please describe content, structure, amount and experiences

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

b). University / Initial Teacher Training (ITT) Yes / No

If yes, please describe content, structure, amount and experiences

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________
c). CPD (in last 12 months)  Yes / No
If yes, please describe content, structure, amount and experiences
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

d). CPD (in last 36 months)  Yes / No
If yes, please describe content, structure, amount and experiences
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
e). CPD (beyond last 36 months)  Yes / No
If yes, please describe content, structure, amount and experiences
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

11. How would you rate your HBPE experience as a pupil?
Very good  Good  Adequate  Inadequate

12. How would you rate the content and time dedicated to your HBPE-ITT experience?
Very good  Good  Adequate  Inadequate

13. How effective was your ITT experience in preparing you to teach HBPE?
Very good  Good  Adequate  Inadequate

14. Why have / haven’t you experienced HBPE-CPD previously?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

15. Where might you seek information on appropriate HBPE-CPD?
__________________________________________________________________________________
__________________________________________________________________________________

16. What other forms of PE-CPD (not related to HBPE) have you experienced…
In the last 12 months?  _____________________________________________________________
__________________________________________________________________________________

In the last 36 months?  _____________________________________________________________
Beyond the last 36 months?

Any other comments / Additional space for previous questions

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________

__________________________________________________________________________________
### APPENDIX 4: PLTR

<table>
<thead>
<tr>
<th>Teacher:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity:</td>
<td>Lesson no:</td>
</tr>
<tr>
<td>Class:</td>
<td></td>
</tr>
</tbody>
</table>

1. **What were your aims for the lesson?**
   - a. For you as a teacher
   - b. For your students

2. **What specifically did you see in your lesson that met your aims?**
   - a. For you as a teacher
   - b. For your students

3. **What went well?**
   - a. For you as a teacher
   - b. For your students

4. **What did not go so well?**
   - a. For you as a teacher
   - b. For your students

5. **What are your specific aims for the next lesson?**
   - a. For you as a teacher
   - b. For your students
<table>
<thead>
<tr>
<th>TEACHER BENCHMARKS</th>
<th>STUDENT BENCHMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>T1. Teacher promotes physical activity (PA)</strong></td>
<td><strong>S1. Students engage in regular physical activity (PA)</strong></td>
</tr>
<tr>
<td>- Demonstrates a passion and energy for PA</td>
<td>- Are fully prepared for lessons</td>
</tr>
<tr>
<td>- Encourages students to identify and meet PA targets</td>
<td>- Actively engage in meaningful MVPA during lessons</td>
</tr>
<tr>
<td>- Maximise opportunities for MVPA</td>
<td>- Evidence progress in PA participation out of lessons</td>
</tr>
<tr>
<td>- Sets ‘activity challenges’ beyond the lesson</td>
<td></td>
</tr>
<tr>
<td>- Communicates with parents/carers and community bodies</td>
<td></td>
</tr>
<tr>
<td><strong>T2. Teacher supports students to be informed movers</strong></td>
<td><strong>S2. Students are informed participants in physical activity (PA)</strong></td>
</tr>
<tr>
<td>- Refers to current national PA recommendations for age group</td>
<td>- Explain PA levels and guidelines for age group</td>
</tr>
<tr>
<td>- Refers to current national PA levels</td>
<td>- Describe how and where to engage in PA locally</td>
</tr>
<tr>
<td>- Highlights how and where to engage in PA</td>
<td>- Can explain the benefits of PA</td>
</tr>
<tr>
<td>- Highlights the effects of PA (benefits and risks)</td>
<td>- Demonstrate/explain safe and effective practice</td>
</tr>
<tr>
<td>- Promotes safe and effective practice</td>
<td></td>
</tr>
<tr>
<td><strong>T3. Teacher creates a needs supportive learning environment</strong></td>
<td><strong>S3. Students set and review individual/team physical activity targets</strong></td>
</tr>
<tr>
<td>- Provides choices in response to needs and interests of students</td>
<td>- Set and review written self-referenced targets</td>
</tr>
<tr>
<td>- Encourages students to work collaboratively and sensitively</td>
<td>- Actively contribute to team target setting and review</td>
</tr>
<tr>
<td>- Demonstrates empathy towards all students</td>
<td>- Share individual and team progress at regular intervals</td>
</tr>
<tr>
<td>- Provides personalised feedback on student progress</td>
<td>- Provide peer feedback on progress</td>
</tr>
<tr>
<td>- Provides personalised feedback on student effort</td>
<td></td>
</tr>
<tr>
<td><strong>T4. Teacher encourages students to become critical movers</strong></td>
<td><strong>S4. Students promote physical activity (PA)</strong></td>
</tr>
<tr>
<td>- Identifies barriers to participation</td>
<td>- Encourage others to meet and exceed PA guidelines</td>
</tr>
<tr>
<td>- Illustrates strategies to overcome barriers</td>
<td>- Support peers to engage in PA within lessons</td>
</tr>
<tr>
<td>- Sets ‘movement promoter challenges’</td>
<td>- Promote PA out of lessons</td>
</tr>
<tr>
<td>- Supports movement promoters</td>
<td>- Support others to overcome barriers to participation</td>
</tr>
</tbody>
</table>
APPENDIX 5: Mid-Unit Review

Name:
Classes taught:
1. What impact do you feel the unit has had on your students’ learning, motivation, intentions to be active and physical activity levels?

2. To what extent have you embedded the benchmarks in your practice?

3. Have the activities chosen been ‘fit for purpose’?

4. What have been the highlights for you as a teacher?

5. What have been the issues for you as a teacher?

6. Any other comments?
APPENDIX 6: Teacher Interview 1

Introduction
Hi .....
Many thanks for agreeing to be interviewed as part of our Health-Based Physical Education (HBPE) project. The purpose of this interview is to gain some idea of your experiences engaging in an initial professional development programme and subsequently implementing a unit of HBPE with your class(es).

Starter Question
What has been the most positive aspect(s) of the whole HBPE project for you?

SECTION 1: PROFESSIONAL DEVELOPMENT PHASE
Q1. How successful was the pre-implementation professional development programme in preparing you to teach HBPE according to the model's design?
Q2. Did the programme match your outcome expectations?
Q3. How effective were the taught workshops in supporting you to plan and deliver a HBPE unit? What did you find to be most/least useful?
Q4. How effective were the school-based reflective tasks in supporting you? What did you find to be most/least useful?
Q5. What factors supported your engagement in the workshops and/or the school-based reflective tasks?
Q6. What factors challenged your engagement in the workshops and/or the school-based reflective tasks?
Q7. Overall, how useful did you find collaboration with university colleagues?

SECTION 2: TEACHER PHILOSOPHY & BELIEFS
Q1. Can you describe your philosophy and has it changed as a result of your engagement in this project?
Q2. Has there been any change in your beliefs concerning how health should be taught within physical education?

SECTION 3: TEACHER BEHAVIOUR IN PRACTICE
Q1. During your unit, to what extent did you embed the benchmarks in your practice?
   Prompt in relation to each of the Teacher benchmarks as follows:
   • Promotes physical activity
   • Supports students to be informed movers
   • Creates a needs supportive learning environment
   • Encourages students to become critical movers
Q2. Have you transferred any of these behaviours into your teaching of other units or do you intend to in the future?
Q3. Do you think adopting these behaviours has had any impact on your students’ learning?
Q4. Have you noticed any change in your students’ physical activity behaviour?
   Prompt in relation to motivation, intentions to be active and physical activity levels
Q5. Which HBPE Learning Outcomes were you most confident delivering?
   Prompt in relation to Habitual, Enthusiastic, Confident, Informed & Critical Movers
Q6. Were there any HBPE Learning Outcomes you found a challenge to deliver?
Q7. How useful did you find the Post Lesson Teacher Reflection? What factors supported and/or challenged your engagement with this process?
Q8. How did you share ideas/experiences with colleagues?
SECTION 4: CONTEXTUAL FACTORS
Q1. Were there any factors which facilitated the implementation of your HBPE unit?
Q2. Were there any factors which impeded the implementation of your HBPE unit?
Q3. Were the activities chosen to deliver HBPE ‘fit for purpose’?
Q4. Have you identified any further opportunities for physical activity participation in school/in the local community?
Q5. Have you identified any barriers for physical activity participation in school/in the local community?

SECTION 5: LEGACY
Q1. Has this experience motivated you to seek out further professional development opportunities focused on HBPE and/or physical activity promotion?
Q2. What impact do you hope this experience will have on your practice?
Q3. What impact do you hope this experience will have on your students?
Q4. Do you have any plans for delivering HBPE in the future?
Q5. Have you identified any key factors to sustain HBPE in your school?
Q6. Do you have any further comments?

Thank you very much for your time!
APPENDIX 7: Teacher Interview 2

Introduction
Hi ....

Many thanks for agreeing to be re-interviewed as part of our Health-Based Physical Education (HBPE) pedagogical innovation project. The purpose of this interview is to gain an insight into some of the factors which have facilitated and challenged the implementation and sustainability of HBPE in your school beyond the honeymoon period.

Starter Question
What has been the most positive aspect(s) of the whole HBPE project for you?

SECTION 1: IMPLEMENTING HBPE

Q1. Can you tell me some things about how you have recently implemented HBPE in your practice, for example, year group, ability, gender, activities? Prompt in relation to reasons for choice?

Q2. What positive experiences have you had working with the HBPE model? Expand on specifics if necessary.

Q3. Have there been any particular challenges you have faced in implementing HBPE? Expand on specifics if necessary.

Q4. Which HBPE Learning Outcomes have you been most confident in delivering? Prompt in relation to Habitual, Enthusiastic, Confident, Informed & Critical Movers

Q5. Were there any HBPE Learning Outcomes you found difficult to achieve? If yes, why do you think this was?

Q6. How would you consider your current level of expertise in implementing HBPE?

SECTION 2: TEACHER PRACTICE

Q1. What key characteristics do you feel teachers need to teach the HBPE model well?

Q2. Are there any significant change(s) you have made to your practice? If yes, please can you provide some examples. Prompt in relation to Teacher Benchmarks.

Q3. Did you share ideas/practice with dept colleagues and support their learning? If yes, please can you provide some specific examples?

Q4. Do you feel you were working in an emerging community of practice? Expand on specifics if necessary.
Q5. Have you shared practice with other colleagues beyond the department? If yes, please can you provide some specific examples.

SECTION 3: CONTEXTUAL FACTORS

Q1. Can you outline any key factors which you feel have helped to sustain HBPE beyond the initial implementation phase? Prompt in relation to school, community, social/cultural context.

Q2. Are there any factors which have challenged the sustainability of HBPE? Prompt in relation to school, community, social/cultural context.

SECTION 4: LEGACY

Q1. What do you see as the future for HBPE at your school?

Q2. Has this experience motivated you to engage in further professional development focused on HBPE and/or physical activity promotion?

Q3. Do you feel you need any further support to teach HBPE?

Q4. Is there anything else we haven’t covered that you would like to tell me about?

Thank you very much for your time!
APPENDIX 8: Student Focus Group Interview

Hello, my name is.... You will remember me as I have been observing some of your HBPE lessons. You have been asked to join this group because your teachers told us that you would be excellent students to speak to.

HBPE is quite new in schools and we want to know what you think about it so that we can make it even better for you later in school life and for future students. We will talk informally about some of the important things you have experienced in HBPE. It would be great if you talked honestly as well as giving others an opportunity to speak.

STARTER QUESTIONS:
A. Can you remember the main activities you did in your HBPE lessons last term?
B. What did your teacher say about the reasons for doing HBPE?

LEARNING
Q1. What are the key things you have learnt during the 5/6 HBPE lessons?

Questions relating to the ‘Informed movers’ learning outcome (in all cases, be sure to remind the students that we are looking for what they have learnt during their HBPE lessons):

Q2a. What did your HBPE teacher say about how much and what type of physical activity you should do? (Probe for deeper understanding than “60 minutes” ie “moderate”, “at least..”)

Q2b. Can you give me some examples of activities that count in your daily minutes?

Q2c. Did your HBPE teacher indicate where you can be physically active in school and in the community? What examples did your HBPE teacher give you?

Q2d. What did your HBPE teacher say about the benefits of leading an active lifestyle?

Q2e. What did your HBPE teacher say about how to be safe when participating in physical activity and exercise? How would you ensure you were safe in the unit’s main activities?

Q2f. Did your HBPE teacher explain how to exercise effectively in order to gain the maximum benefits? For example, did they encourage you to work at least at a moderate intensity to get your heart beating and improve your fitness?

ACHIEVEMENT OF THE 5 HBPE LEARNING OUTCOMES:
Enthusiastic Mover-
Q3a. What did you enjoy most about the HBPE lessons? Why? (probe further for indications of “choice” (autonomy), “caring/cooperative” environment (relatedness) and “positive feedback/improvement” (competence)

Q3b. What did you enjoy least about the HBPE lessons? Why?

Q3b. Did you enjoy the HBPE lessons? Did you enjoy them more than normal PE lessons, less, or about the same? Why?

Confident Mover-
Q4a. What is your favorite activity? How do you feel when you do that activity?

Q4b. Do you feel confident in this activity? Why?

Q4c. How confident did you feel in the HBPE lessons?

Q4d. Did you feel more, less or equally confident in the HBPE lessons compared to your usual PE lessons? Why?

Critical mover-
Q5a. Some people are very active whereas others aren’t. What are some of the reasons people give for not participating in physical activity?

Q5b. How have/could you help others to overcome these barriers to participation?

Q5c. Did your HBPE teacher encourage you to promote physical activity to a friend or family? Did you manage to do this since September? If so, how?

MOTIVATION
Q6. What are the main reasons you participate in physical activity? (probe for reasons relating to SDT such as…)

ACTIVITY LEVELS
Q7a. Which one of the following best describes your activity levels in your leisure
time?

<table>
<thead>
<tr>
<th>Select one</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. I am less active than when I started HBPE in September</td>
</tr>
<tr>
<td>B. I do about the same amount of physical activity as I did when I started HBPE in September</td>
</tr>
<tr>
<td>C. I am slightly more active than when I started HBPE in September</td>
</tr>
<tr>
<td>D. I am much more active than when I started HBPE in September</td>
</tr>
</tbody>
</table>

Q7b. Indicate how much more/less you do, using specific examples.

Q7c. What are the main reasons for your similar or increase or decrease in activity?

**INTENTIONS TO BE ACTIVE**

Q8. What are your intentions for physical activity over the next 6 months?
APPENDIX 9: Data Coding Example

1. **What impact do you feel the unit has had on your students learning, motivation, intentions to be active and physical activity levels?**
   I would say that in the main the result so far has been pleasing. Pupils are thinking about their physical activity and we are seeing a big increase in the ways in which they are trying to get to their 60mins and beyond. Motivation during the lessons has been good although the yr8’s boys particularly struggled with the freedom of creating their own games.

2. **To what extent have you embedded the benchmarks in your practice?**
   I am definitely more conscious of the benchmarks and have brought elements to all of my lessons not just the HBPE lessons.

3. **Have the activities chosen been ‘fit for purpose’?**
   In the main the sustained running activities have been enjoyable to the pupils and met the student and teacher benchmarks. The creativity sessions were a little less successful especially for the boys.

4. **What have been the highlights for you as a teacher?**
   I have seen a massive improvement in the pupils ability to consider physical activity outside the classroom. We have had highlights such as pupils coming up to me around school and telling me how they had achieved their minutes, pupils telling me that they have done ‘x’ activity with a family member etc. I have also seen on two occasions pupils setting up their own running clubs after school in order to achieve their minutes. This is special!! The message is getting through!

5. **What have been the issues for you as a teacher?**
   I have been disappointed that the lesson time is too short and I have often felt like I have rushed the content. The creativity sessions for the year 8’s were too unstructured for them and this led to poor output (in the main) and I feel that the benchmarks were not achieved.

6. **Any other comments?**
   I have enjoyed delivering this unit of work and think the pupils have enjoyed it too. It was good to take the time to reflect on our practice and evaluate the lessons. I believe that the groups I have worked with will be better educated with regards to physically active lifestyle as a result of this unit of work.
## APPENDIX 10: Teacher Survey Analysis

<table>
<thead>
<tr>
<th>Name</th>
<th>Goals of HBPE</th>
<th>Importance of Health in PE &amp; confidence to teach</th>
<th>Previous Experience of HBPE – school, ITT, CPD</th>
<th>Other CPD within 12 &amp; 36 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colin</td>
<td>To encourage fitness through games In Yr8 to apply some theory in preparation for Yr9 GCSE</td>
<td>Not very important Confident</td>
<td>None at school or during ITT (inadequate) No recent &amp; relevant CPD &lt;36 months</td>
<td>&lt;12 months – Athletics officiating &amp; Tchoukball Level 1 &lt;36 months – rugby officiating &gt;36 months – Trampolining</td>
</tr>
<tr>
<td>Luke</td>
<td>Healthy active lifestyles Appreciation for life-long participation Enjoyment</td>
<td>Important Very confident</td>
<td>As a pupil - none ITT - Health unit (good) No recent &amp; relevant CPD &lt;36 months</td>
<td>&lt;12 months – boxercise, handball &lt;36 months) – football, basketball &amp; rugby referee, swimming teacher award</td>
</tr>
<tr>
<td>Terry</td>
<td>To take part in a physically active lifestyle out of school = a knock on effect for team success To join an external club (either recreational or competitive)</td>
<td>Important Confident</td>
<td>As a pupil – adequate ITT – inadequate in preparing to teach HBPE No recent &amp; relevant CPD &lt;36 months</td>
<td>&lt;12 months – A Level delivery &lt;36 months – Leadership pathways &gt;36 months – various NGB awards</td>
</tr>
<tr>
<td>John</td>
<td>Promote healthy and active lifestyles Give pupils an understanding of how body works</td>
<td>Very important Very confident</td>
<td>As a pupil – multigym and running CPD &lt;12 months - weight lifting CPD &lt;36 months – No (lack of time &amp; availability)</td>
<td>&lt;12 months – A Level exam technique &amp; Head of Year 7</td>
</tr>
<tr>
<td>Molly</td>
<td>Teach pupils about being healthy, types of training and effects on the CV system</td>
<td>Very important Confident</td>
<td>As a pupil - none ITT - Health unit (adequate) No recent &amp; relevant CPD &lt;36 months</td>
<td>?</td>
</tr>
<tr>
<td>Name</td>
<td>Goals of HBPE</td>
<td>Importance of Health in PE &amp; confidence to teach</td>
<td>Previous Experience of HBPE – school, ITT, CPD</td>
<td>Other CPD within 12 &amp; 36 months</td>
</tr>
<tr>
<td>------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>James</td>
<td>To give every student a basic understanding of a healthy active lifestyle</td>
<td>Very important Very confident</td>
<td>As a pupil - none SCITT - Health units on school placement (good) No recent &amp; relevant CPD &lt;36 months</td>
<td>None recorded</td>
</tr>
<tr>
<td>Ciara</td>
<td>To give accurate information on health &amp; fitness so they understand how what they do physically will affect their physical and mental health</td>
<td>Important Confident</td>
<td>As a pupil – aqua aerobics, circuit training, aerobics (good) ITT – circuit training (adequate) CPD &lt;12 months – none (lack of time, cost) CPD &lt;36 months – weight training, how to use multi-gym</td>
<td></td>
</tr>
<tr>
<td>Patricia</td>
<td>To promote healthy active lifestyles Exercise is for life</td>
<td>Important Confident</td>
<td>No prior experiences recorded, yet rated school and ITT experiences as adequate</td>
<td>None recorded</td>
</tr>
<tr>
<td>Karen</td>
<td>To promote healthy active lifestyles To aid and develop understanding of healthy living</td>
<td>Important Very confident</td>
<td>As a pupil – GCSE &amp; A Level courses (adequate) ITT – Health unit (adequate) No recent &amp; relevant CPD &lt;36 months</td>
<td>None recorded</td>
</tr>
</tbody>
</table>
## APPENDIX 11: Preliminary Themes RQ1

<table>
<thead>
<tr>
<th>Theme: Teacher Buy in</th>
<th>Theme: Reflective Practitioners</th>
<th>Theme: Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Codes</strong></td>
<td><strong>Codes</strong></td>
<td><strong>Codes</strong></td>
</tr>
<tr>
<td>Enthusiasm/excitement for a new approach</td>
<td>Supported understanding of HBPE</td>
<td>Finding time challenging</td>
</tr>
<tr>
<td>Positive impact on students e.g. high activity levels</td>
<td>Reflection the highlight</td>
<td>Multiple demands e.g. exam PE, extra-curricular</td>
</tr>
<tr>
<td>Update units and resources Whole-school approach e.g. fight obesity levels</td>
<td>Opportunity to do a dummy run!</td>
<td>Competing priorities</td>
</tr>
<tr>
<td>Reflective activities positive and negative</td>
<td>Reflective activities supporting consolidation of new ideas</td>
<td>External pressures e.g. Ofsted</td>
</tr>
<tr>
<td>Shared understanding Induction positive e.g. consolidate ideas</td>
<td>Using the PLTR</td>
<td>Accountability</td>
</tr>
<tr>
<td>Apply learning in practice Initial uncertainty e.g. how different from HRF?</td>
<td>Choice in recording reflections</td>
<td>Additional roles and responsibilities</td>
</tr>
<tr>
<td>Misconceptions</td>
<td>Demanding nature of PAR</td>
<td>Time-table challenges</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme: Collective Participation</th>
<th>Theme: Teachers as Active Learners</th>
<th>Theme: External Sustained Support</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Codes</strong></td>
<td><strong>Codes</strong></td>
<td><strong>Codes</strong></td>
</tr>
<tr>
<td>Informal sharing of ideas e.g. PE office</td>
<td>Active engagement</td>
<td>Critical friends</td>
</tr>
<tr>
<td>Collaborative planning a positive and challenge</td>
<td>Autonomy to plan curriculum</td>
<td>Prevented information overload</td>
</tr>
<tr>
<td>Critical friends</td>
<td>Shared ownership</td>
<td>Provided reassurance</td>
</tr>
<tr>
<td>Peer teaching</td>
<td>A new way of working</td>
<td>Helped overcome uncertainty</td>
</tr>
<tr>
<td>Enthusiasm to support each other</td>
<td>Co-construction of learning</td>
<td>Workshops</td>
</tr>
<tr>
<td>Sustained motivation</td>
<td>Experiencing mock lessons</td>
<td>Virtual support e.g. emails</td>
</tr>
<tr>
<td>Department meetings</td>
<td></td>
<td>School visits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lesson observations</td>
</tr>
<tr>
<td>Theme: Health Practice</td>
<td>Theme: Activity Promotion</td>
<td>Theme: Informed Movers</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td><strong>Codes</strong></td>
<td><strong>Codes</strong></td>
<td><strong>Codes</strong></td>
</tr>
<tr>
<td>Knowledge and understanding of fitness and training</td>
<td>Teachers as positive role models</td>
<td>How PA contributes to health</td>
</tr>
<tr>
<td>Fitness for performance</td>
<td>Prioritising MVPA</td>
<td>Distinguish between safe and correct practice</td>
</tr>
<tr>
<td>Apply some theory for GCSE</td>
<td>Engaging in meaningful MVPA</td>
<td>Demonstrating how and where to be active locally</td>
</tr>
<tr>
<td>Promoting healthy active lifestyles</td>
<td>Busy, active and happy</td>
<td>Understanding the benefits of PA</td>
</tr>
<tr>
<td>Teaching of sports skills</td>
<td>Disconnect between theory and practice</td>
<td>References to PA guidelines</td>
</tr>
<tr>
<td>Looking beyond sport</td>
<td>Pursuit of multiple goals</td>
<td>How PE contributes to 60 minutes per day?</td>
</tr>
<tr>
<td></td>
<td>Use of pedometers</td>
<td>Gaps in subject knowledge</td>
</tr>
<tr>
<td></td>
<td>Active homework challenges</td>
<td>Some misunderstandings</td>
</tr>
<tr>
<td></td>
<td>How to be active out of school</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recording activity through diaries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extra-curricular sports clubs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Breaking down barriers to PA participation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Targeting less active students</td>
<td></td>
</tr>
<tr>
<td>Theme: Creating a Need Supportive Environment</td>
<td>Theme: Critical Movers</td>
<td></td>
</tr>
<tr>
<td><strong>Codes</strong></td>
<td><strong>Codes</strong></td>
<td></td>
</tr>
<tr>
<td>Opportunities for choice</td>
<td>Identifying PA barriers</td>
<td></td>
</tr>
<tr>
<td>How much choice?</td>
<td>Strategies to overcome barriers</td>
<td></td>
</tr>
<tr>
<td>High student motivation</td>
<td>‘Movement promoter’ challenges</td>
<td></td>
</tr>
<tr>
<td>A caring environment</td>
<td>Finding time for discussion a challenge</td>
<td></td>
</tr>
<tr>
<td>Teachers showing empathy</td>
<td>Encouraging family members to be active</td>
<td></td>
</tr>
<tr>
<td>Promoting cooperation</td>
<td>Promoting PA with peers</td>
<td></td>
</tr>
<tr>
<td>Helping peers to be active</td>
<td>Cultural challenges</td>
<td></td>
</tr>
<tr>
<td>e.g. PA ambassadors</td>
<td>Community involvement</td>
<td></td>
</tr>
<tr>
<td>Peer feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feedback on effort and progress</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal improvement/mastery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-confidence of less active</td>
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## APPENDIX 13: Revised Themes RQ1

<table>
<thead>
<tr>
<th>Theme: Teacher Buy in</th>
<th>Theme: Reflective Practitioners</th>
<th>Theme: Busyness of school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enthusiasm/excitement for a new approach</td>
<td>Sub-theme: Facilitating Reflection</td>
<td>Sub-theme: Time</td>
</tr>
<tr>
<td>Positive impact on students e.g. high activity levels</td>
<td>Supported understanding of HBPE</td>
<td>Finding time for reflection challenging</td>
</tr>
<tr>
<td>Update units and resources</td>
<td>Reflection the highlight</td>
<td>Sub-theme: Competing agendas</td>
</tr>
<tr>
<td>Whole-school approach e.g. fight obesity levels</td>
<td>Applying learning in own context</td>
<td>Multiple demands e.g. exam PE, extra-curricular</td>
</tr>
<tr>
<td>External support</td>
<td>Opportunity to do a dummy run!</td>
<td>External pressures e.g. Ofsted</td>
</tr>
<tr>
<td>Critical friend</td>
<td>Reflective activities supporting consolidation of new ideas</td>
<td>Accountability</td>
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<td>Using the PLTR</td>
<td>Additional roles and responsibilities</td>
</tr>
<tr>
<td>Shared understanding</td>
<td>Choice in recording reflections</td>
<td></td>
</tr>
<tr>
<td>Induction positive e.g consolidate ideas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apply learning in practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial uncertainty e.g. how different from HRF?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Misconceptions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme: Collective Participation</th>
<th>Theme: Teachers as Active Learners</th>
<th>Theme: External Sustained Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informal sharing of ideas e.g. PE office</td>
<td>Active engagement</td>
<td>Critical friends</td>
</tr>
<tr>
<td>Collaborative planning a positive and challenge</td>
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<td>Critical friends</td>
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<tr>
<td>Department meetings</td>
<td></td>
<td>School visits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lesson observations</td>
</tr>
</tbody>
</table>
### APPENDIX 14: Revised Themes RQ2

<table>
<thead>
<tr>
<th>Theme: Physical activity for Life</th>
<th>Theme: Promoting Habitual Movers</th>
<th>Theme: Promoting Informed Movers</th>
</tr>
</thead>
</table>
| Knowledge and understanding of fitness and training | **Sub-theme:** Activity during lessons  
- Teachers as positive role models  
- Prioritising MVPA  
- Engaging in meaningful MVPA  
- Busy, active and happy  
- Disconnect between theory and practice  
- Pursuit of multiple goals  
- Use of pedometers  
**Sub-theme:** Activity beyond the lesson  
- Active homework challenges  
- How to be active out of school  
- Recording activity through diaries  
- Extra-curricular sports clubs  
- Breaking down barriers to PA participation  
- Targeting less active students | How PA contributes to health  
Distinguish between safe and correct practice  
Demonstrating how and where to be active locally  
Understanding the benefits of PA  
References to PA guidelines  
How PE contributes to 60 minutes per day?  
Gaps in subject knowledge  
Some misunderstandings |
| Fitness for performance  
Apply some theory for GCSE  
Promoting healthy active lifestyles  
Teaching of sports skills  
Looking beyond sport |  |  |

<table>
<thead>
<tr>
<th>Theme: Creating a Need Supportive Environment</th>
<th>Theme: Critical Movers</th>
</tr>
</thead>
</table>
| **Sub-theme:** Autonomy  
Opportunities for choice  
How much choice?  
High student motivation | **Sub-theme:** Barriers to participation  
Identifying PA barriers  
Strategies to overcome barriers  
‘Movement promoter’ challenges  
Finding time for discussion a challenge  
**Sub-theme:** Engaging others  
Encouraging family members to be active  
Promoting PA with peers  
Cultural challenges  
Community involvement |
| **Sub-theme:** Relatedness Support  
A caring environment  
Teachers showing empathy  
Promoting cooperation  
Helping peers to be active e.g. PA ambassadors  
Peer feedback |  |  |
| **Sub-theme:** Competence Support  
Feedback on effort/progress  
Personal improvement  
Self-confidence of less active |  |  |
**APPENDIX 15: Summary of Changes**

1. Created two sub-themes in Reflective Practitioners
2. Created a new over-arching theme of Busyness and two sub-themes of Time and Competing Agendas
3. Replaced the theme Teacher Learning with Teachers as Active Learners and External support with Sustained External Support
4. Fitness for performance with PA for life
5. Replaced Promoting Activity with Habitual Movers with two sub-themes – during lessons and beyond lessons
6. Developing health knowledge with Informed Movers
7. Sub-divided NSE into three sub-themes of Autonomy, Belonging and Competence to reflect the three basic needs of SDT
8. Replaced the theme Barriers with Critical Movers sub-divided into Barriers and Engaging Others
APPENDIX 16: Consent Form

CONSENT FORM FOR PARTICIPANTS
HEALTH-BASED PHYSICAL EDUCATION PROJECT

Principal Investigator: Mr Paul Sammon, Senior Lecturer in Physical Education
Project Institution: University of Bedfordshire, Polhill Avenue, Bedford, MK41 9EA
Project Dates: January 2012 – December 2013 (approximate)
Contact Details: Email: paul.sammon@beds.ac.uk
Tel: 01234 793375

Please circle as appropriate:
Have you read and understood the Information Letter?
Yes   No
Do you understand that your participation in this study is entirely voluntary?
Yes   No
Do you understand that you are free to refuse participation and have the right to withdraw at any time without it influencing you in any way, and that all data collected from you at that time will be removed?
Yes   No
Do you agree to complete questionnaires and participate in audio-taped interview(s) and video-recorded lessons?
Yes   No
Do you understand that all audio-taped and video-recorded data will be securely transcribed and no one else will be permitted access to the data?
Yes   No
Do you understand that your school’s name will not be shared and disclosed in the reporting of results?
Yes   No
Do you understand that your name will not be displayed in any reports, presentations or publications and will instead use a Unique Reference Number (URN)?
Yes   No
Do you understand that you have an opportunity to ask questions before, during and after the study?
Yes   No
Are you happy to be contacted to give further clarification to any of your data if contacted by the principal researcher?
Yes   No

Signature of Teacher
Print Name
Date
Name of School

Thank you for your participation!
Please complete and return this form to the principal researcher
Paul Sammon

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APPENDIX 17: Participant Information Letter

INFORMATION LETTER FOR PARTICIPANTS
HEALTH-BASED PHYSICAL EDUCATION PROJECT

Principal Investigator: Mr Paul Sammon, Senior Lecturer in Physical Education
Project Institution: University of Bedfordshire, Polhill Avenue, Bedford, MK41 9EA
Project Dates: January 2012 – December 2014 (approximate)
Contact Details: Email: paul.sammon@beds.ac.uk
Tel: 01234 793375

You are being invited to take part in a research study. Before you decide whether to participate or not, it is important for you to understand why the research is being conducted and what it will involve. Please take time to read the following information and feel free to get in touch if there is anything that is not clear.

What is the purpose of the study?
The aim of the study is to investigate the development and implementation of programmes for health-based physical education (HBPE) in secondary schools, based on a new pedagogical model. It will explore the types of programmes developed, teachers’ thoughts on the process and local factors which facilitate the challenge the implementation of HBPE programmes.

Why have I been chosen?
You have been chosen to participate in this study as your school has expressed an interest in developing such a programme within their physical education curriculum.

Do I have to take part?
It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information letter to keep and be asked to sign a consent form. However, you are still free to withdraw at any time without giving a reason and all the data you have provided will be removed. A decision to withdraw at any time, or a decision not to take part WILL NOT affect you in any way.

What will happen to me if I take part?
Between October and December 2011, the researcher will work with several teachers to plan and develop a specific HBPE programme suitable for their individual schools. This programme will then be taught in school for two terms, between January and July 2012. Six months after the delivery of the HBPE programme, (January 2013) the researcher will visit the school again to gather data on the effectiveness of the programme. During the whole process, teachers and students will periodically be observed in their physical education lessons, will be interviewed and will be required to complete some short questionnaires.

What are the possible benefits of taking part?
Currently, there are no such programmes for HBPE in schools. Participating in this research will offer teachers an opportunity to be part of an innovative development in physical education. Through the process of planning and
implementing programmes for HBPE, teachers will also gain an understanding of the factors which positively promote student learning, in relation to adopting active lifestyles for health.

**Will my taking part in this study be kept confidential?**
All information which is collected about you during the study will be kept strictly confidential. Any information about you will have your name removed so that you cannot be recognised. All data will be stored in a locked filing cabinet and electronically on a secure, password protected, university computer. A Unique Reference Number (URN) will be used when data is being examined, discussed by the research staff and subsequently presented/published.

**What will happen to the results of the research study?**
Data will be presented in academic papers or at conferences but to reiterate, you will not be identified in any report/publication. You are also very welcome to receive a copy of the final report by contacting the principal researcher.

**Who do I contact in case I have any questions or require further information about the research project?**
If you have any questions or require further information please contact the principal researcher, Paul Sammon. Alternatively, please contact: Professor David Kirk, Director of the Institute for Research in Education, University of Bedfordshire (david.kirk@beds.ac.uk).

*Thank you for considering participation in this study! You can keep this copy of the information letter for your records.*
APPENDIX 18: Sycamore HBPE Learning Objectives

Boxercise

Learning Objectives:
Students will start to identify the reasons for leading a healthy and active lifestyle (Habitual Movers) through self-selected challenges and monitoring their own progress.

Students should actively encourage each other in a positive learning environment. (Enthusiastic Movers)

Students should focus on personal progress (Confident Movers)

Learning Outcomes

<table>
<thead>
<tr>
<th>ALL (F)</th>
<th>Complete all punches using safe technique. Understand the link between boxercise and their pulse rate / breathing rate.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOST (I)</td>
<td>Most pupils should be able to complete all punches in the correct order demonstrating the correct footwork. Able to identify the benefits of boxercise on their general fitness levels.</td>
</tr>
<tr>
<td>SOME (A)</td>
<td>Some pupils will be able to show accurate technique for every punch at speed and with quick footwork Able to explain the relationship between boxercise and improving Cardiovascular fitness</td>
</tr>
</tbody>
</table>

Cross Fit

Learning Objectives:
Students will start to identify the reasons for leading a healthy and active lifestyle (Habitual Movers) through self-selected challenges and monitoring their own progress.

Students should actively encourage each other in a positive learning environment. (Enthusiastic Movers)

Students should focus on personal progress (Confident Movers)

Learning Outcomes

<table>
<thead>
<tr>
<th>ALL (F)</th>
<th>Will understand the term fitness and what a Health Active Lifestyle is and why it is important. Be able to exercise and complete sessions safely and effectively with accurate replication. To complete a variety of exercises using good techniques.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOST (I)</td>
<td>Will understand the term fitness and what a Health Active Lifestyle is and why it is important. Be able to exercise and complete sessions safely and effectively with accurate replication. Be able to explain the importance of warming up and cooling down on the body. To complete a variety of exercises using good techniques at a high level of intensity.</td>
</tr>
<tr>
<td>SOME (A)</td>
<td>Will understand the term fitness and what a Health Active Lifestyle is and why it is important. Be able to exercise and complete sessions safely and effectively with accurate replication. Be able to explain the importance of warming up and cooling down on the body. To complete a variety of exercises using good techniques consistently at a high level of intensity.</td>
</tr>
</tbody>
</table>

Learning Objectives:

- **Enthusiastic movers** – demonstrate a positive attitude to physical activity
- **Confident movers** – demonstrate perceived competence by the application of tactics and strategies
- **Informed movers** – understand how physical activity effects an active healthy lifestyle, and how to participate safely and effectively
<table>
<thead>
<tr>
<th>LEARNING OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL (F)</td>
</tr>
<tr>
<td>To know the phases of a warm up</td>
</tr>
<tr>
<td>To be able to develop basic strategies</td>
</tr>
<tr>
<td>To be able to suggest one link between physical activity and a healthy lifestyle</td>
</tr>
<tr>
<td>MOST (I)</td>
</tr>
<tr>
<td>In a pair to be able to lead a basic warm up.</td>
</tr>
<tr>
<td>To be able to develop strategies &amp; tactics based upon their strengths</td>
</tr>
<tr>
<td>To be able to suggest more than one link between physical activity and a healthy lifestyle</td>
</tr>
<tr>
<td>SOME (A)</td>
</tr>
<tr>
<td>In a pair to be able to lead a thorough warm up specific to the activity of running</td>
</tr>
<tr>
<td>To be able to implement strategies &amp; tactics based upon their strengths</td>
</tr>
<tr>
<td>To have a detailed knowledge of the link between physical activity and a healthy lifestyle</td>
</tr>
</tbody>
</table>

### Fitness by Chance

**Learning Objectives:**
- **Informed Movers**- pupils will understand the effects of an active lifestyle and how to participate safely and effectively.
- **Habitual Movers**- pupils will participate in physical activity throughout the session
- **Enthusiastic Movers**- pupils demonstrate a positive attitude and engage in the activity enthusiastically.
- **Confident Movers**- Some pupils will offer to lead the warm up in this session and will make more progress in achieving more stations than others in the set time.

**LEARNING OUTCOMES**

Will understand the term fitness and what a Health Active Lifestyle is and why it is important. Know how to take their heart rates correctly, be able to exercise and complete sessions safely and effectively with accurate replication. Be able to explain the importance of warming up and cooling down on the body. All pupils should enjoy the session.

Pupils know how to use their heart rate information to make judgments of their own fitness levels. Pupils will be able to offer ideas of other activities that could benefit the participant taking part. Pupils will understand which exercises will there muscle strength and which work their aerobic/overall fitness. Pupils will be able to lead warm up and cool downs.

Pupils will be able to discuss and evaluate their own and others fitness levels using their diet and heart rate information during sessions. Be able to lead a group through an effective warm up and cool down. Recall and remember all the major muscle groups names and the stretches used to warm/train each muscle group. Be able to complete all the activities showing determination and willingness to beat own personal bests.

### Formula 1

**Learning Objectives:**
1. Understand the benefits of participating in regular PA and how this can improve lifestyle. (Informed Learners)
2. Have an active involvement in their own contribution to their lifestyle and know how they can improve activity levels. (Habitual Learners)

**LEARNING OUTCOMES**

Will be able to explain their choice of warm up and how it benefits the body.

Will be able to identify short-term effects of exercise on the body.

Will consider strengths and weaknesses of themselves and teammates when deciding on a team tactic.

Will think about how they can change their own activity levels and improve their lifestyle.

Will be able to evaluate their team performance and suggest improvements for the future.
**Fun Games**

<table>
<thead>
<tr>
<th>Learning Objectives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>To understand how different types of physical activity can help students to value and sustain physical activity behaviour, using fun activities relative to individual interests.</td>
</tr>
<tr>
<td>To discuss why and how sustaining an active lifestyle can benefit.</td>
</tr>
</tbody>
</table>

**LEARNING OUTCOMES**

| Every student can identify/suggest a type of exercise to achieve a positive enjoyable experience that can sustain their participation. |
| Most students can describe the term intrinsic motivation and link with their choices and decision making beyond the lesson. |
| Students can identify how physical activity contributes to a healthy functional body. Discussing physiological benefits e.g heart rates. |

**Skills Circuit**

Learning Objectives:

- **Enthusiastic Movers:** Students select the level they want to work and remain on task throughout. They will choose to progress at a rate and level appropriate to them.
- **Confident Movers:** Students will demonstrate progress against self-referenced targets (seen by their progress through the cards).
- **Habitual Movers:** Students to be set homework to repeat one activity they have done in the lesson today.
APPENDIX 19: Maple Assessment Framework

HBPE Learning Outcomes

1. Habitual movers – They choose to lead an active lifestyle and participate in regular physical activity
2. Enthusiastic movers – They demonstrate a positive attitude and engage enthusiastically in regular physical activity
3. Confident movers – They demonstrate perceived competence in chosen physical activities through effort and progress/improvement
4. Informed movers – They understand how and where to engage in physical activity, the effects of an active lifestyle and how to participate safely and effectively
5. Critical movers – They understand the barriers to physical activity and become activists (movement promoters) to positively affect their physical activity environment

HBPE Core Task Criteria

Habitual Movers
Bronze – Pupils are at least moderately active for up to 30 minutes every day
Silver – Pupils are at least moderately active for 30-60 minutes every day
Gold – Pupils are at least moderately active for over 60 minutes every day

Enthusiastic Movers
Bronze – Pupils engage positively in PE lessons
Silver – Pupils engage positively in PE lessons and school physical activities
Gold – Pupils engage positively in physical activity within and beyond the school

Confident Movers
Bronze – Pupils demonstrate progress in their physical activity participation
Silver – Pupils demonstrate progress in meeting their own physical activity targets
Gold – Pupils demonstrate progress in meeting their own and group physical activity targets

Informed Movers
Bronze – Pupils identify the main physical activity guideline, positive effects of an active lifestyle and participate safely in physical activity
Silver – Pupils identify two physical activity guidelines and how and where to be physically active
Gold – Pupils identify the three physical activity guidelines and demonstrate how to exercise effectively for health benefits

Critical Movers
Bronze – Pupils recognise the key barriers to participation in physical activity and identify potential strategies to overcome these
Silver – Pupils work to overcome at least one barrier to participation in physical activity
Gold – Pupils will promote physical activity participation to significant others