

**Promoting Physical Activity in primary schools: A
phenomenographical study exploring Physical Education Subject
Leaders' perspective into their practice**

Thesis submitted in accordance with the requirements of Liverpool Hope University for the
degree of Doctor of Education (EdD)

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Declaration of Word Count

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Authors Declaration

I can confirm that this thesis is my own work and has not been previously submitted for an award of this university or any other institution. The content of the thesis is legally allowable under copyright legislation.

Karen McNicholl

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Glossary

AfPE – Association for Physical Education

APPG – All Party Parliamentary group

BERA – British Education Research Association

CPD – Continuing professional development

DCMS – Department for Digital, Culture, Media and Sport

DfE – Department for Education

DfES – Department for Education and Schools

DHSC – Department for Health and Social Care

DI – Direct instruction

EYFS – Early years foundation stage

FA – Football Association

FMS – Fundamental movement skills

HOPE – Health Optimising Physical Education

HPS – Health Promoting Schools

HTA – Head Teacher alliance

ITE – Initial teacher education

ITT – Initial teacher training

KS1/KS2/KS3/KS4/KS5 – Key stage 1/2/3/4/5

MC – Motor competence

MVPA – Moderate to vigorous physical activity

NC – National curriculum

OfSTED – Office for Standards in Education

PA – Physical activity

PAL – Physically active learning

PE – Physical education

PESS – Physical education and School Sport

PESSCL – Physical Education, school sport and club links strategy

PESSYP – Physical education and sport strategy for young people

PHE – Public Health England

PPA – Planning, preparation, and assessment

PL – Physical literacy

PLT – Primary link teacher

QPE – Quality physical education

R – Referential

RAE – Relative Age Effects

S – Structural

SATS – Statutory Assessment Tests

SEM – Sport education model

SEND – Special education need and disabilities

SSCo – School sports coordinator

SSP – School Sport Partnership

ST – Sedentary time

TGfU – Teaching games for understanding

UNESCO – United Nations Educational, Scientific and Cultural Organization

YST – Youth Sport Trust

WHO – World Health Organisation

Abstract

Physical activity (PA) has been defined by Piggin (2020, p5) as ‘people moving, acting and performing within culturally specific spaces and contexts, and influenced by a unique array of interests, emotions, ideas, instructions and relationships’. It is widely acknowledged that when children engage in high levels of PA, this supports their physical, social and mental health (Poitras et al, 2016; Grao-Cruces et al, 2020). Therefore, promoting PA amongst children has been a high priority for the UK government, the NHS and the education sector. Considering children spend a significant proportion of their time in school, the role of schools in promoting high quality PA is very important (Fox et al, 2004; Pate and O’Neill, 2008). While there is an established research base providing information about potential PA interventions in the primary school, research which illuminates the practices, and ideals of PE practitioners and particularly PE subject leaders’ perspectives on this is very limited (Cale, 2000).

Drawing on a phenomenographic interview framework influenced by Larsson and Holmstrom, (2007), data from eight PE subject leaders was collected using elicitation based semi-structured interviews. This allowed the participants to share open reflective responses regarding how they understood their PA promotion practices. The participants who were from Northern England were sampled due to their school’s attainment of the Association of Physical Education (AfPE) quality mark.

A phenomenographic analysis of the interview transcripts incorporated 7 phases of analysis, to illuminate the ideals and practices of PE subject leaders to promote PA and give insight in the nature and meaning of these experiences (Watkins and Bond, 2007). Each subsequent phase was based on the researcher’s perceptions about how effectively the data was being drawn out whilst retaining a true account of each participant’s voice. This process presented an outcome space derived from Hakvoort’s framework (2018), which resulted in six ways that the participating PE subject leaders understand their role in promoting PA. It also illuminated ‘how this understanding is constructed’ and operationalised (Ibid, p3).

These understandings were described as **the collaborator**, who sees PA promotion being everybody’s responsibility; **the egalitarian** who values an autonomous school, where pupils’ learning process is always considered. **The ethos facilitator** who believes that society and community organisations have an important role in facilitating PA. **The wellbeing supporter** who understands PA promotion as a tool for wellbeing; they ensure pupils recognise the importance of engaging in PA for their lifetime. **The enhancer** who believes staff have their own individual understandings, ideals and barriers which must be considered to help them promote PA and **the advocate of variety** who promotes experiences that build confidence through PA.

The findings of this study have value for school leaders and other staff in identifying ways in which PE subject leaders could practice and be best supported to undertake PA promotion most effectively. For aspiring PE subject leaders, the characterisation of the six ways the research participants conceptualised their role can be of value in offering alternative models for practice that these aspiring leaders could practically use.

Chapter 1 – Introduction

1.1 Rationale for the research study based on my professional experience

In my roles as a physical education (PE) and school sport lecturer, PE teacher educator, and advisory PE teacher I have long been motivated by the preparation and ongoing continuing professional development (CPD) of PE professionals. Throughout my career I have continually strived to design programmes which may utilise and build on practitioner knowledge and practice so that my training programmes are both research-driven and relevant to the sector. The latter has not been considered with as much importance as it needs to have (Elliot and Campbell, 2015) and as a result practitioners can encounter multiple challenges to optimal PA promotion. In order to achieve these aims this project was borne from my desire to generate more knowledge and expand on this practice by illuminating the ideals and practices to promote PA that primary school PE subject leaders have.

My research questions (presented in the methodology chapter) were designed to give clarity about the practices PE subject leaders adopt to promote PA, the factors they deem instrumental in determining these practices, the ideal practices they aspire to adopt and the barriers they have experienced which have prevented the adoption of these practices. These questions enabled a collection of data about how the PE subject leaders understand what PA promotion practice is, what they do to achieve this and how their practices support this.

I have experienced much change in the policy ideals which develop a curricula and educational landscape which decides the priorities for and expected practices which have an impact on teaching and learning. I have had to negotiate this landscape in the professional training of teachers, students, and my work with mentors in school to ensure the next PE teachers have the skills and knowledge to really impact on pupils' outcomes. Research informed teaching is a prerequisite for effective teaching and learning (Furlong, 2014; See et al 2016; Walker, 2017). In school teachers' research pedagogies, they read and implement knowledge on how children learn, adapting their teaching accordingly and evaluate the impact that their lesson planning has on pupils' learning and engagement. All of these constitute meaningful research, which is a part of their professional lives, a professional responsibility. My values when designing research have reflected my professional role to create worthwhile training opportunities for trainee teachers and mentors in school, which are intended to improve the opportunities for pupils to experience quality PA opportunities and improve lifelong health and wellbeing. These two agendas are interrelated, as is my desire to model these professional behaviours with my students so that they too have the confidence and skills to be research informed teachers as they enter the teaching profession. The introduction of specialist PE modules within the undergraduate degree I was teaching at the time, further focused my ideals about how to best impart knowledge and skills for my trainees to become effective PE subject leaders when they start in their first teaching position.

During this process I used the professional understandings and beliefs that I developed through my experiences as a teacher in school and an initial teacher education (ITE) tutor/lecturer in the university sector to inform my researcher decisions. Indeed, negotiating

the policy landscape, working within school and university structures has been consistently challenging when it comes to providing effective PE teacher or higher education; my researcher decisions will look to address these issues. I shall now discuss my decisions in creating this study and rationalising the content.

1.2. The UK Context

In this section, the various definitions of PA and the context of such defined PA in the school setting will be discussed, to consider the importance of PA participation for health and wellbeing. Further, the need for primary school facilitation of PA opportunities in PE lessons, within the school day and beyond it will be highlighted as will the influence of National policy and some specific initiatives on teachers' ability to facilitate high quality PA and the challenges which teachers and senior leads in schools need to negotiate to promote PA. Finally, conclusions will be made based on the researcher's own professional position and rationale for this study.

According to Piggin (2020) an important definition of PA which is widely accepted in the research community and informs many policies internationally is provided by Caspersen et al (1985, p126), who define PA as 'any bodily movement produced by skeletal muscles that results in energy expenditure'. Although Piggin appreciates the clarity of the definition, he suggests that certain phrases may omit important information which is necessary for schoolteachers' understanding. There is a depersonalisation of activity, a limited consideration of personal motivations and how lived experiences can explain PA behaviour (Piggin, 2020). The holistic, complex nature of it in terms of how the associated cultural and physical space and social endeavours can shape people's PA experiences and how political ideals can and do shape PA provision is not accounted for (Ibid). To better appreciate these limitations in Caspersen et al's definition, Piggin presents a new and broader definition:

'Physical activity involves people moving, acting and performing within culturally specific spaces and contexts, and influenced by a unique array of interests, emotions, ideas, instructions and relationships' (Piggin, 2020, p5).

This definition will be adopted in this thesis for the purposes of presenting the holistic and complex ideals and practices that PE subject leaders have to promote PA in the primary school. The findings from this research will be presented through a phenomenographic outcome space and associated discussion and recommendations which model PA as defined through these ideals.

Engaging in PA is important for everyone. It is part of a healthy lifestyle which reduces the risk of developing cardiovascular and other non-communicable diseases later in life (WHO, 2018). A higher PA participation in early childhood is associated with better bone density, cardiovascular profiles, and body composition (Carson et al, 2016; Timmons et al, 2012). This is particularly pertinent as obesity levels in children are continuing to rise, with one third of all children being overweight or obese by the time they leave primary school (Public Health Wales Trust, 2018; Lloyd et al, 2018; Department for Education (DfE, 2019). Obesity is one of

the most serious public health challenges worldwide (WHO, 2015). PA helps to establish healthy behaviour patterns which persist as young children grow into early adulthood (Jones et al, 2013; Telama et al, 2013) and has been associated with increased psychosocial advantages such as the reduction of symptoms of depression, anxiety, stress and improvement of confidence and self-esteem (Morgan et al, 2012; Biddle et al, 2011). This ultimately supports better mental health in young people (Beauchamp, Puterman and Lubans, 2018; Biddle et al, 2019).

The research shows that PA participation and fitness improves motor competence (MC) (Melby et al, 2021; Lima et al, 2017; Barnett et al, 2016), thus giving children the knowledge and understanding about rules, tactics and how to engage in a range of activities. There is a general association between MC and positive academic and cognitive performance (Geertson et al, 2016; Beck et al, 2016) with fine and gross motor skills and exercise capacity being associated with positive but varied outcomes. Having this MC gives children a level of confidence and motivation which improves their ability to participate in a broad range of PA later in life (Whitehead, 2010; Dudley, 2015). Essentially, physical literacy (PL) as described by Whitehead (2010, no pagination) as 'the motivation, confidence, physical competence, understanding and knowledge that individuals develop in order to maintain PA at an appropriate level throughout their life' promotes MC, which relates to PA and children's fitness (Holfelder and Schott, 2014; Lubans et al, 2010; Robinson et al, 2015; Lima et al, 2017).

Children with special educational needs and disabilities (SEND) have a better quality of life when they participate in PA (MacEachern et al, 2022; Lai et al, 2020). The physiological impact is similar to that discussed previously, but for children with physical disabilities, PA helps to prevent functional decline and fatigue (de Vries et al, 2015; Keawutan et al, 2014; Ash, Bowling, Davison and Garcia, 2017). In addition, PA supports better social behaviour (Gregor et al, 2018; Lai et al, 2020), communication skills (Yarimkaya et al, 2017) and can reduce poor behaviour and stress in children with autistic spectrum conditions (Hillier et al, 2011; Sorensen and Zarrett, 2014).

The National Health Service (NHS, 2021) states that children and young people aged 5 -18 years old need to do two types of PA each week to keep healthy. These should encompass aerobic exercises, which develop movement skills and exercises which strengthen their muscles and bones, with at least sixty minutes of moderate intensity PA (including these types of exercises) each week ((NHS, 2021; WHO, 2018). They should aim to reduce their sedentary time (ST) by breaking up long periods of not moving with some activity throughout the day. The NHS (2021) provides more detailed information on which sports or activities can help to achieve these aims and also the different expectations for children under five and for adults. However, only 23% of boys and 20% of girls aged 5-11 meet the NHS recommendations with a decline in PA with age (Baldursdottir et al, 2017; Public Health England, 2017). The UK Government takes the view that schools are central to tackling the obesity crisis and ensuring their pupils engage in enough PA is their responsibility (Chapman et al, 2020; Department for Health and Social Care (DHSC), 2016). They are considered the ideal setting from which to actively engage children and their families and improve their PA behaviours, creating an engagement with lifetime PA (Lloyd et al, 2018). In conjunction with policy there have been

several initiatives in the last few years that recognise this and aim to support schools to increase their pupils' PA participation, such as 'This Girl Can', 'Inclusion 2020', 'Active Partnerships', the Football Association's (FA) 'Primary Stars', and 'School Games programmes' (DfE, 2019).

1.3 The policy and its impact on PA

Ofsted's new Inspection Framework, which came into effect in September 2019, had the ideal of giving greater recognition to schools' work to support the personal development of pupils. They expect pupils to have opportunities to learn about eating healthily and how to maintain an active lifestyle through a broad, balanced education, and the provision to be active during the school day and through extra-curricular activities. What is clear from the Ofsted guidance is that a collaborative approach involving school-based and external agencies is required to promote PA both within and beyond PE lessons; throughout the school day and outside of it.

In July 2019, an action plan involving the Department for Education (DfE), the Department for Digital, Culture, Media and Sport (DCMS) and the Department of Health and Social Care (DHSC, p8) created a statement of intent. They set a joint commitment to ongoing collaboration, to ensure three overarching ambitions modelled around the ideal that sport and PA were an integral part of both the whole school day and out of school activities. Firstly, that all children have the opportunity to take part in 'at least 60 minutes of PA every day (with at least 30 minutes during school). Secondly, that children have the opportunity to realise developmental, character-building experiences through sport, competition and active pursuits and thirdly, that all PA provision for children and young people is designed around the principles of PL, focuses on fun and enjoyment and aims to reach the least active'. When pupils engage with these PE lessons, they are likely to be more active in non-school settings (Dale, Corbin and Dale, 2000) which has a strong association with longevity of PA participation into adulthood (Telama et al, 2014).

These ambitions have been based on evidence gathered through consultation with key stakeholders across the sport and education sectors as well as a survey of children, young people, and teachers; with collaborative actions derived to achieve these. The guidance from the Chief Medical Officer has been considered, with some minor differences to the expected daily minutes of PA, as an average number throughout the week instead of a minimum (DHSC, 2019).

There have been multiple pilot trials and actions aimed at getting children more active. For example, a toolkit to support the effective use of the PE and school sport premium funding, the sharing of best practice from schools which have successfully engaged pupils in PA. The mandatory introduction of health and relationships education where the importance of PA is set out in its curriculum and taking further action to ensure all children leave primary school with swimming and water safety skills. Many of these have been tied together through initiatives such as School Sport Partnerships (SSPs) which had a positive impact on the quality of PE, the extracurricular provision, and levels of PA in children and young people (Loughborough Partnership, 2006; Ofsted, 2005). However, these outcomes have been

questioned in more recent research due to the differential objectives being facilitated by schools, the limited use of tangible analysis with a focus on high quality PE rather than some initiative-based outcomes (such as participation statistics), and a lack of a clear rationale for the evidence base (Griggs, 2015; Houlihan and Lindsey, 2008). This is evident in Griggs' (2010) indication that the primary link teachers (PLT's) were passive recipients of school sports coordinators' (SSCos) targets for the partnership which failed to meet their school's own PA development needs. Essentially 'a recipient of policy changes rather than one who led or steered its development' (Griggs and Randall, 2019, p666).

As the SSP programme lost funding due to the onset of the coalition government in 2010, the networks that were built became fragmented and in most regions were dismantled (Pitt and Rockwood, 2011). An exception is in the Merseyside area as Liverpool City Council did continue to provide funding to keep key aspects of the partnership running to this day. Where SSPs were reduced or dismantled, this meant that PE subject leaders had increased accountability to provide evidence of positive impact over the scale of investment (Griggs and Randall, 2019). Negotiating the policy landscape, with the numerous changes to content or outcome led expectations or managing the accountability to achieve certain PA outcomes and justify funding is inherently challenging for PE subject leaders (Griggs, 2015) and these issues warrant exploration. There are various initiatives (a selection of these have been discussed in this introduction and further information will be provided in the literature review) which aim to support schools, as well as those working with children and young people across different settings to promote PA. There is little which effectively models the practices, considers the logistics or management considerations within which PE subject leaders must work, or report on the ideals which are valued by practitioners in their own contexts. While the DfE and Ofsted provide examples of quality practice, the way in which these practices can be implemented, how they are negotiated and prioritised within the context in which teachers work, and how practitioners feel about said practices is limited. This research study will look to address this and is described in the research focus section later in this chapter.

1.4 PA in the school setting

Promoting PA throughout the whole school day has been highlighted as an important expectation in policy and research literature (Martin, 2022; WHO, 2016; Fairclough, 2012; Salmon, 2010). PE lessons have a fundamental part in this practice, as teachers have most control over the content and the participation rates are naturally higher due to the compulsory National Curriculum (NC) expectations. Pate et al, (2005), McKenzie et al, (2004) and Masurier and Corbin (2006) agree that teaching which models the characteristics of quality physical education, such as child centred MC instruction, fitness education, the development of cognitive concepts, cooperative and social skills through inclusive, assessment based progressive lessons with plenty practice opportunities (NASPE, 2004) does lead to increased PA levels. There are ongoing issues to achieving this; mainly relating to teachers' confidence and competence to model these characteristics of quality PE. McKenzie et al (2004) suggest that youth spend more time engaging in moderate to vigorous activity (MVPA) when PE lessons are taught by PE specialists, they also provide more motor skills

practice compared with non-specialists who provide more game play with fewer practice opportunities and tasks (Constantinidis, Montalvo and Silverman, 2013; Dyson, 2014). Although the latter is an important pedagogy from which to promote PA, it is these motor skills or the development of MC which supports PL in children and ultimately their ability to participate in PA for life. These specialists make up a small proportion of staff in the primary school (Jones and Green, 2015) and as the responsibility for PE lessons in the primary school generally sits with the class teacher, it becomes the PE subject leaders' responsibility to provide appropriate training and support from which to boost teachers' confidence and improve their competence to teach.

There are inherent challenges for PE subject leaders improving schoolteachers' development; it has been long reflected in the literature that primary teachers have weaker subject knowledge and pedagogical skills to teach PE (Ofsted, 2005; Griggs, 2015; Ofsted, 2012). Specifically, there is insufficient challenge with a performance led, overly games-based curriculum and poor assessment and recording. One of the main issues identified is the lack of provision for PE during teachers' ITE (Keay and Spence, 2012; Randall et al, 2016; Haydn-Davies et al, 2010), which does not instil confidence in trainee teachers. The consolidation of subject knowledge or pedagogical skills learnt on placement is sometimes limited or weak due to the school mentor's limited confidence or schools' priorities for training.

It may be considered easier to employ sports coaches to teach PE in the primary school, and this has been a feature of primary schools' staffing for the last two decades (Jones and Green, 2015; Blair and Capel, 2011). The lack of confidence of teaching staff, the skills and time needed for PE subject leaders to provide (and for teachers to attend) the necessary training and the requirement to provide weekly planning, preparation and assessment time (PPA) are all factors which have seen the saturation of coaching company staff into school (Smith, 2015).

Another issue is that in the primary sector there is a commonality in reducing pupils' PE participation or a reluctance to implement PA breaks within the school day to focus on more academic learning (Cothran et al, 2010; Gately et al, 2013), such as preparation for Statutory Assessment Tests (SATs) or phonics tests. What is becoming more evident from research is that taking time away from PE does not result in learning in other areas but instead simply impacts the pupils' achievements in PE based goals (Le Masurier, 2021; Trudeau and Shephard, 2005). There is an association between better academic performance in more physically active children (Carlson et al, 2008; Ahamed et al, 2007; Mullender-Wijnsma et al. 2016) and teachers have more positive views of classroom PA for academic benefit (Martin and Murtagh, 2015; Stylianou et al, 2015). The challenge to PA integration relates to the realities of classroom teaching, expectations for content, pedagogies, and consistency between staff. There are ongoing challenges in teachers' autonomy, although many teachers are implementing PA into the classroom, they would like more ideas to do this more effectively and more often (Dinkel et al, 2017).

Teachers need to identify how PA integration can support academic learning, otherwise they are more likely to resist PA in this context (Erwin et al, 2011; McMullen et al, 2014). Dinkel et al (2017) identify further barriers including classroom management and potential CPD to

support better behaviour in this PA promotion context. They suggest that inconsistent perceptions of confidence within teaching staff and teachers' reports of older pupils' reluctance to participate in PA, do not necessarily offer an accurate reflection of the pupils' perceptions or actions. Dinkel et al (2017) and Webster et al (2015) suggest that researchers need to understand the ways in which teachers utilise PA in the classroom (e.g., how often and how long) and what can be done to improve PA promotion with teachers who show an inconsistent approach. It is important to model this, through exemplifying practice in line with positive academic and physically based outcomes within the sector.

There is a lack of information about after school PA provision being implemented in UK primary schools. Davies (2014) established that schools offer more non-active clubs than active clubs, and of the latter many extra-curricular clubs offered were for team sports. Allender et al (2006) suggest that pupils in primary school may be more encouraged to participate in clubs where they are provided with a variety of activities (such as multi skills) as opposed to just competitive sports; particularly those who lack fundamental movement skills (FMS). Many of these clubs are funded by the school or parents with at least 40% delivered by external bodies or non-school staff (Davies, 2014). There are both positive and negative implications of these practices, which will be discussed further in the literature review.

It is clear in some schools, that PE won't be considered a priority; it is a marginalised (Sprake and Palmer 2018) or 'Cinderella subject' as identified by the All-Party Parliamentary Group (APPG, 2016). Despite the high levels of funding (usually from school sports premium) there is little account of the impact on pupils' outcomes and limited assessment measures of their pupils. Consequently, CPD programmes can be ill-considered and planned to result in limited meaningful improvement to pupils' learning. This echoes the issues presented regarding negotiating the policy expectation. Teachers rarely discuss classroom PA or pupils' PA outcomes with colleagues and when they do this is usually informal, which Dinkel et al (2017) suggest PE subject leaders need to encourage as they are the strongest advocates for a PA culture and developing collaborative support.

This section has discussed the importance of children's participation in PA and the role of the primary school in facilitating this, the need for quality PE and an approach to PA promotion that is facilitated throughout the school day, and some of the main issues with establishing this from the teachers and teacher educators' perspective.

Chapter 2 - Literature Review

2.1 Introduction

The literature review presented in this chapter considers research into the area of PA promotion in the school setting. The importance of PA promotion in schools was outlined within the introduction chapter which also included a personal and contextual outline of the researcher's reasons for conducting this research. This chapter will firstly analyse a broad selection of school-based interventions using a systematic review conducted by Jones et al (2020), in order to provide information on potential positive increase in pupils' PA participation. The policy landscape influencing PA expectations for children and young people, and the responsibilities of PE practitioners in the primary school in relation to this will be discussed. To follow, the literature on a selection of pedagogies and PE models for teaching and how they impact on PA promotion as well as what practitioners can learn from physiologically or externally based MVPA testing in PE lessons will be discussed. The literature highlights the potential challenges and implications for practice in promoting PA that there may be from teachers' and pupils' perspectives; both are integral to understanding how they can best support effective PA promotion. Finally, the literature on the impact that a school context can have on PA promotion will be summarised and evaluated; considering the concept of whole school learning, how the school context can work with the community to improve PA and wellbeing, particularly those 'around the child'.

2.2 School based interventions for increasing PA

Overall, the research studies which provide school-based interventions for increasing PA are more focused on researcher designed practices, with little consideration of the practicalities for PA promotion in the UK primary school. Where the practices are teacher designed or facilitated this enables better impact (Kolle, 2020; Cassar, 2019). This may reflect in the lesser or inconclusive impact recognised in recent literature (Lloyd et al, 2018). Jones et al (2020) identified no evidence of effect for MVPA and inconclusive evidence for ST improvements in the full range of school-based interventions they evaluated. This was due to their perceptions about the quality of evidence collected, as they state that 2 of 3 large scale and good quality studies reported no effect on MVPA and a small proportion of studies measuring ST, with few of these reporting a positive effect. In school-based interventions there is less demonstratable evidence for positive PA improvement with younger children as opposed to adolescents (van Sluijs et al, 2007; Metcalf et al, 2012), which accounts for the higher rate of PA in younger children (van Sluijs et al, 2007).

There is also no pattern in effect evidenced for boys and girls from these interventions, as supported by Weaver et al (2018) and Huberty et al, (2014), which suggests that the differences in children's ideals and practices (Cordor et al, 2020) do not have a major influence when they experience external interventions. Further research on the impact of PA participation for children will be explored later in this chapter.

Interventions which replace more sedentary activities with PA (such as class time PA breaks, before school clubs, PA based homework, etc.) suggest there is a positive effect on PA levels whereas interventions which extended pre-existing PA had no effect (in PE lessons) or were inconclusive in play times (Jones et al, 2020). The impact of school day PA promotion is evidenced by Jones et al, as their analysis of research which considers MVPA improvement measured throughout the whole day compared with during the school day demonstrates a more positive impact in the latter. However, the authors question the quality of evidence provided in their analysis of this research, suggesting that the MVPA or step count effect should therefore be inconclusive. They surmise that there may be compensatory behaviours present during intervention cycles (i.e., children engaging in less MVPA throughout the day due to feeling tired after interventions). This may limit increases in PA levels throughout the whole day but there may be a positive increase in cardiovascular fitness.

As outlined in this section, there are challenges in facilitating successful PA interventions in the primary school. Further, there is inconclusive or negligible impact on PA promotion within many studies (Metcalf et al. 2012; Russ et al. 2015 and De Fever et al. 2021) identify potential issues with how these interventions are translated from research into practice in school. They state that many of these interventions have limited teacher or pupil involvement and do not illuminate how they can be sustainably developed and facilitated within the school day (Christian et al. 2015). De Fever et al (2021) outline that current approaches to PA promotion may not be working, possibly due to the multifaceted nature of primary school settings, which can impact on the promotion and implementation of PA and create a barrier to it. They also identify no evidence of effect when MVPA measurements are taken over the full day (instead of during school time). Both considerations could clarify Jones et al's (2020) conclusion that there is limited evidence of effectiveness of the various interventions on children's PA in this area. Expanding PA opportunities is considered more effective in extending or enhancing PA participation. Practices such as after school club interventions, class PA breaks, active travel and more active learning are considered the most promising in school interventions for this purpose (Ibid).

2.3 Quality sports opportunities to promote PA

There is an increased awareness of the influence that schools have on the outcomes of their pupils beyond their academic learning in policy and guidance (APPG, 2016; APPG, 2018; WHO 2022). Based on international interventions, the World Health Organisation's (WHO, 2021) health promoting schools' (HPS) framework considered effective whole school approaches as those which integrate health education into the curriculum, adapt the social and/or physical environment and engage with their communities and pupils' families (Langford et al 2015). Schools which engage with these practices are considered health promoting but the key practices which have successfully developed these approaches in UK primary schools have not been made clear. When utilising all the identified whole school approaches, health promotion in terms of pupils' PA participation and their associated fitness levels improves (Ibid). Currently, interventions in primary schools do not however provide the integration between health and education; how health promotion will support school priorities, such as

academic attainment, which are considered more likely to engage practitioners with the WHO's framework (Langford et al, 2015, Mohammadi, 2010). This literature suggests that this may be due to the inherent complex systems at work in the school setting. Bartelink and Bessems (2020) identified that there needs to be a level of flexibility in a HPS approach as schools can and should operate according to the needs of their own specific context, with a consideration of their own environment, characteristics, community, and members.

Recently, the WHO (2018) developed a systems-based approach to increasing PA, through a global action plan, setting out four strategic objectives and twenty policy actions which have been designed to be 'universally applicable' (Ibid, p8). 'Creating active people' (p25) is a strategic objective fitting into the primary school sector's areas of potential responsibility; with foci centred on enhancing the provision through increasing opportunities for PA and active recreation through a whole school approach, reinforcing lifelong health and PL, and strengthening the quality of PE to ensure more positive experiences for pupils. While PE practitioners can view the required outcomes for their pupils, there are no evident citations which could validate these outcomes, which is a common issue within WHO policy. There is also no guidance about how to facilitate actions and practices which could achieve these perceived successful outcomes, or a consideration of how they could fit within school policies or governmental agenda which dictates school curricula and actions; a detriment of making policy universally applicable.

In the WHO's (2010) practical guide to developing and implementing school policy on diet and PA, suggestions for necessary policy interventions were linked to curriculum planning. They included providing funding for PE classes, appropriate PA facilities and training for PE teachers as well as involving pupils in a task force which would identify barriers and possible solutions to offer decision making opportunities in lessons about their PA activities. These provided a useful starting point to influence policy makers; as Woods et al (2021) suggest, there are positives with PA focused policy as identified by the strength of the direct or indirect effect on PA within the school setting. However, as with the WHO's (2018) global action plan, there is no evident literature to suggest these are ideal practices to achieve positive PA promotion for primary school pupils. Although a little generalised; policy actions have been shown as effective but further strengths in evidence do need to be generated for PE (curricula/lesson) practice and the consideration of how whole school policy is being applied, to create a par with the quality evidence established for school sport and extracurricular PA (Ibid).

Policies designed for the school sector are mindful of children's outcomes, based on recommendations presented by the NHS or other health-based research studies. (WHO, 2021; WHO, 2022). A focus of multiple policy initiatives was therefore on physiological outcomes, particularly in the 2000s such as the PE, school sport and club links strategy (PESSCL) (Department for Education and Schools (DfES) and DCMS, 2004), PE, school sport for young people (PESSYP) (Sport England, YST, 2009), Game Plan (DCMS, 2002) and learning through PE and sport (DfES and DCMS, 2003). This created a crowded policy space (Houlihan, 2000) where a number of different discourses, priorities and considerations were identified (Houlihan and Green, 2006). The content is still limited, and a more applicable framework is often not provided, as research conducted in primary schools has been limited and there was

a limited consideration of the logistics of implementation in line with NC criteria and child centred learning. In Ofsted's (2012) report, "Beyond 2012 – outstanding physical education for all", which includes evidence of inspections of PE to provide an overview of findings regarding achievement, the quality of teaching, curriculum, and leadership; there is a discussion about practice as providing vigorous warmups and sustained periods of activity (p17), as doing so contributes to pupils' all-round personal development (p4). Sir Michael Wilshaw (Her Majesty's Chief Inspector) in his report on the quality of PE in schools (2013), stated that there was often poor physical and strenuous activity in PE lessons and that teachers needed to improve the fitness of pupils through maintaining PA opportunities throughout lessons and engaging them with regular high intensity vigorous activity for sustained periods of time.

Despite Ofsted's claims that the recommendations provided would assist schools in this process, Wilshaw's report (2013) suggests that establishing *how* to actually promote PA within PE lessons and to do so for a sustained period, or to idealise approaches to achieve this is particularly difficult. The appraisals highlighted that 'in weaker lessons although recording information and observing each other's work aided pupils' learning, this often led to lengthy periods of physical inactivity' (p17). There is a value placed on learning, but in the same context it is suggested that this is detrimental to PA promotion; with no demonstratable guidance for practitioners to understand how to manage the curriculum, school led, and teacher led ideals for best practice pedagogy alongside quality PA promotion.

It is important to note that the PA focus within PE lessons, derived to support pupils' long-term wellbeing is not considered on a par with the educative outcomes of PE (Quennerstedt, 2019; Luguetti et al, 2017). Quennerstedt (2019) states that educative PE is that which leads to a growth of further experience, (as originally argued by Dewey, 1938). There are ideals such as pupils negotiating the curriculum to prevent inequality (Oliver, 2001), developing pupils' autonomy over content and pedagogies they engage with through participatory approaches (Enright and O'Sullivan, 2010; Luguetti et al, 2017). Of course, there will be other aspects of PE which are considered educative, but the performance of sport, fitness activities, the development of PA opportunities with an agenda to prevent obesity and enable lifelong wellbeing can be difficult to categorise as having educative outcomes (Quennerstedt, 2019). He suggests it is a political choice for practitioners based on how they view the purpose of PE. There is an accountability to policy and the NC agenda which may influence teachers in this direction. The WHO's (2022) policy brief on promoting PA through schools does identify that 'quality PE should focus on teaching physical competence and confidence, sport and movement skills and knowledge about the health behaviours needed to establish and sustain lifelong PA and health' (p5). They identify the wider reach of PE lessons in this regard for all children, to develop their confidence and suggest that PE should be part of a formal curricula, be valued and not replaced by other subjects, be taught by appropriately trained teachers and ensure that pupils' personal improvement should be the focus of evaluation (Ibid). PA promotion remains an important expectation within PE lessons, but there is little research evidence to inform successful practice for both simultaneously.

A further gap in the literature is that there is limited UK research into PE practitioners' negotiation of policy or their opinions about its integration into their settings. This is important as the policy landscape in the UK is broad and often changing and examples of this negotiation in UK primary schools would be relevant to UK teachers. In a New Zealand based study, Petrie (2011) looked to express the challenges for primary PE teachers working in 'contestable' policy contexts (p1). They established that when sport and PE policy intersects with curriculum policy this has altered the focus from the holistic approach as expected in their PE curriculum. This then lessens sustainable outcomes in learning especially as primary teachers have little opportunity to contribute to policy creation. It is also worth noting that their analysis is research inferred and does not involve first-hand viewpoints of teachers which lessens the feasibility of implementation in the primary school. It would be useful to further research and provide a more easily relatable and reflective account of the policy and initiatives identified in the UK and how PE subject leaders could integrate these into their settings.

In addition, considering a Wales based study, Rainer et al (2012) identified the challenges headteachers (from their perspectives) had in providing quality PE and school sport. These headteachers identified issues with prioritising staff development in PE (with other priorities outside of PE considered more urgent) and reaching agreement with the PE subject leader and others involved in PE policy making or decisions in school. It was considered difficult for headteachers to meet the Welsh government's curriculum achievement and PE and school sport (PESS) plan, particularly relating to collaboration with other schools and ensuring school policy considered the wider targets of governmental initiatives. These headteachers suggest this could be achieved through more strategic planning and using resources to support their staff to implement such policy (ibid). Despite this they did identify improved standards of quality PE and a greater confidence and motivation demonstrated by their staff in delivering PE as a result of the PESS plan.

This section has outlined some of the key policy expectations and recent initiatives presented in the literature to raise PA promotion or improve quality PE, with a critical analysis of the challenges of their implementation in the primary sector. The present study will allow PE subject leaders to account for how their ideals for practice stem from such governmental initiatives and their choices for development in their schools which is currently limited in the literature.

2.4 Pedagogies for PA in PE lessons

In this section, the range of pedagogies will be discussed relating to lesson structures or progressions which have been presented in the literature, with a particular focus on how effective they are in promoting PA. These are mainly based on research conducted in the secondary sector but will present a useful analysis of the impact the pedagogical approach has on PA promotion which is useful to practitioners teaching the younger key stages. McKenzie and Lounsbery (2013) suggest that PA promotion in PE lessons needs to be facilitated through a focus on active learning time, which will in turn increase opportunities

for children to develop in their physical, social and cognitive skills (DfE, 2013), which are all facets of quality learning in PE. In this section the development of these through PA is addressed and some key research in the field is appraised.

The guided discovery style, from the spectrum of teaching styles (Mosston and Ashworth, 1986; 2008) is well regarded in PE lessons due to its focus on the cognitive development and retention skills of the learner, (Derri and Pachta, 2007). Essentially, this spectrum evokes a chain of discoveries through a sequence of steps (questions) which allow the learner to reach the target outcome as efficiently as possible (Mosston and Ashworth, 2008). Christodoulidis et al (2001), argued that giving pupils ownership over the decision-making process creates a teaching environment which is varied and focused on individual improvement. These cognitive and affective learning opportunities, such as getting pupils to discover new concepts, rules, relationships between skills and cause and effect, are essential in encouraging PA (Morgan et al, 2005; Mosston and Ashworth, 2008). The way that pupils experience and understand these concepts is discussed later in this chapter.

Practitioners do need to be mindful of their pupils' ability to be autonomous and make certain decisions which are right for their PA or learning needs at a specific point. This has been evident in the literature for a long period; initially through Clement (1979), then followed by Thohari et al (2019) who suggested that teaching pupils 'how to think' rather than what they need to think about in terms of curriculum content and application, is important to developing their critical thinking skills and therefore ability to achieve the most from the guided discovery approach. The idea of visible thinking routines is supported by Hamada (2015) and Pill and SueSee (2017) who state that learning does not just happen, it is planned for, and it is the teacher's role to check the pupil's success in 'making meaning of and further understanding the lessons' (ibid p47).

To further extend these pedagogical ideals, the convergent discovery style (Mosston and Ashworth, 2008) lessens the role of the teacher in posing questions to search or discover and gives pupils this responsibility. Further, the divergent discovery style (ibid) requires pupils to create multiple solutions to single questions or stimuli, for example, if pupils are asked to perform a pass in netball, the first time they do this will commonly be their most confident, well-practiced pass. Subsequent objectives will be to design and perform passes which achieve distance, trajectory, or power, based on their own creations instead of something they have seen before. This encourages imagination and has the impact of not limiting their experiences to the replication of known skills, which as the literature suggests (Pill and SueSee, 2017; Mosston and Ashworth, 2008) is successful at promoting PA. There is faith that all pupils have the capacity to be creative and therefore teachers should tap into these innate traits to adapt their pedagogies and promote PA (Konstantinidou et al, 2015).

Similarly, in response to some of the recent research (Todd, 2014; Quennerstedt, 2019) into more educative PE practices, there perhaps should be a consideration of how children or young people experience a teacher's choice of pedagogies. As the NC and policy dictate content expectation, teachers decide on the best pedagogies from which to implement this content, but there is an assumption that teachers know what is best for their pupils in this regard (Quennerstedt et al, 2014). In the physical context children cannot be modelled on

adults, their movement is different, they should not be expected to develop into adult performers as a measure of quality they must work towards while they are children. Their reasons for performing a skill a certain way or doing it at all will probably also differ (Rhodes and Lim, 2017). There are also inherent issues with the fixed norms of growth, development stages and body mass index (Orsso et al, 2020), when many children, based on these measures display poor outcomes but are actually quite fit and healthy (Gallagher et al, 2020). Therefore, if teachers are assuming success in similar terms to their own lived experiences or set physiological definition, this may impact on the quality of PE and PA promotion.

In many UK schools, there is a trend towards a tactical approach to learning where 'tactical and strategic problems are posed in a modified game environment, ultimately drawing upon students to make decisions' (Webb and Pearson, 2008, p2), rather than a technique approach of learning skills first and then applying them to games; this is called the Teaching Games for Understanding (TGfU) model. Teaching 'why' a skill is needed using the adapted game play environment allows learners to make better decisions, develop more flexible techniques to perform the skills effectively in a game, than what is achieved with skills practiced in isolation (Bunker and Thorpe, 1982; Hopper, 2002). Wang and Wang (2018) assert that as the TGfU model begins with a modified game, pupils can play accompanied by learning through targeted questioning and then apply this learning to further game related activities, focusing on tactical aspects of these games and problem solving. In their analysis, there is a consensus that small-sided team games promote the highest level of MVPA, as the pupils have limited opportunities to be inactive and the conditions are more intense. More traditional skills-based approaches with a focus on skill acquisition do restrict physical exertion. Enjoyment is also higher in team games (Fairclough, 2003) as pupils display better perceptions of competence and they value the additional freedom that the TGfU classes provided as they can decide and solve problems during game play without restrictions on skill performance (Wang and Ha, 2012). The very nature of the model involves more prolonged game play with limited opportunity for inactivity (Smith and Leech, 2010) and it is considered more enjoyable which results in higher PA levels (McKeen et al, 2007).

Arnett and Lutz, (2009), Li and Dunham, (1993) and Hastie and Trost (2002), note no significant difference in the MVPA times of high *and* low-skilled pupils as a result of their interventions. The authors attribute this to the measures used, skills tests corresponded with gender classifications in their study as opposed to pupils self-reporting or PE teacher measures in previous research. Having similar MVPA times supports the positive appraisals of the TGfU model in this study as the modification of games was considered to enable MVPA of pupils with varying motor skill levels (also supported by Wang and Ha, 2009). Since this research into PA levels based on skill level is secondary school and non-UK based, further research into UK primary school settings is needed to establish a level of validity for practitioners.

Research conducted in the secondary school setting suggests that PA is a major focus and concern of teachers in school and the games-based approach is recognised as the best method of promoting PA (Bennie and Langan, 2014). When compared with movement-based PE lessons (i.e., dance, gymnastics), team games lessons showed higher MVPA and there was

a perception that the latter types of lessons dominated the curriculum (Wood and Hall, 2015). Fitness-based activities and orienteering also maintained a higher mean MVPA time (Fröberg et al, 2017). In exploring these practices and models, it would be useful to gauge the perceived importance and impact of such games-based models on PA and the barriers/ideals influencing their implementation. Despite the consensus on importance, it is difficult to practically implement interventions or practice across school which researchers consider effective to tangibly impact on PA participation. Doing so will provide a measure of physiologically based successful PA opportunities, as will be expected as there is a focus on increasing MVPA opportunities with these studies. This research study can illuminate and provide useful recommendations to support practitioners to promote optimal PA in the primary school setting.

A meta-analysis of the literature conducted by Bassett et al (2013) has shown the potential for up to 40% of children's recommended daily MVPA (60 minutes) can be achieved during school PE lessons (across primary and secondary sectors). On conducting a review of international studies in this area, Hollis et al (2016) concluded that MVPA levels in PE classes in the USA (measured as 36.5%) (Surapiboonchai et al, 2012) 'did not meet the United States Centre for Disease Control and Prevention and the United Kingdom's AfPE recommendation (50% of lesson time)' (p34). Wang and Wang (2018) state that prior to their study, there had been no analysis of MVPA levels and PE lessons in China. Europe and the USA failed to generate sufficient MVPA levels (Kirkham-King et al, 2017; Fairclough and Stratton, 2006; Cheval et al, 2016) with their pre-intervention analysis concluding that elementary school pupils spent 34.2% of class time engaging in MVPA, with older students in middle and high school spending between 27% and 47% of lesson time engaging in MVPA, respectively (Wang and Wang, 2018).

In a study to establish if PE lessons need to be longer to achieve more MVPA, it is interesting to note no real increase from a comparison of longer lessons and traditional block lessons (Smith et al 2015). The design and delivery of lessons with MVPA as a focus is considered a more important factor in raising PA (Fairclough and Stratton, 2005). Jin (2013) concluded that teachers' support, behaviours and individual fitness focused lessons also increase MVPA. It is important to consider young peoples' perceptions of being monitored for MVPA. Scott et al (2018), established that students had a positive view of being monitored and that they changed their levels of PA whilst being monitored. While this is a positive account of an intervention, unless the intervention can be properly integrated into provision, within the school led priorities its value will be limited. The use of MVPA testing equipment may motivate children to increase their PA levels, but it is important to consider if this motivation will be maintained without this equipment, or a testing environment. In fact, there were issues with validity of MVPA data as pupils admitted to shaking their pedometers to increase step counts (ibid). There is also a limited account of the long-term implications from such research.

Van Sluijjs et al, (2007) and De Meester et al, (2014) suggest that in a large volume of school settings it has been challenging to achieve MVPA increases during PE lessons. Speculatively, this could be due to the need to include specific pedagogies such as formative assessment

opportunities or restrictions in the types of activities the researchers could adopt. It is evident that interventions in school, such as activity breaks during curriculum time (Erwin et al 2011; Delk et al 2014) can promote childrens' PA participation, however, where more educational interventions were facilitated, the impact was not evidenced.

There are studies which look to test and provide interventions to support children's physiological outcomes (Brusseau et al, 2018; Kelly et al, 2019). They have established benefits to health, self-esteem, and psychological outcomes during childhood years and into adult life; as is clearly rationalised by the policy agenda (APPG, 2016). Pupil and school staff opinions have been accounted for in a selection of studies (Clarke et al, 2015; Holt et al, 2018; Day et al, 2019) with a focus on raising PA opportunities and a healthy school agenda. The impetus for this research has been the researchers' own design led interventions, without teacher involvement in the design process or agenda. Owing to the logistical considerations, an account of the constraints of a school day, teachers' other wider school priorities, curriculum expectations and pupils' learning needs is limited. While the focus of PE lessons particularly should be on ensuring PA is promoted and that pupils are motivated to participate (DfE, 2013), teachers cannot deliver lessons which fail to provide learning. This is the thread through which the teachers' standards (DfE, 2011) have been designed and to neglect learning would pertain to a narrow agenda which could harm children's future potential in sport (Dyson, 2014).

One of the main challenges for PE teachers is to provide sustained PA in lessons whilst improving skill development and skills application in game play. In a rare primary school study, Van Beurden et al (2003) tested an intervention in PE lessons to successfully improve FMS and PA simultaneously. They showed that in considering levels of skills mastery of the pupils and through carefully adapted skill delivery and PA opportunities, children could improve both their FMS and PA, without negative effects for either. This suggests that, in line with policy and NC expectation, a more holistic approach is possible whilst maintaining PA. Powell et al (2016) designed and evaluated a year-long teaching strategy intervention, which supported teachers in increasing children's MVPA during primary school PE lessons. This study provides useful information on successful pedagogies to promote PA as it situates intervention planning with the school staff, using regarded models and actions to develop autonomy, relatedness, and their knowledge to support them through the intervention processes (Ryan and Deci, 2001; McLeroy et al, 1988). As identified by the authors, the use of a mixed methods approach to evaluate the effectiveness of the intervention gave a trustworthiness to the data. Direct observations were quantitative but also supported the researcher's own reflections in the PE environment using her similar teaching experiences. (Powell et al, 2016). Methods were theoretically grounded and supported by discussions with the researcher's colleagues to assess the quality of interview data, collected to establish teacher perceptions and experiences of the intervention (Ibid); this improved the validity of the findings. These ideals were valued for this research study to be conducted. A commonality within the literature, this study also identified that a small sample of one control school and one intervention school and a purposeful selection of the sample could limit generalisability of the findings across different school contexts (Ibid). Also, the assessment of children's MVPA during PE could have been measured using additional methods at the intervention stage and

as follow up to aid accuracy and report on sustainability, which is underrepresented in the research.

Powell's study utilised the SHARP principles model (Figure 1) as a method of increasing active learning time and this was viewed as a sound approach from which teachers can achieve the aims of the study. The ability to apply this model to a range of pedagogical approaches and within the NC was considered beneficial.

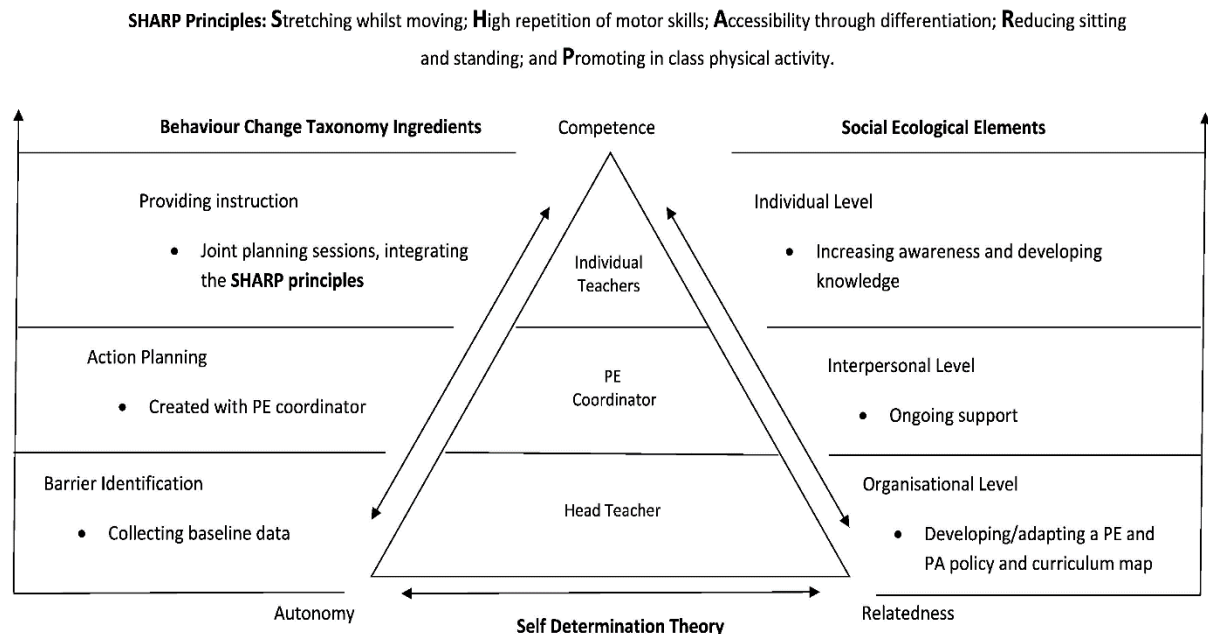


Figure 1 The SHARP principles model
(Reproduced with permission from the authors; Powell, Woodfield and Nevill, (2016))

This model was produced to support Powell et al's (2016) study focused on the design and evaluation of a teaching strategy intervention, which supported teachers in increasing children's MVPA during primary school PE lessons. 'A set of teaching principles were developed which became the core element during the intervention. These were termed the 'SHARP Principles' and involved the following key pedagogical aspects: Stretching whilst moving, high repetition of motor skills, accessibility through differentiation, reducing sitting and standing and promoting in class physical activity' (p8).

The use of an objective measure of PA in which to examine the impact of different teaching strategies on MVPA and motivation was used in a study by Rosenkranz et al. (2012). This study is particularly useful as the proportion of time spent in MVPA was collected consistently during the first 20 minutes of teaching time in the baseline and post-intervention lessons. This study showed that 'PE lessons in which teachers explained the relevance of activities and provided students with choices would increase MVPA, autonomous motivation, perceptions of competence and opinions of teachers support, whilst decreasing sedentary behaviour and controlled motivation' (p836). The use of autonomous choices in lessons is supported by Sanchez-Oliva et al. (2014), who showed this was an important facet in promoting enjoyment, the importance of PE and the intention to participate in PA out of school.

Although PA opportunities are an expected outcome of PE it is not often considered a measure of progress in learning when teachers' standards are considered. The more effective practitioners will be judged on how the pupils have learnt and applied their knowledge and skills in the practical context. Teachers and mentors would expect a certain level of MVPA during lessons, which has been established in the literature thus far, but this would be considered a teacher development outcome, rather than a pre-requisite to pupils' learning (Fairclough and Stratton, 2005). Other considerations are more commonly the psychomotor development (physical strength and skills), affective development (problem solving and cognitive skills) and social development (communication and teamwork skills) (Frapwell, 2015). In the primary school sector, assessment in any form is often limited due to the uncertainty over how to assess in PE (with the recent school created assessment expectation) and more focus on core subject data tracking. There is certainly scope for teachers to plan assessment opportunities based on, for example, endurance-based performance or evidence of engagement in PA for the duration of each lesson.

There is however, limited research which considers assessment practices which evaluate PA in lessons, particularly in the UK schooling system. In their analysis of PL assessment practices, created by policy internationally, Young et al. (2021) suggest that where PL assessment tools are connected by physical proficiencies, such as sport-related motor skills, cardiovascular fitness, and tactical awareness, these are then constructed to represent PL development needs, which is a positive account of how to measure PE learning (Wilkinson and Trotman, 2016). In some Canadian assessment frameworks, there is a focus on maintaining PA participation and related competences such as affective and cognitive learning outcomes which are designed to align (Lodewyk and Mandigo, 2017). In a Norwegian study, Joyner et al. (2020) established that physical growth in terms of height and relative age effects (RAE), the performance advantage of youth born in the first quarter of the birth year) gave a competitive advantage and higher attainment. Dalen et al (2017) suggested that the evidenced higher grades were more closely linked to RAE than height/body size.

Assessments that are based on sports performance and did not consider a differential for later year births, which invariably impact on growth and size, allow less time to practice, less chance of being selected for sports teams or quality coaching according to Copley et al, (2008). As discussed later, perceived competence is a strong determinant of sports or PA participation (Musch and Grondin, 2001) and in line with Harter's (1978) competence motivation theory this pertains to an inequitable reward system. If pupils perceive they can perform at a high level and have talent they are more likely to continue perfecting these abilities and engage with PA/practice opportunities, ultimately achieving better in their assessments of sports performance.

In this section, a critical review has been presented of some key pedagogical PE models, physiologically based PE lesson interventions, NC content led pedagogies and assessment for learning as a means of supporting PA participation. Long term, the successful application of designed programmes or pedagogies and their impact on PA promotion in the primary school has been limited, regardless of the focus on 'non-physiological' measures, such as self-efficacy, motivation, and other aspects. The common issue is the lack of involvement of the

PE subject leader or class teacher in the process, as evidenced where they have been able to link up their knowledge of school systems, improvement planning, children's learning and PA needs and staff competence; this has resulted in sustainable programmes for PA improvement (such as the SHARP model).

2.5 Teachers' promotion of PA

Despite the ongoing health agenda which looks for schools to support children and young people to be healthy and active, there has been much written about the lack of teacher confidence to deliver quality PA opportunities. There appears to be a disconnect between the need to ensure wellbeing and teachers' ability or confidence to enable this. This is an important consideration so the current study will explore key practices that the PE subject leaders use to support, develop and quality assure their staff to facilitate effective PA promotion and a quality provision.

Despite the relevant Early Years Foundation Stage (EYFS) or Key Stage One/Two (KS1/2) curriculum stating that practitioners must provide opportunities for children to be active, develop physical skills and understand the value of PA (DfE, 2014) or take part in sustained PA (DfE, 2013), it is not clear what constitutes this or how teachers can/should plan to implement this in lessons. Howells and Meehan (2019) indicate teachers and early years practitioners who 'lack the confidence to know what to do to support and sustain PA' (p1). The literature also suggests that poor confidence and experiences could stem from a limited PE provision during their teacher training. The amount of time allocated to trainees during university or school led training programmes has been limited (Lander et al, 2017; Randall et al, 2016; Randall, 2020), and the lack of a joined-up approach to ensure trainee teachers are able to observe and teach quality PE lessons in school further impacts their ability in this area. The specific challenges of teaching PE to pupils with SEND is a further barrier (Maher et al, 2017; Tristani et al, 2020).

As the promotion of PA opportunities is reliant on teachers' planning ideals, and their confidence and competence to deliver a PA focused provision, it is pertinent to discuss the current research into the potential challenges teachers face to achieve these outcomes and how research can be used to support teachers' quality PA promotion in their setting. Providing a choice of activities and letting pupils make their own decisions based on their personal needs supports motivation to be physically active (Lewis, 2014). The teachers' use of motivational strategies such as 'providing a meaningful rationale, providing instrumental help and support and their ability to gain an understanding of their students' was assessed by Taylor et al. (2008, p75). The downside of this is that issues such as lack of lesson time for PE and high accountability on teachers for the performance standards of their students does lead to low self-determination in teachers (the ability to function using motivational strategies in their teaching) (Deci and Ryan, 2000). This 'lessens their autonomy, their feelings of competence when teaching, it limits their perception of their students' self-determined motivation' (Taylor et al 2008, p89) and ultimately their ability to provide the three motivational strategies for their students.

According to the established literature (Escriva-Boulley, 2018; Taylor et al, 2010), teachers experience similar motivations and perceptions of need when teaching as pupils do in learning. This is a worthwhile consideration, as it has the potential to influence the pedagogies used and the ultimate PA gains during lessons. Sparks et al. (2017) for example, found that students' perceptions of their teachers' relatedness-supportive style were positively related to confidence in their teachers' ability. These teachers showed an interest in emotional support (Whitehead et al, 1983), had extensive energy, gave their time and resources for their pupils in a way which is warm and caring (Escriva-Boulley, 2018). More commonly, teachers who develop an autonomy supportive style relate their pedagogies to pupils' need satisfaction, their motivation and what they perceive as positive course/lesson related outcomes in PE (Taylor et al, 2010). Conversely, teachers who lack this autonomy supportive style are not supportive of their student's autonomy, only their competence and relatedness development (Washburn et al. 2020). While positive socialisation experiences in the PE context are considered an influence on the motivating styles of teachers, these may change throughout a career and be based on the context in which each teacher works (Ibid).

Van Doren et al (2021) do caution that much self-determination theory-based research in this area uses self-reported measures to assess pupils' PA levels, with only a couple of studies using an objective measure such as specific equipment; of which it was concluded that positive changes to teachers' motivating styles can increase MVPA during PE (Escriva-Boulley et al, 2018; Lonsdale et al, 2019). How PE subject leaders recognise teachers' motivational barriers and the potential impact on PA in lessons and what they do to lessen these barriers will be an area of exploration within this research.

The literature suggests that teachers understand the importance of PA, both in maintaining PA during PE lessons and in promoting it in the wider school context and out of school (Taylor et al, 2008; Lonsdale et al, 2019). However, Green, (2000, p109) and Morgan and Hanson, (2008) assert that 'there is a 'theory-practice gap' between the more academic nature and expectation of PE curricula and teachers' philosophies for PE', the former being beyond individual schools' control. By 'doing' PE, this interacts with their thoughts on the subject which are more often ideological. This results in a lesser focus on 'coherent and integrated ideas (as would be expected from a philosophy) and more of a checklist of aims such as enjoyment, health, skills and character' (p124), which Green suggests (quite disparagingly) are more like 'justificatory ideologies, which serve to vindicate teachers' preferred conceptions of PE' (p124). The teachers involved in Green's (2000) study had deeply rooted attachments and convictions relating to the value of sport, their practice and how they negotiate this practice. Students also evidenced that their previous experiences influenced their current philosophies. Depending on the learning needs of their pupils and the PA promotion ideals for a school, there could be issues with how PE practitioners apply their philosophies to their curriculum planning and pedagogical approaches.

An ongoing issue evidenced in the literature is that teachers perceive their competence as low in the primary sector (Kirk and Colquhoun, 1989; Morgan and Bourke, 2008; Harris et al, 2012; Lynch and Soukup Snr, 2017). Non-specialist teachers' perceptions of confidence are often critical of the amount of PE content during their teacher training courses and limited

exposure to PE teaching in school, which has been evidenced in the UK and internationally. (Morgan and Bourke, 2005; Yildizer and Munusturlar, 2021; Martinez-Bello et al, 2021). Observational experiences of PE lessons lead teachers to believe they lack the knowledge or ability to teach PE (Xiang et al, 2002) and teachers lack belief in their performance skills and modelling competencies (Carney and Chedzoy, 1998). Morgan and Bourke (2008) established that safety concerns affected teachers' confidence, with activities such as gymnastics and swimming being the ones sports teachers would least prefer to teach. In a New Zealand study, based in the primary school sector, McLachlan et al (2017) established that while teachers felt a good level of confidence to teach PE, they believed in doing so through facilitation rather than teaching physical knowledge and skills. This could suggest a lack of confidence in their own abilities or a poorer understanding of the expectations for good practice pedagogy but conversely these teachers may value a more pupil led session which develops autonomy (McClintic and Petty, 2015; McLachlan et al, 2017). Post intervention, after a 10-week programme where teachers observed specialists delivering nutrition, PA and PL focus activities for their classes, the teachers' knowledge, their skills and attitudes in promoting the aims of this programme were increased. However, the authors suggested that these teachers did not display the confidence to offer a similar quality PE programme without further external support or resources.

Teachers need to develop PL, in terms of FMS in order to enable their pupils' participation and enjoyment of PA through life (Wilkinson and Trotman, 2016; Sallis et al, 1999). Childhood school experiences to this effect 'construct a commitment to sport and PA' and therefore a better personal sporting ability (Morgan and Bourke, 2008, p19). There is a relationship between current participation in PA, enjoyment from participation and levels of ability and self-efficacy in PE teaching (Ibid) and therefore possible barriers to successful teaching and promotion of PA from such teachers.

Jung et al (2018) suggest that for quality PE teaching to occur, teachers need to understand the concept of a hidden curriculum (Jackson, 1968) and how their planning and pedagogical choices can take account of this for the benefit for their pupils. The hidden curriculum refers to the messages, values, attitudes which are not taught openly (Rink, 2014) and that pupils learn unconsciously, as learning gained outside the intended curriculum (Jung, 2018). Teachers need to be aware of their actions or rituals and the impact they may have on pupils' experiences of PE, how the values of the school influence (perhaps unintentionally) their curriculum planning, the learning environment, or pedagogical choices. How they interact with their pupils needs consideration as sometimes unintended phrases or terminology may be detrimental to pupils' experience of PE, such as using terms like 'be tough' or commenting on appearance whilst pupils are running/throwing. Over time the hidden curriculum becomes quite clear to pupils (ibid), and it is important to keep all possible outcomes in mind during planning, teaching and reflection.

In an Australian study, Morgan and Hanson (2008) looked at understanding the broader topic of quality PE by researching teachers' perceptions of the benefits of their own PE provision. They found various benefits from their students' participation in PE across the physical, social, emotional, and cognitive domains, with specific reference to PA promotion; PE provision was seen as integral to increasing student PA and improving fitness and it was viewed as the

school's responsibility to promote PA opportunities to enable adequate activity levels and increased PA later in life. This is echoed by Bennie and Langan (2015) who identified that PE teachers value a games-based approach to developing PA as a measure of high-quality PE.

Some previous studies do provide an understanding of teachers' views of how to implement specific school wellbeing initiatives within their schools (Bennett et al, 2013) or their views of a school as a promotor of PA (Martínez Baena, 2011). In an American study, Roth et al (2019) considered PE teachers' perspectives of the SPARK programme which is a standards-based approach to teaching PE whilst maximising PA participation (Dowda et al, 2005). There is little to support the SPARK programme except a broad assertion by the teachers that it could improve their practice. Multiple challenges were perceived to prevent successfully achieving this; including whole school factors such as the low value of PE within the school, which undermined attempts to position PE as an academic subject. Teachers also felt the need to go beyond their job duties to improve the PE programme in their schools due to a lack of support and the perception that while the SPARK programme was a way to improve PA it overlooked expected standards of learning and knowledge gain (Roth et al, 2019). These are non-UK studies which limits the reliability of information that can be garnered for PE practitioners' practice in the UK and in the former study (similarly) too much of the research in PA promotion in school used a pre-decided initiatives to inform reflections.

Daly-Smith et al (2021) looked to advance their understanding of essential physically active learning behaviours in teachers by conducting a meta-analysis of 25 papers. The authors conducted an appraisal of the studies for quality, based on Garside's (2014) recommendations for appraisal for qualitative synthesis, to consider their trustworthiness and the theoretical and practical considerations. Through thematic coding and the construction of themes underpinned by the Theoretical Domains Framework (TDF) (Atkins et al, 2017), the authors could account for key drivers of behaviour from which to inform potential interventions. They established that teachers' confidence to deliver PAL was directly linked to their ability to manage pupils' behaviour. Where teachers were more confident this led to a willingness to try new approaches, be creative and adopt a trial-and-error approach with PAL practices. As discussed earlier, the lack of confidence to teach PE identified in primary school teachers would have negative implications on their ability to promote PAL. Perceptions of relevance are subjective however, in that there could be bias in appraisals which focus on specific environments where PAL behaviours are exhibited. The authors do suggest that some studies failed to use frameworks to guide interventions or the structure of analysis, this then impacted the validity of this meta-analysis. The different approaches to PAL delivery could cause challenges in interpretation and the predominant use of researcher led programmes was considered to prevent a consistency to these programmes.

This section has reviewed the literature regarding teachers' understanding of how to deliver effective PA opportunities, the challenges they face in terms of their confidence, knowledge, and pedagogical skills and some of the ideal practices and traits teachers should understand in order to support quality PA. It remains that the primary class teacher is the best person to teach PE as they have the personal knowledge of the children, with their needs and abilities (Wright, 2004). Additionally, they have an established position in the school, allowing a choice

of teaching strategies, content decisions and learning environment (Jones, 2015). Despite this and the literature presented, at the time of writing there is limited research into PE subject leaders' support of teachers' PA promotion or their opinions of what constitutes quality PA or how to promote it in the primary school.

2.6 Challenges to promoting PA for children

As PE subject leaders' ideals about promoting PA are not well documented in the literature there is also limited literature which directly considers the challenges to promoting PA as evidenced from children's perspectives. Barriers to PA participation and engagement from children's viewpoints are comprehensive and varied, and are dependent on gender, age, ethnicity, socio economic background and school typology (Romero, 2005). The perceived barriers to children's PA participation as outlined in the literature shall now be discussed, highlighting the considerations for practitioners in the primary sector for their design of effective PE lessons to manage these barriers during curriculum time PE.

There are fewer perceived barriers to PA participation for primary aged children (Moore et al, 2013; Sallis et al, 2000). This is in line with higher levels of PA and volume of MVPA evidenced for children in primary school than their older counterparts (Gidlow et al, 2008), which is probably due to less external demands on time for younger children. Gender and age differences in perceived barriers and number of barriers are less apparent within the primary age range and their reasons for participation are similar (Robbins et al 2017; Moore et al 2013).

Stuntz and Weiss (2010) identified four common elements from the children's viewpoints, which practitioners should consider in their design of a PE curriculum. These are perceptions of competence and autonomy (Haerens et al, 2007; Holt et al, 2019), fun and enjoyment, peers' relationships (Heitzler et al, 2006) and learning new skills. The focus of education and other PA opportunities should be on creating a developmentally appropriate learning environment, achieved through the planning and structure of sessions (Bailey et al 2013). Studies which consider the perceived barriers to PA for specific groups, establish that children had more intrinsic reasons for poor participation, such as self-image, body related concerns and promoting autonomy and self-competence for overweight children (Zabinski, et al 2003; Deforche et al 2011) and for autistic children (Obrusnikova and Cavalier 2011).

As discussed in the previous section, teachers who take account of pupils' autonomy develop key traits in their pupils such as feelings of competence and relatedness which generally result in increased PA levels as they have the motivation to challenge themselves (Perlman, 2013). Within the Sport Education Model (SEM), Perlman (2012) identified that when pupils were allowed to demonstrate competence and contribute to the lesson beyond effective game play their MVPA levels increased. He outlined that the use of a scoring system gave pupils tangible resources from which to demonstrate their competence which improved their MVPA levels. Perlman's (2012) study focused only on unmotivated pupils participating in a SEM based class in comparison with pupils participating in a skill-drill-games class. So further consideration about how the majority of pupils who exhibit a range of positive and negative motivations in

PE, experience these practices would be useful. In a comparative assessment of the SEM with direct instruction (DI); PA intensity levels, game performance, and friendship goals were assessed in a primary school context by Rocamora et al (2019). They established that pupils who experienced SEM teaching over 15 structured sessions had significantly higher light and moderate PA levels, together with more successful friendship goals than those who experienced DI teaching. The latter showed higher sedentary PA levels and a good level of game performance was measured, but this was still better for the SEM group. The present study provides a practitioner view on the perceived impact of different types of instruction on PA and considers the feasibility and challenges to sustainability in the primary school setting.

In TGfU based lessons, male pupils show higher MVPA than female pupils. In a Chinese secondary school-based study, Wang and Wang (2018) suggest this may be due to male pupils experiencing a higher quantity of and more appropriate practice trials in mixed gender classes or that male pupils tend to enjoy team sports more than females do. Boys may also be more likely to engage with certain sports (as would girls) due to cultural, media or family influence, which Wang and Wang (2018) state may have influenced their data collection (Burn, 1996). The socio-cultural context in which children play is more of an influence and support for them to be physically active; more so than psychological or intrapersonal factors (Bailey et al 2013; Stuntz and Weiss, 2010). This is supported through the NC focus on social development. Educationalists should encourage participation in activities which are informed by the socio-cultural context, which are enjoyable to children and provide those activities that they feel competent doing and that include positive social support, moving beyond simply educating children about the benefits of PA (Stuntz and Weiss, 2010; Lewis, 2014).

There is more evidence for an increase on MVPA for adolescents than children through intervention studies (van Sluijs et al. 2007). This is related to the assertions stated previously in this chapter; adolescents do exhibit difference in motivation, perceptions of barriers to PA participation and ideals for teaching pedagogies and support based on gender. The influence of school and family provided the best results in this age group in terms of MVPA increase and positive engagement and management of challenges. Mentorship by older pupils also impacts, as an increase in social support led to better self-esteem for both boys and girls (Corder et al, 2020) and the ideal of developing social relationships to develop self-determination in pupils is also supported by Allen and Kern (2017) and Wentzel and Ramani, (2016). It is important for practitioners to be mindful that these social approaches may not promote PA, autonomy or other or wellbeing outcomes, as suggested in some research due to pupils' anxieties about expressing feelings about PA due to potential negative responses of classmates (Holt et al, 2019), embarrassment about performing in front of peers (Mitchell et al, 2015) and a perhaps inaccurate perception that autonomy is respected by others and they are interested in these ideals (Ryan and Powelson, 1991). Further research which explores if similar findings are relevant to children in primary schools is needed to support practitioners to identify the best ways to promote PA.

Mental health issues lead to disengagement in everyday activities and a loss of enjoyment (Jerstad et al, 2010; Da Silva et al, 2012), and PA has been shown to improve physical self-

perceptions and enhance self-esteem (Lubans et al, 2016) which will support this engagement. The authors do concede, however, that there is limited available evidence regarding the specific mechanisms which are responsible for these effects and there are contrasting findings regarding pupils' neurobiological, psychosocial and behavioural actions on PA participation. The authors suggest that the mechanisms underpinning the effect of PA on cognition, well-being, and ill-being should be made clearer as they are important to give stakeholders the knowledge to effectively prioritise PA promotion (Ibid). Conversely, Biddle et al (2019) suggest that there is no positive correlation between PA and self-esteem, with more clearly associated positive outcomes in cognitive functioning and in limiting depression. Further research into how self-esteem can best be promoted through PA and the practices that teachers can develop to facilitate this is needed.

As far as gender differences are concerned, girls value teacher support and whole class-based sessions whereas competition and the use of rewards systems are valued by boys, however in some other studies competition in PA can be considered stressful and a barrier to developing pupils' competencies (Holt et al, 2019). Gender has a role in the connection between body image and PA, Corder et al (2020), identify that girls can have a complex relationship with PA, and the influence of gendered societal pressures and expectations can lead to varied outcomes (Spencer et al, 2015; Hill, 2015). Gillison et al (2009) report that girls view PA participation as their duty, related to improving their physical attractiveness and associated health and good feeling benefits; the way they perceive themselves is a key factor in their PA choices. Self-perception does not play such an important role with boys, as their motivations relate to developing peer relationships (Verselska et al, 2011). Where body image is an issue, Kopcakova et al (2014) identified more PA participation by boys than girls as a means of increasing muscle mass and losing weight, with girls tending to favour dieting.

There is a clear variation in opinion about what motivates children or adolescents to be physically active, but there is potential to explore how practitioners support quality PA promotion, including their opinions about which activities they choose to teach and the rationale for these with considerations for pupils' barriers or learning needs. A further consideration should be about how practitioners develop and work within whole school frameworks and the wider community to facilitate PA.

2.7 The wider school and community in promoting PA

The literature demonstrates a clear connection between children's engagement with PA and their wellbeing. It is associated with better life outcomes and has a preventative effect on ill-health (Anderson et al, 2006; Penedo and Dahn, 2005), self-esteem and life satisfaction are also increased through PA participation (Hyde, Maher and Elavsky, 2013). Of particular importance is children's desire to maintain and develop their activity levels into adult life which regular PA participation supports (Public Health England, 2015; Bernstein, Phillips and Silverman, 2011). As children spend a majority of their time attending school, the school staff have a necessary role in providing optimal PA (Pate and O'Neil, 2008; Kirk, 2012). It is expected that schools are able to provide an environment where there can be immediate

improvements to PA and health, doing so in the PE context (McKenzie and Lounsbery, 2009), through PA breaks during other classroom lessons (Verstraete et al, 2006) and through extra-curricular sports (Bocarro et al, 2008). There is a policy expectation for local government to fund provisions such as increasing specialist PE teachers. Also, to challenge current expectations by developing NC wellbeing foci and revising Ofsted requirements for effective PE and school sport provision (APPG, 2016) which support schools to facilitate this. There is limited clarity about how these actions are best achieved, however.

Kobel et al (2015) suggest that children engage with MVPA for 25% of each break time they had in school and therefore extra break times increased the volume of PA significantly. The testing of MVPA in pupils who engaged with extra-curricular activities has shown that structured and taught sessions achieve less MVPA and are more discouraged amongst pupils than 'free play' (Coleman et al, 2008). Where the focus was on individual fitness-based interventions with participants this had the opposite effect; with children showing more steps per day after the eight-week intervention (Lubans and Morgan, 2008). This suggests that extra curricula activities which plan time for fitness activity, a focus on intrinsic rewards such as body image or weight loss and/or fitness knowledge promotion will impact both MVPA during the session and motivations beyond this (Curtner-Smith et al, 2007; Pano and Markola, 2012).

The practice of primary schools developing community networks, which are cost-effective and utilise social responsibility schemes and other partnership programmes was evidenced by De Fever et al (2021). Such local community networks lead to mutual benefit between schools and external stakeholders, for sustainable actions which headteachers are aware is necessary as the longevity of funding is not guaranteed (Ibid; Griggs and Randall, 2018). These networks also help promote PA for life which is a part of the NC remit (NC, 2014; Public Health England (PHE), 2015) and this is supported by adults as role models who influence such behaviours (Domville et al, 2018). These networks, including those present in home environments have the capacity to influence school-based PA promotion as that facilitated in school can have the same influence on the community or home.

De Fever et al (2021) in their realist inquiry case study to ascertain 'multiple levels of influence which impact on promoting, implementing, or impeding school-based PA initiatives' (p9), identified unintentional facilitation of PA to be a relevant mechanism to help promote school-based PA initiatives. Identified by De Fever et al (2021), the realist methodology incorporates a theory-driven inquiry process to formulate the connection between an outcome that happens because of causal influences (mechanisms) that are activated under a certain context (Pawson & Tilley, 1997). Understanding these mechanisms helps researchers understand and explain an outcome observed within a phenomenon (Jagosh et al, 2013). Although teachers did not consider simple movements during class time, in short bursts as PA they provide a better learning environment, where ST is broken up, behaviour, pace of lessons, innovative teaching approaches are facilitated (Ibid). It is these considerations which motivate teachers to engage with PA, as the outcomes are positively learning focused, and teachers are already implementing these strategies.

The popularity of the 'Daily Mile' initiative pertains to lesser structured and more intrinsically rewarding activities, that have increased MVPA and decreased ST in PE lessons or more

generally within the school day (Chesham et al, 2019). Harris et al (2020) did undertake a useful study using focus groups of children, parents, and teachers to establish responses to how the Daily Mile initiative works in practice. According to the literature, therefore, it is beneficial to consider the logistical implications for a PA intervention and the challenges each group faces in planning, delivering, and taking part in this PA. The present study focusses on qualitative data to compare the practices promoted by PE subject leaders that are useful to establish their ideals about such practices and how they sit within the school sport ethos in their schools.

The development of formalised school clubs or playtime activities can be useful in raising PA and children's motivation to participate out of school (Salway et al, 2019), particularly those after school as this is a time where higher peaks of PA within the day occur (Riddoch et al, 2007). Also, the current provision for active after school clubs is high with 91% of schools offering at least one (Davies et al, 2014). Much of the research, however, is mixed regarding the effectiveness of active after school club interventions in raising PA (Beets et al, 2018; Mears et al, 2016; Atkin et al, 2011). Timperio et al (2004) conducted a review of studies into PA intervention programmes in school and concluded that those 'employing a multidimensional model of school health intervention prove to be most effective' (p46). This supports the discussion earlier regarding MVPA levels and structured fitness interventions in extra-curricular activity. Such models include interventions to several curricula and extra curricula provisions, community, parental, environmental, policy and catering practices. Schools that successfully promote PA are considered as those who effectively implement the HPS model (see Appendix 4), or a multidimensional approach (Fox and Harris, 2003). There is limited qualitative research into teachers' perspectives about how PA is promoted within the whole school context, with most research being conducted by those outside of the teaching profession. It is hoped that the phenomenographic approach in the study to be reported will enable the knowledge and experiences of teachers in the field to come to the forefront.

Issues such as the availability and use of equipment, facilities, and staff to accommodate pupils both within and beyond the school day (Young et al, 2014; Davison and Lawson, 2006) have been established in the literature. The sharing of schools' resources for free time play opportunities for the community is not usually possible with UK safeguarding laws and external use of facilities as such is usually at a fee. The value of outdoor environments for promoting and motivating pupils to be physically active has been established; particularly in relation to developing moderate, non-competitive activity within green grounds (Dyment et al, 2007). Boyle et al. (2008) considered the perspectives of those responsible for PE delivery in the secondary school on their pupils' PA levels and the positive or negative impact of any initiatives their staff use to promote PA. Many of the themes generated constituted a school or community driven implication which affects how pupils perceive PA. Some examples include the nature of a PE department's ethos and the ensuing perceptions of elitism or a need to be competitive limited pupils' motivation. The promotion of team sports in line with various policy ideals alienates pupils who prefer more independent or fitness related PA opportunities. Further, there is limited collaboration with pupils on curriculum design which lessens the long-term aspirations of pupils to engage with PA. The community leisure

provision was also perceived as lacking for pupils, which further impacted on their PA participation.

In addition to these resources, having parental or guardian support plays an important role in the PA participation and motivation of their children (Edwardson and Gorely, 2010; Zecevic 2010; Mitchell et al, 2012) and can lessen children's sedentary behaviours (Marsh et al, 2014). Similarly, to the children's perceptions of teachers' PA and lifestyle (as discussed previously), children can make positive associations when their parents show engagement in PA (Mitchell et al, 2012). The influence can in some cases exceed that of school-based interventions or practices (Marsh et al, 2014).

Working with those families at elevated risk of diabetes (as judged by socioeconomic status), Huys et al (2021) implemented guides for healthy eating and activity in school. Working with parents and community stakeholders to produce specific activity calendars and social media promotion of the importance of a healthy lifestyle. The authors were unsuccessful in this intervention, which was rationalised by the high drop out and low attendance rates in the study, possibly characteristic of this hard-to-reach participant group. van Sluijs et al (2007) identified no evidence of MVPA increase for children from minority ethnic groups or females from their comprehensive meta-analysis to evaluate the effectiveness of interventions to increase PA in children. This could indicate a lower motivation to engage in these interventions by these groups.

This last section has discussed the impact of common whole school initiatives, school ethos and ideals, the availability of space, equipment and the influence of parents and guardians on quality PA provision in the primary school. Again, PE subject leaders' opinions relating to the management of these issues to overcome them could not be identified in the literature. There is, therefore, a demonstratable need to provide more context specific ideals to support practitioners' understanding of effective whole school approaches to promote PA.

2.8 Summary

In summary, the literature has suggested that schools and teachers have an important role in providing PA opportunities and promoting PA participation for their pupils and within the community. This literature review has highlighted the policy landscape influencing PA expectations for children and young people, and the responsibilities of PE practitioners in the primary school in relation to this. A range of pedagogies have been outlined that have highlighted research into their impact on PA promotion. In addition, research has been considered about what practitioners can learn from physiologically or externally based MVPA testing in PE lessons. The potential challenges and implications for practice in promoting PA that there may be from teachers and pupils' perspectives have been emphasised. Lastly, this review has provided some context around the concept of whole school learning and PA promotion, how the school context can work with the community to improve PA and wellbeing, particularly those 'around the child'.

Overall, the research evidence for integrating PA promoting practices particularly in the primary school context is limited. There is limited information from the research which PE subject leaders can take into their own contexts and adapt based on expected systems, procedures, their ideals for teachers' CPD and pupils' wellbeing. Where researchers identify models for improving PA, they neglect to consider the challenges to implementation within the primary school and the research is rarely supported by PE subject leaders who negotiate these challenges daily.

What emerges clearly is the need for research that illuminates the practices and ideals that PE subject leaders model to promote PA in the primary school. This is the main objective of the study to be reported. By using a semi-structured interview, the participants will be given the opportunity to reflect, evaluate and discuss their practices in detail, with the aim to provide clarity about the practices and models used in their schools to promote optimal PA. Information will be gleaned through a developmental phenomenographic methodological approach to capture their lived experiences including their PA promotion practices, barriers and challenges to their ideal practices.

The research questions are:

- What practices do PE subject leaders in schools adopt to promote optimal PA?
- What factors do they see as being instrumental in determining the practices adopted?
- What are the ideal practices that the PE subject leaders aspire to adopt?
- What are the barriers to implementing/adopting these aspired ideal practices?

Chapter 3 – Methodology

3.1 Introduction

This chapter will focus on how the mode of inquiry was constructed and the contextual considerations, which were co-dependent in that one must account for the other (Knight and Cross, 2012). To establish a research point of view, the first step in the process is 'to conceptualise what the researcher wanted to learn and the context in which the researcher wanted to learn it' (p 41). In the rationale for the study to be reported, the considerations and challenges teachers face in promoting PA in their schools were outlined, both within PE lessons and within and beyond the school day. The aim of the research was to choose a methodology that was as relevant to practice as far as possible... and that would answer the research questions. To clarify this, the key characteristics of the phenomena being investigated were established (Ellis and Levy, 2009). Previous literature discusses research processes and drivers referring firstly to investigating a problem (Ibid; Blaikie and Priest, 2019). The phenomena to be investigated did not need to solve a problem to derive meaningful information for practitioners. The participants and their context did not need to exhibit issues or challenges; instead, the research could essentially illuminate the body of knowledge (Ellis and Levy, 2009) in a way which allows participants to highlight the relevant and contextual practices, ideals and opinions which have enabled them to be successful in promoting PA.

It is in the understanding of these meanings, their interpretation, construction and how they are considered in the contexts and experiences of the participants which situate this study within an interpretivist framework. Bailey (1996, p11) asserts that 'experienced and effective teachers interpret the available information in their own particular settings, make decisions, and act on them'. The research therefore considers a set of phenomena with their own as well as relational characteristics (Miller, 1978). A non-dualist stance was promoted for this study, in which the focus or importance is not placed on one individual, one researcher or one context to understand the phenomenon; but on the interrelation between them all. There should be no dividing line between the inner world (the person) and the outer world (the world in which they live) (Bowden, 2005, p12). Meaning, which is derived in relation to the phenomenon, needs to value these interpretations. Understanding the characteristics of the phenomenon to investigate guided the design of a main research question and sub-questions which define (albeit in qualitative terms) the foci to explore.

3.2 The research questions

Central Research Question:

How do PE subject leaders in primary schools promote optimal physical activity?

Secondary Research Questions:

- What practices do PE subject leaders in schools adopt to promote optimal PA?
- What factors do they see as being instrumental in determining the practices adopted?
- What are the ideal practices that the PE subject leaders aspire to adopt?
- What are the barriers to implementing/adopting these aspired ideal practices?

Alvesson and Sandberg (2011) assert that the implications and assumptions which are associated with research questions are what give them depth and that the researcher must study and establish the implied aspects of each question. This then allows underlying differences to come to the forefront of the data which should then be conceptualised in terms of participant context, demographic and experiences. For this study to be adopted however the researcher valued research questions as explicit in what they ask with any interpretation being derived only from the answer given. Therefore, the secondary research questions supported a clarity about the PE subject leaders' understanding of what PA promotion practice is, what they do to achieve this and how their practices support this. This helped to establish a methodological approach which would provide focus on the type of data to be collected and the scope for the research (Tashakkori and Creswell, 2007).

3.3 Phenomenography

The research design enabled the specifics of this study's conceptual and philosophical research phases as well as answering the research questions for this study. An interpretivist framework was valued and much of the literature rationalised a phenomenographical approach as enabling this. A key influence during the early decisions regarding research design was Larsson and Holmstrom (2007), particularly their assertions of phenomenography aiming to describe the different ways a group of people understand a phenomenon (Marton, 1981). Larsson and Holmstrom (2007) characterised the differences between phenomenography with 'the suffix-*graph* as having the aim of describing ways in which a group of people understand a phenomenon and phenomenology, with the suffix-*logos*; which aims to clarify the structure and meaning of a phenomenon' (p55). The focus should illuminate the body of knowledge, the practice of PE subject leaders in the field; what it is that they do, enact, plan for, know, understand, think, feel, dislike, and want etc... This is not an exhaustive list of knowledge gains but an opportunity to explore the range and variations of opinion.

The interview questions allowed the participants to discuss different ways of experiencing the phenomenon, with a focus on the tangible actions and practices as well as their opinions, assertions and ideals. Dahlin (2007) highlights that phenomenography describes variations in the experiences and the ways in which the participants see the phenomenon. It can best be understood as a research design when encapsulating both of these types of understanding, viewed as a non-dualist perspective (Svensson, 1997; Marton and Booth, 1997). The focus of the study to be reported was true to this definition; it is the everyday life in which the participants experience the phenomenon, which was relevant to this study, the participants being central to understanding variation in experience (Hathaway and Fletcher, 2018). The variety of opinions were both accepted and highlighted through the data collection and analysis processes, then used to develop a collective meaning. It is a 'substance orientation... how people perceive, experience and conceptualise something with these ways of experiencing an aspect of the world normally be termed 'conceptions'' (Marton, 1981, p177).

It is true to say that phenomenological studies are similarly situated within the lived experiences of the participants; their perceptions and experiences are drawn out through the data. The goal of phenomenological research is to explore the phenomenon through researcher interpretation and analysis; an important difference between the two methodological approaches is evident in the building of a theory to understand the phenomenon (Flowerday and Schraw, 2000). In this study it was considered challenging and unfair in a sense to impose a theory, essence, or structure to the PE subject leaders' work, as highlighted by Strandmark and Hedelin (2002, p79) '[to define] what the thing is and without which it could not be what it is'; as is generally the focus of a phenomenographical study.

Although sampling led to the selection of participants considered as those who engage well with and provide PA opportunities with positive outcomes, this judgement in the first place did not follow a rigid standardisation. Much assessment of quality in the education setting is based on the progress and learning of pupils and additionally in the PE context their engagement in PA in PE lessons, during school and out of school (Sandford, Duncombe and Armour, 2007; Murdoch and Whitehead, 2012). There can be no one essence or inner meaning of PE subject leaders' practice as it is their own viewpoints about the outcomes that are important to them for *their* pupils which matters. These can naturally differ across settings, due to pupils' starting points in their learning and participation opportunities out of school, facilities available and school improvement plans amongst many other variables. An understanding of the phenomenon can and should differ depending on the context of the practitioners' work; any qualitative measure of this should support its illumination thereof. As such, the phenomenon cannot be seen in isolation (Stamouli and Huggard, 2007), to analyse the relationship between the interviewee and the phenomenon will hopefully derive an understanding within and through comparisons beyond their contexts.

Pertinent to this discussion was the researcher's decision about the reasons for conducting this research. It was important to consider the differential between pure phenomenography and developmental phenomenography, as the distinction enables the researcher to answer

this question. Phenomenographical research should be considered as an approach that investigates how a group of people understand a particular phenomenon (Marton, 1986), but it was considered important to clarify if the outcomes formed a conclusion to the research (as is the aim of pure phenomenography) or if the study addressed an educational issue with an aim to solve a problem or address an issue. This may be more pertinent to outcomes within developmental phenomenography (Bowden, 1995). It could be argued that there were elements of both pure and developmental phenomenography evident in the research approach. In establishing how PE subject leaders exemplify their practice and promote PA in school, the researcher provided information from which PE subject leaders in the primary sector could understand these practices and give them the knowledge to adapt their practice; using this information to address the issues in their school at that time. It would be pertinent to suggest that this research could subsequently address an educational issue in this respect as outlined by Bowden (1995) as developmental phenomenography.

Alternatively, the research outcomes could be an end in themselves as the findings present more of a model of practice with identified quality outcomes (based on the sampling procedures) and information about how the participants managed the issues to achieve success in raising PA. There is not the focus on gathering data about a problem to solve in this study (which several developmental phenomenographical studies exhibit); but more to illuminate the understandings about practice. There was no practical issue for the research outcomes to address and the methods used to collect data were not designed as a means of either finding or potentially solving an issue. The researcher is content to suggest this study pertained more towards the developmental approach, as although the research outcomes did not actually solve a problem they could indeed be interpreted and used to do so for schools aspiring towards quality practice in the primary sector. In illuminating practice this could be simply a way for the sector to validate their own choices and adapt their practices; even if there were no perceived problems to solve. The recommendations provided would support these outcomes.

In considering the aims for this study it was important to look at the relationship between the researcher and the participants involved and also the researcher's understanding or opinions about the phenomenon. It is important to be mindful of personal opinions and how they could manifest during the interview process and analysis phases, but also mindful that it is accepted that the phenomenographic researcher understands aspects of the phenomenon under investigation (Tight, 2016). Through adopting a relativist stance (Guba and Lincoln, 1994), the researcher was able to prioritise all points of view in the process, that one's own view of truth can be different to another's view of it and therefore there is 'no objective truth to be known' (Hugly and Sayward, 1987, p278). There is room for researcher subjectivity, in fact it is important in order to derive meaning from participants, the skill is to do so using robust methods and analysis which value reality as being socially constructed and not independent of a person's consciousness (Myers, 2008). The way in which the data was collected and

analysed to develop collective meaning and maintain this relativist stance within a developmental phenomenographic approach will be discussed later in the chapter.

3.4 An evaluation of phenomenography

Most critical discussion about the use of phenomenography relates to the analysis of data, the research design itself is generally accepted as a valid research method. Ornek (2008) identifies the main issue of credibility as 'the relationship between the data obtained from interviews and the categories for describing the ways in which people experience the phenomenon' (p3). How the categories are evidenced in terms of their position as discrete entities or adjoining categories (Kember, 1997), how the resultant hierarchies are created (Webb, 1997) and the long-term validity of the categorisations (Alsop and Tompsett, 2006) have been discussed in the literature. The ability to bracket out prior knowledge and avoid a conscious interpretation of the data was a concern of Walsh (2000) and Webb (1997) regarding the identification of a hierarchy. There are more recent concerns about the effectiveness of bracketing due to there being a level of conditioning of the researchers' understanding of their methodologies which may be more influential than preconceptions that relate to different phases of analysis (Emiliussen et al, 2021). However, Akerlind (2005) suggests that the theoretical and epistemological assumptions and a clearer methodology derived more recently, have allowed for effective bracketing in phenomenographic research. It is clear that the range of ideals about who is involved in bracketing and the lack of uniformity of approach can impede successful bracketing, however this can also allow a researcher to use their own perspectives to develop the most useful choices and methods (Tufford and Newman, 2010) which is considered an important part of phenomenographic research.

Much recent research uses more robust and regular reviews of categories of description and an increased consideration of prior research and a procedure for the dialogue used at interview (Brown et al, 2016; Larsson and Holmstrom, 2007), which limits assumptions in interpretation of data and the creation of the outcome space. If the conclusions are recognisable to others and clearly show the logic and procedures for analysis which the researchers have used, this improves the reliability of the study (Trigwell, 2006). Prior to the interviews and analysis stages of this study, a number of phenomenographic studies were read, including literature reviews critiquing the framework in different contexts, to explore the variances, benefits and disadvantages of each approach.

3.5 Data Collection

The research questions pertained to an approach to collecting data which supported phenomenographic outcomes. They considered the conceptions of people, providing an opportunity for participants to describe their experiences and knowledge, understandings, and ideals in a way which they feel it is appropriate to them and their context. The interview design modelled an elicitation technique allowing open and reflective responses from each participant to explore the diversity of understanding and interpretations that can be applied to the phenomenon in their own context. Vermersch (1994) considers an elicitation interview as a means of accessing a lived experience as an 'expert act' (p1); the different ways of experiencing and understanding how to promote PA. So, within a constructivist research epistemology, how the phenomenon and its parts are related to one another will support a mutual understanding of the meaning of these experiences (Ornek, 2008). As Bowden (2005, p9) suggests; 'the phenomenographic interview has a focus; the way in which interviewees understand the chosen concept - and this focus is maintained throughout the interview'. The question choices reflected Larsson's (2007) assertions that to understand the perspective of the professional they need to be explicit in the main research aim of the study. Specifically, they need to draw out each participant's views, feelings, beliefs, understandings, and experiences of how to promote PA in the primary school, with the aim of supporting them to reflect on the meaning of these experiences not to simply describe them (Ashworth and Lucas, 2000). Vermersch (1994) suggests the elicitation interview technique as a way of supporting this; promoting three types of effects 'inducing, convincing and asking' of the participant and being mindful to consider how these are promoted, such as the types of questions or prompts and how the interviewer's method of analysis of previous responses can determine these. Therefore, the interview questions were presented in a way to evoke their personal and independent judgements and a reflexivity from a personal stance as outlined below:

- 1) When do *you* feel *you* have been successful in *your* role? Or what makes *you* a successful PE subject leader?
- 2) Can you tell me about how *you* promote physical activity in physical education lessons?
- 3) What is difficult or hinders *you* in this work?
- 4) What helps *you* in this work?

The interview schedule (Appendix 3) was within an accepted commonality in terms of the qualities to be derived from the phenomenographic interview as outlined by Bruce (1994) and the need to explore variation of participant's experiences and understandings of the phenomenon through a focus on the relation between the participant and the research questions.

These qualities are:

- they are centred on the interviewee's lifeworld
- they seek to understand the meaning of phenomenon in the interviewee's lifeworld
- they are qualitative, descriptive, specific, and pre-suppositionless
- they are focused on certain themes
- they are open to ambiguities and change
- they take place in an interpersonal interaction
- they may be a positive experience.

(Bruce, 1994, p49)

Open questions are also common as they allow the participants to select the dimensions of the question they wish to answer (Marton, 1994) and promote an independence with their own thought processes, and within the contextual and relational meaning they would derive from their standpoints. However, the very nature of open questions, regardless of whether they are pre-set or not, does allow the interviewer scope for variation within and between interviews. Trigwell highlighted that interviewers should be 'exploring at greater and greater depths of thinking without leading' (Trigwell, 2000, p68). A number of unstructured probes (Bowden and Green, 2005) are needed within the phenomenographic model in order to pursue lines of enquiry which emerge from the responses; with Ashworth and Lucas (2000) suggesting this could be considered a 'conversational partnership' (p302) as the interviewer is actively supporting the participant's reflections.

Akerlind (2008) outlined a process to start off with contextual questions which set the scene (or more easily transition) to primary questions which encourage a reflection on the experience. These primary questions always follow a contextual question to ensure the participant can reflect on the phenomenon before being prompted further. Akerlind (2008) suggests that her primary questions follow purely from the interviewees' ideas and responses, they are probed to reflect on underlying meanings, from a list of potential prompts; namely, why they do the thing, what they are hoping to achieve, why did they do the thing in that way, is there an example of that? Consideration was taken for using a more structured schedule with a probing question following a contextual question as this could support a reflection on experiences in line with the research aims of the study, but this was rejected in practice for a number of reasons. Firstly, the nature of the study required an understanding of the knowledge, values *and* practices of participants as well as their understandings about why they developed these. There was also a focus on aspirations or ideals for further improvement and a discussion on the barriers they have encountered. An interview schedule provided a more comprehensive focus which looked beyond specific meaning driven outcomes, in the existing world of the participants; they should be allowed to find meaning

and interpret what they felt was important to discuss in answer to each of the questions. This is supportive of the interpretivist framework being used for this study. Any scripted probing questions could essentially push them into a specific response and thus more spontaneous probing questions were used in relation to the participants' utterances and if further exploration or clarification was needed. It is possible that the researcher may have missed the opportunity to clarify or explore a topic or utterance, although as the interviews progressed, the researcher became more adept at this. However, within the nature of phenomenographic research, the analysis phase can and should draw meaning from all of the transcripts in relation to each other. This approach towards probing questions helped to evidence the value of independent judgements within the analysis phases and drove the researcher's interpretations (Marton, 1986; Hajar, 2021).

There is variation evident in how researchers ensure the most meaningful and relevant data is collected within a phenomenographic approach. Jarrett (2016) interviewed each participant twice, with a different focus for each interview; the first interview focusing on the participants' teaching and learning beliefs, giving them the opportunity to reflect on and understand their journey into teaching. The rationale was that doing so would prepare them for the second elicitation interview, hopefully allowing the researcher to gain genuine access to previous experience (Cahour et al, 2005). The separation of participants into distinct groups prior to interview enabled comparisons between understandings (of the bibliographic universe in this case) based in disciplinary or contextual situatedness in Cossham's study (2017). As Crotty (1998, p58) notes; 'social constructivism emphasises the hold our culture has on us; it shapes the way in which we see things... and gives us a quite definite view of the world'.

Marton and Booth (1997, p129) highlight that it is important to bring the interviewee into a state of 'meta-awareness', to enable them to articulate their conceptions; they likened this to the interviewer creating a therapeutic situation which would enable them to fully clarify and effectively move beyond any resistance or denial in the interviewee's responses. As stated previously, the phenomena to be investigated was not initially intended to solve a problem but to derive meaningful information for practitioners. The researcher was confident that this approach was unnecessary for this study and that any strategies employed to delineate the most useful information would stem only from the responses given and not an assertion about participants' psychological traits to inform the study. It was important that the participants were allowed to find their own meaning and interpret what they felt was important to discuss in answer to each of the questions. The questions did allow a variety of interpretations regarding how to answer, this did indeed produce a range of responses like for example, examples from practices they developed in school, to opinions about policy, stories about their personal lives. The researcher felt these responses were the content that they naturally discussed in answer to a question, they were important enough to be considered relevant to their understandings and practices related of the phenomenon. This led to more response lead probing questions as discussed earlier in this chapter, based (as far

as possible) to either clarify or help them to expand on what was said rather than the researcher's own opinions of what was said.

3.6 Interviews with PE subject leaders – the research sample

The decision about who to sample was very important, the groups of people who would exemplify positive accounts of PA promotion and practice was considered in depth in addition to how this is validated to sample. There was limited publicly available information which clearly identified the constituents of such in primary school settings, particularly relating to how teachers have evidenced practice in this area, in fact, this formed part of the rationale and setting for this research. The selection of participants was wholly based on the reported positive outcomes in their schools as exhibited by specified sporting organisations, charities, and governmental policies (as discussed in the next paragraph) and their role as PE subject leaders in their setting. Busher and Harris (2000), Randall (2015) and Griggs and Randall (2019) suggest that PE subject leaders are often responsible for the curriculum and PA outcomes and do have an overall understanding and accountability for the PE provision across the whole school. Therefore, they would be best placed to provide information to answer the research questions.

The role of Ofsted (the Office for Standards in Education, Children's Services and Skills) is to make sure that organisations providing education, training and care services in England do so to a high standard for children and students (Ofsted, 2019). In the more recent Ofsted reports, there is certainly an increased focus on PE and school sport provision with a discussion around the promotion of PA which in some respects links with attainment outcomes, within PE and across the school. The researcher considered these reports an important starting point to identify potential schools to sample as Ofsted reports are a nationally recognised and regarded evaluation. Exploration of the practices which afforded the judgements as stated in the inspection reports formed the rationale for this sampling approach. Schools were sampled based on recent Ofsted inspection reports (completed within a two-year period prior to data collection), which identified a high standard of current practice in PE and school sport as outlined by the common inspection framework (Ofsted, 2019). This ensured that the judgements and any information provided by Ofsted were an accurate reflection of the current practice in the school at the time of the research and the work of the PE subject leader. During the data collection phase of this study there was evidence of a policy and media drive to improve PA in education settings (APPG, 2018; NHS, 2018) which may have resulted in an increased reflection on the quality of PE and sport in schools in Ofsted inspection reports.

The researcher considered the AfPE quality mark as another useful measure for sampling schools. This award is decided by senior school leaders and PE professionals and measures the quality, outcomes, and opportunity in primary schools in terms of their PE, school sports and PA provision. Those schools achieving a quality mark with 'distinction' have been awarded

this because they excel in their practice and their outcomes are considered of a high standard. The researcher's sampling included only those schools which were awarded a 'distinction' quality mark, the highest award possible. The specific criteria the AfPE inspectors look for is not made publicly available unless the school actually applies. It was also possible to conduct an internet search and find information about the types of criteria used in an assessment and the potential sources of evidence schools could use to demonstrate their achievement of the said criteria from primary school websites, regional sports/PA partnerships and initiatives and private PE teaching companies and resource providers. These were not considered as accurate as the AfPE quality mark criteria but did further support the researcher's own informed judgements to sample effectively. One such example is provided in Appendix 1.

Initially the researcher had planned to consider schools that had achieved Youth Sport Trust (YST) school games mark award at Gold level in addition to those who had achieved the quality mark distinction. The school games award at either Bronze, Silver or Gold level, rewards schools who have a commitment to and have developed competition, school sport and PE for all ability levels. There is a focus on recognising PA promotion, tracking participation and a systematic approach to whole school engagement to include leadership development and the club links in the community (YST, 2019). Ultimately however, the AfPE quality mark was a more rigorous assessment process and already highlighted quality practice in the areas which school games awards recognise, going beyond this to highlight more examples of practice and a further range of outcomes which would benefit this study. (See Appendix 1 example). In fact, most of the schools sampled had achieved both awards which could be considered to exemplify the most representative sample of a high standard of provision, rather than being part of the sampling criteria.

Sampling decisions considered which participants were best placed to answer the main aim of the study; How do PE subject leaders in primary schools promote optimal physical activity? As discussed, the sampling procedures considered participants to be 'best placed' if their school exhibited successful outcomes in sport and PE provision in recent Ofsted inspections and had also achieved the award of AfPE quality mark with distinction. Contact was made with 15 schools which met these criteria in North and Central England. Sampling was conducted widely by geographical area to offer a range of socio-economic advantage. The aim was to diversify the sample and illuminate practice in promoting PA with schools experiencing different challenges; such as exam results pressures, financial challenges and pupil premium intake.

Of the 15 schools contacted, the researcher received 2 declines and 10 expressions of interest to take part. There was no requirement to reduce the sample again by stipulating more criteria as 2 PE subject leaders of the 10 who expressed interest failed to confirm availability. This left 8 participants and their schools who would take part in the study. The schools in the sample did actually reflect differing socio-economic advantage and differing regions, so the researcher was confident about a diversity of school sample. It was recognised that the size of the sample to be used in this study was lower than that advocated by many

phenomenographic researchers. Larsson and Holmstrom (2009) for example, suggest in their research into a large number of phenomenographic studies that 'the data from 20 participants should be sufficient to discover all the different ways of understanding' (p56). Bowden (1995) suggests that the data from between 20 and 30 subjects would provide sufficient variation in 'ways of seeing' (p17) but not so that the data becomes unmanageable. Some authors propose that data should be collected until a saturation point is reached; continuing with data collection until no additional conceptions can be discerned (Sandburg, 1997).

In discussion with the supervisory team for this study, the nature of each school context was considered, the experience and perceptions from the participants in relation to the interpretative aims of this study were considered to create a broader scope of discussion. In essence, the participants' own interpretations of the interview questions were not only possible but encouraged. As the researcher's personal interpretations also have a place in the analysis of data, extending from a background in teaching PE in the school sector, the methodological approach and focus of the study lent itself to a deeper analysis rather than reporting on breadth of views. The sample size reflected these considerations and supported a push for a rigorous analysis and interpretation of results (Bowden and Green, 2005).

Participants were approached, initially through email communication with the school office staff, stating the research aims and the information about what is required from their school PE subject leaders. A follow up telephone call/email following an expression of interest was arranged in order to manage the logistics of the process and finalise details for the interviews. Interviews were (in seven out of eight cases) conducted on school site at a time that fit within the participants' work schedule and constraints. One of the interviews took place at university (the workplace of the researcher), during school holiday time. A private room was secured to ensure a quiet environment for the duration of the interview.

3.7 Ethical considerations

A Liverpool Hope University ethics form was completed, and procedures were followed and approved by the faculty research ethics committee following revised British Educational Research Association (BERA) ethical guidelines (2018) prior to any data being collected (see Appendix 5).

All schools and participants involved in the study remained anonymous, recorded during transcription, analysis phases and within the final thesis using their initials only. Any publications including conference presentations and journal articles submitted after completion of this study will maintain this anonymity. Schools were identified by their locality (if required) and school 'x' and care was taken during transcription to anonymise any reference to people, places or organisations stated by the interviewees. Any data collected and information stored electronically maintained this anonymity. The researcher offered to

produce appropriate criminal records checks as the majority of the interviews took place on school site (however, this was not requested). Strict safeguarding and risk assessment procedures were followed regardless, following the school and university policies, when on school site.

The researcher considered it appropriate to identify as a university tutor, who led PE ITE provision to give the participants an idea of their experiences and knowledge in the area of study. By doing this, participants would hopefully value the questions and probes for more information, as well as the value their contribution could make to other PE subject leaders and ITE trainees. This ideal is supported by Sandvik and McCormack (2018) who advocate the use of person-centred interview experiences through being alert to communicating holistically. Showing a genuine awareness and interest in the lifeworld of a participant can contribute to a more autonomous interview (Deci and Ryan, 2008). It allowed a level of connectivity with the researcher, the participant, and the context; representing the researcher's context and the common context of the situation (Jacobs et al, 2017) which are all important for knowledge gain. This also supports researcher reflexivity, by using personal insights and understanding to work with the dialogue at the time to effectively probe for meaning and progress the interview or adjust the approach to support the participants provide more succinct answers if required.

Schools were approached nationally across a range of geographical areas (based on indices of deprivation) as previously discussed. It was not considered that partnership involvement with the researcher or their university employer would prevent schools that fit the target sample from being involved in this study. To manage any potential power relationships, the rationale and expectations for the interview were shared with the participants and it was clear that the interview questions were explicitly connected to answering the research questions and phenomenographic research considerations, instead of topics more connected to their role with the university. While it was planned to account for schools who work in partnership with the researcher's university employer, as not being chosen for convenience and relationship; the final sample did not include any partnership schools, so this was not necessary.

All participants were provided with formal research information and approval forms, containing information about the whole research process, including a rationale, methods, expectations of participants and how anonymity and confidentiality will be ensured. In line with BERA guidelines, participants were informed within the forms and again prior to interview that they could withdraw at any time, prior to writing up of the thesis.

While the researcher considered it unlikely that discussions at interview could bring about memories which were worrying or painful to participants, due to the positive sharing of practice focus, it was made clear that if this occurred, the interview could be paused or cancelled at any point. The design of the interview questions was carefully considered to support the participant's independent discussion and interpretation of the questions (as valued by Harris, 2011); the researcher felt that this would put them at ease.

3.8 Data Analysis

There are multiple accepted methods from which to undertake an analysis when subscribing to the phenomenographic model, including variations within each stage. The researcher engaged with multiple phenomenographic research studies (Jarrett, 2016; Larsson and Holmstrom, 2007; Saijo, 1988) in order to explore how others have analysed their data and to promote the ideal that an analytical approach does not need to be constrained by a particular model or way of doing it. For the researcher, any considerations about phenomenography should be in the way findings are interpreted, how the analysis is conducted should work to present this interpretation. As Akerlind (2005, p76) asserts.

'[Phenomenographic] researchers' data interpretations are made on a collective, not an individual interview basis. The aim is not to capture any particular individual's understanding, but rather to capture the range of understandings across a particular group. In other words, the analysis goes across and between all of the interview transcripts so that the categories of description that are yielded reflect not individual meanings or conceptions, but rather conceptions from a pool of meanings. The interpretation is, thus, based on the interviews as a holistic group, not as a series of individual interviews.'

As the study to be reported considered a broader area, 'experiences and understanding of practice to promote PA in school' the researcher needed to consider the best approach to analysis that could really give adequate insight into the nature and meaning of these experiences (Watkins and Bond, 2007) and understandings. Phenomenographic data analysis does not need to be based on externally perceived models of best practice, or from a commonality of what has been done previously (O'Connor et al, 2018; Stolz, 2020). Returning to researcher decisions to adopt a developmental phenomenographical approach, when conducting the phases of analysis, decisions about each subsequent phase were based on personal perceptions about how well data was being drawn out and illuminated in relation to the research aims of this study whilst remaining true to the participant voice. The focus was to illuminate how the participants experienced the phenomenon, namely what were their opinions and understandings about how PA can be promoted in the primary school. Therefore, all phases needed to contribute to achieving this goal. The analysis was constructed in such a way so that if at any time the researcher felt the data was not being illuminated effectively, there was concern about validity of interpretation or confusion accounting for the outcome of the analysis the researcher could 'move back'/reflect on the previous phase(s) and readdress processes going forwards. Each phase was saved and unedited to allow this if required. The next section will outline the phases of analysis used in this study with a rationale for their use and a discussion about the processes.

3.9 Phases of Analysis

3.9.1 Phase 1

Transcription and Familiarisation

The first phase of analysis involved the transcription of the interviews as a way of supporting a familiarisation of what the interviewee was saying in response to each question. The researcher undertook all interview transcription personally and did so verbatim, within a short period of conducting the interview.

As the interview questions were derived from Larsson's and Holmstrom's (2007) approach in this study, this study's analysis was used as a benchmark. The researcher then explored and compared different practices, to develop an analytic approach that would delineate the best range of understandings from the data. Larsson's first phase was to read the full text, which various other studies (Drew et al, 2002; Trigwell, 2006) also advocate, therefore for phase one analysis the researcher read and re-read the discussion within the transcripts with a view to achieving familiarisation with the text and contextualising their understanding drawing on professional experience as an PE practitioner relating to what the participant is saying. This phase was simply looking at what was on the transcript, there was little consideration about the research questions, or any attempt to group into themes at that stage. The rationale behind this was to help the researcher to define and summarise what the participant was saying, in their own words. This would hopefully support subsequent phases of analysis to more easily identify themes which are true to the narrative in the transcripts in the next stage of analysis. It is true, that on reading through more transcripts that the researcher may have thought about commonality between what each practitioner was saying, but for the best part simply summarising what was said hopefully ensured a more inclusive approach and more validity to enable an 'openness to all possible meanings' (Akerlind 2005, p324).

The researcher added notes to clarify meaning if applicable (i.e., if the PE subject leader was referring to schools in a certain area or had discussed their involvement with a SSP initiative but not made this explicit in the dialogue). They also noted any thoughts at the time about occurrences considered relevant or feelings about what the participant was saying/doing (i.e., showing annoyance, or pride). This was not to infer meaning at this early stage but to ensure accuracy of interpretation in later analysis. In summarising the dialogue, the key content relating to opinions, decisions and actions the researcher remained focused on ensuring these summaries remained a guide to meaning, or to remember their own interpretations from the time. This phase did not attempt to contextualise the content as appropriate or relevant to the research questions, only to be used if required to support the later searches for meaning and variations in meaning from the transcripts.

3.9.2 Phase 2

Allocating utterances/quotes to a specific research question (or more if necessary)

Table 1 (Analysis 2 spreadsheet participant 'JS' extract)

<i>Number order of quote</i>	<i>Participant name (abv)</i>	<i>Quote/extract</i>	<i>Research question focus</i>
6	JS	<i>From surveys that they've done, (parents value sport/PA) PE Ofsted's, surveys that I've sent out to parents about the PE provision and activities, surveys I've sent to pupils all come back, sort of 90% positive and that sort of thing.</i>	2
10	JS	<i>they allow us to use if they haven't got exams on we can use. Normally using an outdoor space they will fit in with us... But if we need an indoor space and they've got exams on or can't let us we can get in somewhere... if they've got nothing booked I can book it two weeks in advance free.</i>	2

Influenced by Sjöström and Dahlgren's, seven steps of data analysis in phenomenographic research (2002) (see Appendix 2) the researcher engaged with the idea of familiarisation phases for initial analysis as well as a value placed in gaining an in-depth understanding of the data (Creswell, 2013). True to a phenomenographic approach, the researcher felt the participants' voice, their points of view should be present within the analysis for as long as possible. This instilled confidence that the choices made about which utterances best illuminated answers to the research questions were representative of the participants' understandings and practices. However, the second step of identifying similarities and differences and selecting extracts straight from the transcripts that seem most relevant and meaningful for the study (as suggested as good practice by Khan (2014) and Sjöström and Dahlgren (2002), seemed to lessen the validity of an analysis; particularly at early stages of the analysis. The researcher was minded of Dortins' (2002) negative reflections on her own transcript analysis. She stated that the reading was a reorientation away from what she calls defining characteristics of the interview process, such as the conversational tone, a true social and language topography which really reflects the construction of an identity in relation to place, historical or social themes (Smyth, 2007). A construction of identity means that 'perception does not exist in isolation from experience and experience does not exist without influence from perception' (Jarrett, 2016, p32), therefore the researcher wanted to try and allow the features of their 'talk' rather than their own 'conceptions' (Saljo 1997, Marton, 1995) to be as present in the analysis phase for as long as possible.

Jarratt, (2016), Hutton-Jarvis (1999) and Dortins (2002) all developed a focus on similarities and differences, or 'consistencies of meaning' (Dortins, 2002, p212) from which to establish understanding. These were constituted through a cohesion of the participants' accounts into 'a limited number of qualitatively different conceptions. Where there were inconsistencies, these constituted qualitative differences' (Ibid). A successful illumination of meaning was achieved when considering it in relation to the group of transcripts and also from a transcript on its own. However, it was thought that sometimes an individual transcript could not provide this consistency of meaning and needed to be analysed and understood in relation to a group of transcripts.

For this study, the researcher felt that analysing the transcripts individually to infer meaning would not provide a consistency of meaning which accurately represents the views and practices of the PE subject leaders. It was thought that the researcher may be led into looking for a specific way of understanding the phenomenon in one transcript if it was evidenced in others. At this point the researcher favoured identifying cohesion between participants' statements in forming categories, for example, a focus on a specific way they motivate pupils to be physically active, or a similarity in a challenge they have faced and how they overcame it. It was intended to do this in later phases by using the researcher's interpretations of cohesion, their subjective opinion connecting meaning from the participants' voice.

A strength about the design of the interview questions was that they were written broadly in line with the research questions. It allowed the researcher to start to make connections between answers to interview questions and answers to research questions as would enable a more meaningful progression, scaffolding (in a sense) for further phases of analysis. Maintaining the features of the participants 'talk' for as long as possible, all content from participants was categorised as pertaining to one of the research questions. It was noticed in the interviews that when participants responded they did so with a relatively clear focus on answering the interview question and the discussion also linked to previous and subsequent questions. This is because the interview schedule was designed to be open, to allow and accept interpretation of response; for which the researcher could evidence utterances which provided examples from practice, feelings, and opinions about the topic. Occasionally a quote or utterance within a quote could pertain to multiple research questions. Therefore, to ensure potentially relevant data was not omitted from future analysis, these quotes were categorised within each of the research questions they related to.

When engaging in this phase, Microsoft spreadsheet occasionally prompted the researcher to use a summary of the quote typed into the cell. It was decided to ignore this function to record truthfully the utterances of participants, which should support the validity of the research as the analysis progresses.

3.9.3 Phase 3

Compiling all utterances/quotes into specific spreadsheets based on a research question focus

Table 2 Analysis 3 (research question 2 extract)

<i>Number order of quote</i>	<i>Participant name (abv)</i>	<i>Quote/extract</i>	<i>Research question focus</i>
97	LM	<i>you know we've done kind of staff voice as well and I think that's really important. They know themselves if they need to develop and there's an area and you can't say 'right you've got to teach that, off you go!' Erm so it's working with them and obviously through staff meetings we've kind of got that constant CPD and its quality as well.</i>	2
10	RL	<i>We've created this, (skills document) erm... using the national curriculum but also just unpicking it a little bit further. So we do work closely with the (county, name omitted) sports partnership and the (city name omitted) sports partnership and they really liked that when they saw what we'd done.</i>	2
45	ZM	<i>I think having the coaches has been a massive, massive because otherwise it would have been a lot of CPD run by me, whereas now they can be involved in CPD every week rather than me giving a one off CPD staff meeting which would have been useful for a term and then they would have gone onto something else. Whereas now it's continuous and they can ask questions of the coach that maybe I couldn't answer, I mean I'm not all singing all dancing, I just actually enjoy it. But we've got someone there who is a specialist, who we can ask, she does did a lot of the CPD for us.</i>	2
76	ZM	<i>Cause that's what I believe myself, I believe in the mental health behind the exercise and things like that, so I wanted that to come across in lessons. My head teacher agreed and she felt the same that maybe that discussion wasn't happening as much as we would want so, that's why now... and since then I hear children talking about it and in science I see it coming through, when we do human body and things like that. When we do human body, they've got that vocabulary, that</i>	2,3

		<i>knowledge which supports them and I've seen a bigger</i>	
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This phase was simply to provide a new framework from which to view the data more clearly in a different way. Each research question and the quotes allocated to it were presented in a spreadsheet, the quotes then viewed again to check the meaning could be used to answer the research question they had originally been allocated to. This re-checking with a view on all participants' voices helped to visualise the way the researcher had interpreted relevance to each research question. There is an element of ambiguity with this, so this process of rechecking lessened the chances of confusing meaning given to each quote as interpretations were confirmed multiple times. Rechecking has a level of commonality within phenomenographic studies, with numerous studies either using (Andreas; 2019, Jain et al; 2016) or advocating its use (Kettunen and Tynjälä, 2018). The considerations regarding supporting validity during the whole analysis process will be outlined later in this chapter.

3.9.4 Phase 4

Allocating utterances/quotes to specific colour categories (coded to reflect understandings about practice in promoting PA)

The choice to create categories at this point of analysis in phase 4, was informed by the researcher's earlier decisions at the start of the process to maintain as much of the participants' voice for as long as possible and as a framework to support the methods and their validity in future phases. This was the first point at which a subjective descriptive coding was attempted with a view to create categories which define the actions, the people, the situations that promote PA; following Marton and Booth's assertions that a focus of phenomenographical data analysis should be to create categories that identify the differences in the experience or understanding (1997). By creating essential topics from the data (Saldana, 2016) this would ideally prevent understandings or experiences becoming lost within their previous allocation to a research question as further phases of analysis were completed. This categorisation allowed the range of opinions and practices pertinent to a specific way of working to achieve PA to remain within the data as further phases progressed. Reviewing a distinct way of experiencing/understanding how PA is promoted and encompassing the entire range of variation (Bruce et al, 2012), which as discussed was important to ensure as long as possible within the process.

There were 16 colour categories created as outlined in Table 3

Table 3 Colour coded categories

<i>Colour</i>	<i>Category description</i>
Blue	making memories, supporting learning and Pa
Brown	differentiation for PA
Dark Blue	supporting teachers' reflections, learning
Green	dissemination of best practice
Grey	pupils reflections on learning and PA
Lilac	externally promoting PA, parents, clubs
Orange	rationale for PA content
Pale Blue	facilities, resources to support PA
Pink	assessment for PA
Purple	rewards to promote PA
Red	consistent timetable for provision
Yellow	PA across the whole school context
White	competition to support PA
Peach	collaboration for PA

Table 4.1 presents two examples of two quotes and their allocations to a specific colour category. On the spreadsheets these allocations were highlighted in the relevant colours.

Table 4.1 Analysis 4a

Number order of quote	Participant name (abv)		Colour category	Quote/extract	Research question focus
61	SD		Green – dissemination of best practice	<i>you know the teachers most of them are very competent in PE, we haven't got many that are that weak...they're very good at coming to me you know... 'I'm teaching this, can you help me with it?' I've got some time to go out to have a look, to talk with the teachers about the PE side of things, to observe and look to improve practice. I'm always looking for training opportunities; we buy into the SLA so that we can use that side of things ...</i>	1
58	SD		Pale blue – facilities, resources to support PA	<i>we took in two groups of 60, we wouldn't be able to cope with them. Were at 44 or 45 this year, there's 46 in year 6 there's 44 next door in year 5, but then we've got year 3 and 4 are both 30's, so yeah we did have to expand. We obviously spent a lot of money on PE equipment, our PE store's quite well stocked, in fact it's overflowing (higher intake of pupils)</i>	1, 2

This method was developed across all the transcripts, separating of categories and sections as previously described but always with a view to combining beyond individual transcripts in analysis (Akerlind, 2005, p327). This allowed for 'pools of meanings' (ibid p325) to be created as more of a collective analysis across all the transcripts as a set was facilitated. This would hopefully develop categories of description which are interrelated and understood in relation to each other (Akerlind, 2005), which support an overall understanding about the practice to

promote PA in their primary school. Bowden and Walsh (1994) suggest as a possible focus when reviewing the transcripts, that there is a consensus to resolve or understand what they define as mismatches or inconsistencies within the data and 'to focus on borderline transcripts which do not fit the proposed categories of description' (Akerlind 2005, p328). This approach was discounted, firstly as the nature of the study was not intended to establish issues or solve them and secondly, the researcher felt it would be unhelpful to subjectively devalue certain opinions or practices as 'inconsistencies'. These opinions or practices were considered valuable and should be suitably evidenced as such with the view to being true to every participant's voice/opinion rather than looking for a consensus.

The researcher did appreciate that context can be relevant in analysing individual transcripts. The interviews were evidence of this in that they showed variations in practices and were conducted in schools with varied pupil intake, locality and staffing in PE. An analysis which clearly highlighted the individual 'situation' was considered, as it would be easier to establish, as an example, what the successes were in relation to the specific barrier they faced and then why they are successful by taking this context into account. However, the researcher did consider a collective analysis to be more valuable to the research aims of this study as too much thought about the context and its implications could influence choices for categories of description and possibly direct the researcher's decisions about the S relationship between these categories (Marton and Booth, 1997). These should really be inferred or analysed from the variations of opinion across all the transcripts as the 'meaning and structure of human awareness are intertwined and mutually constitute each other' (Akerlind, 2005, p70).

Phase 4 (b)

Compiling each coded category into a spreadsheet

Table 4.2 Analysis 4b (Lilac Externally promoting PA extract)

Number order of quote	Participant name (abv)	Colour category	Quote/extract	Research question focus
60	ZM	Lilac externally promoting PA	<i>I want it to be, oh I like exercise, how it makes me feel, see mental health is a big thing at the moment; I have a strong belief that exercise helps mental health so I believe it would help generations if exercise became more... if they all became more active. Physical activity in family's needs to be more of a priority than I think it is...</i>	2,3
63	CH	Lilac externally promoting PA	<i>Certain sections (parents support) that don't (bring back kit on time,</i>	4

			<i>offer lifts etc...) and can't economically for some reasons, but there's other areas that make up for it</i>	
100	CH	Lilac externally promoting PA	<i>the school where I was before was 97% Asian heritage, so t's an entirely different side of rules and regulations. Straight after school, it's hard work because most of them will go to Mosque, so to try and get extracurricular fixtures it just wasn't happening</i>	4

3.9.5 Phase 5 (a)

Trial of thematic coding and referential (R) and structural (S) coding

Once the categories were identified in each of the individual transcripts in phase 4 this generated 16-coded categories which could each be viewed alongside their research question association. This was a timely point at which to 'recheck' each quote both against the category to which it had been assigned and the research question it was deemed applicable to. Maintaining a commitment to analytical choices and the validity of them.

The researcher was mindful throughout the processes that an analysis; looking at where the participants' focus of attention is at, could align to the commonly used R and S aspects identified. A way of experiencing a given phenomenon depends on 'which constituent parts are discerned and appear simultaneously in the learner's focal awareness, and which parts or aspects recede into the background' (Linder and Marshall, 2003, p273). In the context of the researcher's study, it was considered useful to identify the importance placed in a specific practice, by connecting the 'doing' or action undertaken with evidence of its importance or meaning to the participant, with the intention of adding validity to the analysis. With this in mind, the researcher queried the dependability of beginning the search for R and S themes at this stage of analysis. This was due to the ongoing ambiguity of meaning associated with each 'aspect' as well as the range of dimensions which may or may not influence categorisation within each aspect.

In the literature review, Harris' paper (2011) was discussed and her attempts 'to understand these frameworks and how they can be applied to various types of data' (p110) were highlighted. It is unclear how these aspects are understood in terms of the meaning they evoke and also the way they interact with each other during an analysis process, as there are multiple variations (Pramling, 1983; Prosser and Millar, 1989). She noted that phenomenographers 'stretched' (Harris 2011, p110) how these aspects are understood and applied in order to meet their own approach. The researcher agrees that any understandings about learning and teaching are multifaceted and therefore have complexities associated with deriving meaning because of their 'relational, dynamic, and contextual character' (p117). There is not a clearly defined method of developing a R and S framework and also difficulties

in understanding how the framework is theoretically grounded and relates to concepts of intentionality (Harris, 2011). Due to this, the researcher felt that while still working with multiple categories, that a thematic analysis should be explored, with the theoretical freedom and flexibility that it affords. This could provide a more manageable data set by not ‘forcing’ categorisation which looks to explain qualitative differences in the outcome (Marton, 1988) but more holistically interpreting the participant provided data the researcher strived to keep throughout the analysis phases up to this point. It is important to note that the processes of analysis developed so far within this phenomenographic approach; the ability to find and link variations, meanings, understandings and illuminate the body of knowledge relating to what practice is in promoting PA, remained the driving focus of this study. Considerations about thematic coding would only be used as a way of testing accuracy of R and S analysis at this stage and to support a more confident appraisal of results.

Braun and Clarke (2006) assert that a thematic analysis can be modified to fit the needs of many studies, without a prescriptive procedure. The researcher can become the ‘instrument for analysis’ (Nowell et al, 2017, p2) making more judgements about coding, theme creation, context consideration (Starks and Trinidad, 2007) than when working within the phenomenographic frameworks. Developing R and S categories within the data set at this stage would be more onerous and perhaps more challenging to ensure consistency and accuracy in the approach. The thematic approach also supports researchers working with a large data set to develop a well-structured approach to analysis for better organisation (King, 2004), as although the approach is not prescriptive, it is autonomous and would be valued in the researcher’s opinion due to the thought put into it.

A thematic coding trial was applied with research question 1 and with 4 out of the 16 categories. An analysis of the data straight from Analysis 5 (where the participants quotes are still present) with a focus on research question 1 and the same 4 categories was then completed using the researcher’s interpretations of R and S meaning. (Please see Tables 5.1 and 5.2).

Table 5.1 Trial of R and S categories

Referential (R) /structural (S)	Colour categories	Quote/extract	Research question
R	White – Competition for PA	creating a culture of competition for all, not just elite	1
R	White – Competition for PA	competition as a way of bringing schools and local communities together with large groups of pupils	1
S	White – Competition for PA	Providing varied sports and activities at competitions, for all pupils to access	1

R	Red – Consistent timetable for provision	structured opportunities for PA through a commitment to curriculum time and achieving the NC expectation (esp swimming)	1
S	Red – Consistent timetable for provision	parental support for PE time, supporting children to participate	1
R	Lilac – Externally promoting PA, parents, clubs	an emphasis on promotion of PA through external offer, PA as a responsibility for community, developed through curricula provision	1
S	Lilac – Externally promoting PA, parents, clubs	ensuring consistent quality externals are delivering PA by liaison with pe subject leaders regarding learning	1
S	Lilac – Externally promoting PA, parents, clubs	mutual benefit achieved through PA for pupils and club links/community cohesion	1
R	Blue – Making memories, supporting learning and PA	children need a range of opportunities across school not just in PE	1
S	Blue – Making memories, supporting learning and PA	Providing new and varied opportunities, range of clubs, considering enjoyment mainly	1
S	Blue – Making memories, supporting learning and PA	focusing their opportunities on maintaining their learning and motivation to be physically active	1

Table 5.2 Trial using thematic analysis

Competition (white)
Specific competitions for specific pupil groups (pupil premium, talented, send)
Specialist support PE staff taking a lead role in developing extra-curricular provision/competitions
Lead school facilitating large scale competitions so participation for all is achieved across cluster schools
House system of competition in school, awards for success in PE representing houses
Attendance at competitions important, pupils' experiences prioritised
School led promotion of KS1 competition due to limits on external providers offer
Staff led assessment of house achievements, how can they do better as a house? Sense of ownership and belonging to the house
Consistent timetable of provision (Red)
Schools promote consistent opportunities for all year groups, equality in provision

Culture of importance of PE shared with parents has led to their support to ensure consistent provision; despite weather, kit, sports preference – no barriers to opportunity
Swimming focus and going beyond expected requirements for all pupils is promoted
Externally promoting PA (Lilac)
Former pupils used as ambassadors for PA and family provision
Wider promotion of health and wellbeing with families and linking this to school practices (healthy eating, family PA opps)
Sports councils take a lead role in PA promotion, and healthy lifestyles promotion; content etc...
Social and media promotion is key to promoting PA in school with families and community (twitter, newsletters, website)
Club links develop community cohesion and link with mutual school PE /club provision and wider opportunities for PA – trading opportunities, links, pupils centred outcomes – bespoke (not just one company involved)
Frequent QA of externals offer linked to need, learning etc...
Making memories in learning (Blue)
Providing opportunities based on knowing pupils' interests/passions and also new opportunities they wouldn't get out of school
Using the local environment and giving experiences they might not get through home life inc residentials
Monitoring popularity of clubs and opportunities, if anything needs changing based on external or pupil feedback
Developing new games/sports which motivate and improve attendance and opps to excel (child centred foci)
Focusing PA opps on maintaining their motivation to be physically active

The trial using thematic analysis took the approach akin to generating codes and sorting these into potential themes as highlighted by Braun and Clarke (2006). This was completed with a focus on research question one: What practices do PE subject leaders adopt to promote optimal PA? Each category was analysed and summarised for all possible themes. For example, where the interviewee/s mentioned undertaking competition for specific groups on a few occasions this would constitute one theme. The researcher did not feel that further streamlining of the themes was necessary at this point of the trial as they wanted to see if the initial themes created could be similar to that used in the R and S approach despite its relatively prescriptive way of grouping. An example was looking for a focus of attention for one group and trying to differentiate this from any meaning being attributed as these would inform different categories in this method. The method was still valued however, there is certainly scope in pushing a researcher to think in these terms to create a thorough data set which pertains to the range of research questions, only that it would be more complex in the initial stages due to the range of data carried through to this point. Further discussion about the processes used when developing R and S categories will be presented later in this chapter.

The researcher established from this trial that the meaning and coding derived was very similar for both approaches, this led the researcher to continue a more thematic coding

approach for each colour category within each research question. This helped to create a more manageable data set which would have the same validity as if the researcher had used it in the phenomenographic analysis for the duration of this process.

Phase 5 (b)

Analysis through thematic coding with every category within each research question.

Table 5.3 Analysis 5b (Thematic Q3 extract).

Assessment to promote PA (pink)
Objective led lessons focused teachers on the importance of delivering PE/PA right
Reports provide info on what is happening with PE / sport /PA in school, expenditure, numbers involved
Pupils and staff voice promoted; what they want/need, opinions about content/offer – helps keep track of provision – audit, review and reflect
Using/buying into quality assurance packages for external providers; external support to do this, to monitor the provision
Assessing against rubrics for each year phase; core tasks as a measure of progress/statements; ongoing assessment against these
Tracking against NC criteria and own measures, key skills
Idea that using different measures give a clearer picture of attainment and success of PE/PA and what interventions are needed
Joint assessment with coaches during lessons
Rewards to promote PA (purple)
AfPE distinction valued the most; a stamp of authority more than Ofsted, worked hard to achieve
Unexpected to achieve distinction as didn't have quality mark at all, feeling of pride
Collaboration to support PA (Peach)
Developing pupils' appreciation for all children and awareness of their differences, raising aspirations for all,
PA brings all together as aspirations recognised as being anything/different (playing for school team, playing on the yard)
Teachers switching what they deliver so they practice delivery across a range of activities – usually fundamentals through different activities
TA confident to set up/deliver parts of lesson to enable PE subject leaders to work with SLT
Whole school approach with team effort in terms of underpinning everything and creating an ethos
Cluster of schools set up own comps/tournaments due to SSCo high school teacher not engaging with the role
Cluster pe subject leader meetings to manage cluster events, working with school games organiser
Expected commitment of staff to do 10 hour block of clubs per year, all coordinators work together to facilitate this

These choices would usually be applied earlier in the process (Akerlind, 2005) but in line with the researcher's decisions to maintain the full data set as representative of the participants' voice for as long as possible, they were confident that in doing this trial at this stage the analysis process had been better supported, developed confidence in the accuracy of the researchers interpretations and ultimately enabled successful future R/S or 'how and what' based analysis.

3.9.6 Phase 6 (a)

Allocating R and S categories within each category and for each research question

Table 6.1 Analysis 6 (a) (research question 1 extract)

Consistent timetable of provision (Red)
Schools promote consistent opportunities for all year groups, equality in provision
Culture of importance of PE shared with parents has led to their support to ensure consistent provision; despite weather, kit, sports preference – no barriers to opportunity
Swimming focus and going beyond expected requirements for all pupils is promoted
- Developing a culture of importance placed in PE/PA needed to ensure consistent provision (R)
- Consistent curricula and extra-curricular opportunities for all year groups (S)
Externally promoting PA (Lilac)
Former pupils used as ambassadors for PA and family provision
Wider promotion of health and wellbeing with families and linking this to school practices (healthy eating, family PA opps)
Sports councils take a lead role in PA promotion, and healthy lifestyles promotion; content etc...
Social and media promotion is key to promoting PA in school with families and community (twitter, newsletters, website)
Club links develop community cohesion and link with mutual school PE /club provision and wider opportunities for PA – trading opportunities, links, pupils centred outcomes – bespoke (not just one company involved)
Frequent QA of externals offer linked to need, learning etc...
- PA achieved through linked practice and promotion through families and media (R)
- Developing community cohesion through pupil centred links (S)
Making memories in learning (Blue)
Providing opportunities based on knowing pupils' interests/passions and also new opportunities they wouldn't get out of school
Using the local environment and giving experiences they might not get through home life inc residentials
Monitoring popularity of clubs and opportunities, if anything needs changing based on external or pupil feedback
Developing new games/sports which motivate and improve attendance and opps to excel (child centred foci)
Focusing PA opps on maintaining their motivation to be physically active

- Child centred provision developed through understanding of their interests and opportunities in the area (R)
- Providing and maintaining motivational provision by assessing quality and attendance (S)

The researcher began looking for R and S meaning within each colour category and for each question. Settling on one R and one S meaning per category was considered sufficient in order to illuminate the range of opinions and understandings pertinent to this study. The care taken in previous phases to maintain participant voice and provide a representative data set of all the potential understandings of practice in promoting PA really supported the validity of this phase. For some research questions within specific colour categories the researcher could not allocate an R and/or S meaning as the data did not present the content related to it. In the analysis 'not applicable' was stated if this was the case, an example is provided in Table 6.2.

The researcher did grapple with the meaning of R and S aspects of analysis, as within the research there is a disparity between how each can be interpreted (probably so that the researcher can establish how best to infer meaning from their data and a lack of explanation about what they are actually looking for in the process). In Jarrett's (2016) study, the R explanation can be inferred as more like a S understanding and vice versa and the Larsson and Holmstrom study (2007) does not really look to analyse beyond a basic understanding of anaesthesiologists' understandings, therefore there is no explanation of the process.

Marton and Booth (1997) state that there are 'what' aspects, which tell us the participants focus of attention and 'how' aspects which define how meaning is created (Larsson and Holmstrom, 2007; Trigwell, 2000), with Jarrett (2016) identifying these aspects as R (how aspect) and S (what aspect). The researcher engaged with Jarrett's (2016) study throughout during this process; mainly due to the sports education context and focus on understanding how learning can be promoted in a pedagogical sense which was valued as a teacher education practitioner. When looking at his groupings and the research aims, he had a more specific focus on what the practitioners were doing, or accounts of their experiences. Although this study had a broader focus beyond teaching practices and their success it was important to demonstrate in analysis the meaning of their understanding of practice as well as their experiences of practice as one can inform the other. The researcher's decisions about how the R and S categories illuminate understanding were checked against a level of conformity to this method.

In effect, PE subject leaders' experiences were considered - what they promote in practice, but also their understanding of why they have promoted PA this way, how they address ideals and barriers etc... So 'how they describe their ways of working' and 'the overall meaning being attributed' would both be sought out for a R understanding and 'What their focus of attention is' and 'the elements of practice they are focused on...' would inform a S understanding. The researcher was initially happy with these distinctions (and the extract is true to their interpretation during this phase) however in later phases this altered.

6 (b) *Compiling each R and S meaning for each colour category together.*

Provided an example of R and S for each research question within each category.

6 (c) *Colour font each R and S meaning/understanding based on their category.*

This meant that when printing the researcher could see which category each R and S meaning related to.

Table 6.2 Analysis 6 (c) extract

Colour category	Research question focus	Referential meaning	Structural meaning
Collaboration to support PA (peach)	1	Commitment to providing and supporting a variety of staff roles to raise PA	Facilitating collaborative planning opportunities across schools to raise volume and quality of PA (CPD/meetings)
Collaboration to support PA (peach)	2	Culture of team working with an expectation from everyone for quality PA	Developing multiple teams and agencies around pupils' to help to promote PA outcomes
Collaboration to support PA (peach)	3	Ethos created through staff building confidence to teach PE and recognising whole school approach as a team effort	Providing opportunities for staff to teach across all curriculum areas and support clubs/competitions
Collaboration to support PA (peach)	4	Staff are not specialists and external staff may be ineffective so need to be QA and supported	Awareness of challenges with prolonged staff support as they need differing levels of help in order to have confidence and skills teaching PE
Supporting teachers' reflections (dark blue)	1	Teachers reflectivity as a cyclical process involving pupils and staff	Helping teachers develop their skills and understanding through reflecting on their own practice and pupils' feedback

Supporting teachers' reflections (dark blue)	2	PE subject leader taking ownership over developing staff reflectiveness and commitment to quality	Utilising staff evaluations and pushing importance of PA across the school to engage staff with their CPD
Supporting teachers' reflections (dark blue)	3	Supporting staff to integrate fundamentals of PL and PA in lessons	Teachers reflections and analysis of successful PA and PL in lessons comes from ethos of school and ongoing support
Supporting teachers' reflections (dark blue)	4	Teachers feel the challenge in completing all aspects of their job and the impact on their PE skills/confidence, leaders must account for this	Providing CPD which ensures sustained quality teaching, beyond PE subject leader's skills and to account for staff turnover, curriculum/pedagogy expectations
Rewards to promote PA (purple)	1	Linking rewards with participation, effort and attainment to promote longevity in PA	Providing showcase of achievements through sports awards, assemblies, recognition
Rewards to promote PA (purple)	2	Importance played in using celebration to reward pupils PA and educate pupils about value of PA (R)	Celebrating achievements as well as effort/participation through awards, events and promotion
Rewards to promote PA (purple)	3	Achieving AfPE distinction a stamp of authority for good practice	Quality mark distinction seen as embodying best practice in PA promotion
Rewards to promote PA (purple)	4	N/A	N/A

Phase 6 (d)

The researcher printed out and cut up each R and S meaning from all research questions and categories and grouped all the R 's and all the S's together.

3.9.7 Phase 7

As the analysis progressed, the researcher came to realise that the outcome of learning can and should be related to how the outcome is arranged and what the outcome is about (Marton (1988), cited in Harris 2011, p111). Analysis processes thus far have been outlined and highlighted the ambiguity around how different aspects have been defined and used in the literature. At this phase of analysis, the researcher considered these aspects at length, with a view to improving their confidence in the decisions about how they should apply these aspects to the analysis and final outcome space.

The researcher felt assured that any R and S aspect delineated should naturally stem from decisions about what and how; within whichever definitions seemed most appropriate to allow illumination of answers to the research questions. A large proportion of studies attest to how the R and S understandings can be inferred from what and how understandings (Pramling, 1983; Marton, 1988) and that together they demonstrate the meaning of practitioners' understanding of their practice as well as their experiences of practice. After an appraisal of a number of phenomenographical research studies and after engaging with Harris's (2011) critical appraisal and conclusions about the values and nature of R, S and 'what and how' aspects of analysis, the researcher decided to define the R aspect as 'what is focused on' (the intention) 'What PE subject leaders understand to be their role to effectively promote PA' and the S aspect as 'how the explanation is given' (the process) 'How do they achieve this'. This seemed the most logical approach in keeping with the majority of phenomenographical research and for the purposes of establishing answers to the research questions (Prosser and Millar, 1989). The researcher was mindful that there needed to be some element of 'stretching' (Harris, 2011) but was also content to accept this because applying a specific research aim to a definition about an analytical method would never be as relevant as for the research aim for which it was first intended.

The work completed for the previous phase (6a to 6d) was not considered redundant as all meanings relevant to each research question would be transferred into this data set and presented as a whole from which to create an outcome space. Each cut out strip was re-checked and labelled (R or S) according to the new definitions presented here. At this point its important to note that each quote or meaning was separated from their associated research question so that a collection of R and S meanings which embodied all of the data remained. Securing R and S meanings related to each research question gave a broader more thorough data set showing the intentions and processes across different areas of consideration, so that at this later stage the researcher was able to create an outcome space which embodied more areas of understanding; i.e. all coloured categories were presented with R and S meanings analysed, each giving the range of interpretations/practices or understandings to answer each research question.

Practically, the 'strips' were sorted into initial categories of description (using these understandings). In analysing R and S meanings, there were logically established connections between the S - how aspect and the R - what aspect. Essentially, categorisation of the how aspect of learning could have been made from a particular 'what' aspect. The researcher understood this was a preferred outcome in Marton's work but did not look to achieve this,

instead taking it a step at a time; creating both R and S aspects separately, then noticing they related. This was an approach which aimed to categorise what is being understood, considering the process, actions, and motives behind this understanding, whilst also being mindful of the participants' conceptions and examining the context and the parts that comprise them (Harris, 2011). The final outcome space will be detailed in the next chapter.

3.10 Decisions of hierarchy

The creation of a hierarchy is a common element of the phenomenographical process, with a main premise of ensuring the categories of description are logically related, which is typically by hierarchically inclusive relationships (Marton and Booth, 1997; Akerlind, 2007). The priority was to utilise this research framework to highlight and describe either the variations in experience or variations in the ways participants see practice in promoting PA (Dahlin, 2007). The aim was to learn how this phenomenon appeared to others, doing so by developing a collective meaning from the range of ideas presented as variations of meaning (Loughland et al, 2002; Bruce, 1997). From this, descriptions and analysis of these experiences were identified at a collective level, representing the qualitatively different ways of understanding their PA promotion. The point at which the researcher felt these outcomes were achieved would naturally become the point at which the analysis would conclude.

The researcher was confident that the outcome space categories stood in logical relationship to each other, in relation to the phenomenon and were parsimonious, irrespective of the type of outcome space that was created (Marton and Booth, 1997). As Laurillard (1993, p45) suggests, 'an outcome space represents a developmental progression, in the sense, that the conceptions represented by some categories have more explanatory power than others. This was realised in the creation of an outcome space as there were certain ways of understanding which presented more content and a higher value to PE subject leaders, and they are logically related in that they reflect what they understand to be practice in promoting PA and how this practice is attributed to their experiences of PA promotion. Creating a hierarchy to define how the ways of understanding interrelate would not necessarily improve the understandings derived for effective PA promotion, or how practitioners could use them to improve their own practices, as they are context and individually specific.

3.10 Trustworthiness

The decision to use phenomenography as a theoretical framework for this study supported the researcher's neutrality (as far as possible) to the ideas of participants as it was acknowledged that professional multi-setting experiences have formed multiple opinions which could influence the design of the research methods, the direction of probing questions during interviews and the way in which data is analysed. Trustworthiness, in consideration to the whole research study, would refer to maintaining this neutrality throughout the duration of the process. Through the researcher's professional life opinions have been formed which throughout the interview process and during analysis would naturally come to personal focus.

In order to suspend personal opinions about the phenomenon being studied many qualitative researchers undertake a process of 'bracketing' (Prepoutsidou et al, 2004), in which they attempt to set aside their experiences, biases and preconceived notions to understand how the phenomenon appears to the participant and how it is reflected in the data (Orgill, 2002); not how it is perceived by the researcher. Initially the researcher did engage with the idea of on-going reflexivity in accordance with Alvesson and Skoldberg's (2017) consideration of researcher levels of reflexivity. In practice, this means identifying how viewpoints may affect the researcher's interpretations at each stage of the process to, for example, ensure aspects of the interview are not repressed in favour of others, or the analysis and subsequent categories of description are the most representative of the participants' understanding of the phenomenon. The challenge related to limiting bias when using a phenomenographic approach is that the opinions of the researcher are actually considered an important part of the process. The knowledge, understanding and conceptions that the researcher has of the phenomenon can and should be used in order to make decisions about the direction of questioning during interviews and will in some way inform the outcomes of the analysis. In fact, the outcomes would be richer through maintaining this relativist stance as for example, the researcher could draw on knowledge of the context of school improvement when probing about a specific response during an interview. The ideals of Alvesson and Skoldberg's and Prepoutsidou's teachings about suspending opinions to ensure validity were therefore rejected, as long as researcher decisions remain constant and transparent and the foundations of the phenomenographical framework used were credible.

The methods to ensure this have been clearly defined within this section, so the processes involved during specific stages of this research study are now outlined.

Summary of methodological decisions:

Interview sampling

- Purposeful sampling to select participants who are best placed to answer the research questions.
- Sampling nationally to reflect a variation of social/economic deprivation, to support the validity of the study.

Interviews

- Interview schedule with questions which allowed participants to exhibit a range of interpretations.
- Probing questions purely based on interviewees' responses, or to provide clarity/help me interpret meaning.
- Researcher mindful of potential bias in probing questions but similarly the valuable contribution that researcher knowledge could give to explore participants' responses further.

Analysis

- Participant data kept as whole as original transcripts for as long as possible within the analysis phases (differing from some phenomenographic studies which interpret or code data into more concise meanings earlier).
- Phases of analysis which value the participants' data and provide ways to illuminate the potential of it (i.e., R and S meanings developed for all research questions and all colour categories to show the breath of understanding and practice).
- Questioning and considering the data presented, reflections giving basis for trial phases and acceptance of errors in interpretation.

Chapter 4 – Research findings and discussion

4.1 Creation of the outcome space

The researcher had the vision when starting the analysis to ensure the data used to inform meaning was as representative of the PE subject leaders' experiences as possible. They engaged with multiple phenomenographic studies in order to support this process (Akerlind, 2008; Jarrett, 2016; Larsson and Holmstrom, 2007), with the intention of ensuring the creation of an outcome space that was representative of the variations of opinion expressed by the PE subject leaders who participated in the study. There are multiple accepted processes to create and finalise an outcome space. In Marton's (1986) seminal work, he expressed that the outcome space should depict the relationship between an ordered set of categories of description based on different dimensions of variation. Marton and Booth (1997) clarified further key criteria, to maintain distinct categories which show the range of meanings in how PA promotion practice is experienced. The categories are logically related in that they reflect what the PE subject leaders understand to be practice and how this practice is attributed to their experiences of PA promotion. Marton and Booth (1997) shared a third criterion (to clarify the similarities and differences between categories). This is not explicitly presented within the outcome space but is included in the data presentation where exemplar quotes are shown to represent the meanings garnered and the categories created. The researcher remained centred on these ideals and explored different research studies which used some or all of these expectations to finalise the approach and create an outcome space. The decisions and processes used to achieve this will now be outlined.

Sorting the quotes into R and S meanings provided an example for each meaning within each category and for each research question different but parsimonious categories were created to represent the data set. A brief summary was then written to explain the R and S categories based on the researcher's decisions about how to define R and S outcomes, as discussed in the methodology chapter. From these summaries, the account of Hakvoort's (2018) processes was taken which she used to inform an outcome space based on teachers' understandings of emerging conflicts. Her methods and the explanations thereof could be reflected and presented similarly with the researcher's understanding of how R and S can be defined and situated to help provide answers to the research questions.

The concept of R aspects is referred to as a 'specific meaning attributed to a particular way of understanding' (Ibid p3); this reflects the search for meaning about what PE subject leaders understand to be their role to promote PA. The S aspects of understanding provide a benchmark on 'how the understanding is constructed' (p3) in terms of the process of achieving this. With the distinction of separate external and internal horizons providing evidence of 'the parts that the way of understanding is built of' (p3) (internal) and what constitutes the background against which the way of understanding appears and to which it relates' (p3) (external). To provide an example, to take the R understanding of the role of the PE subject leader as a collaborator; this understanding is built from an internal horizon within S understandings. Specifically, this means the ways in which pupils understand the learning process, the work of the PE subject leaders to support wellbeing and use evaluation to quality assure the PA offering in school. This internal horizon category explains the processes, actions, things that are happening and what people are doing and how these things relate

(Barnard et al, 1999) to achieve effective collaboration. It is often the PE subject leaders' actions or ideals at play which set into motion these things which is summarised referentially through the distinct ways of understanding created. The external horizon for this category is an area of awareness from the context in which the theme sits (Cope, 2004). In this example the PE subject leaders were working within a context in which PA promotion is everyone's responsibility. It is explicitly understood through their continuation of the processes which make up the internal horizon, but it is important to note that on its own the external horizon provides an illumination of how PE subject leaders understand and enact practices in promoting PA.

The researcher felt that these ways of understanding would complement the work done up to this point to illuminate understandings in relation to the research questions. This helps to exemplify 'how the parts of the phenomenon are distinguished and appear at the same time in the learner's focal awareness and the parts of it that move into the background' (Ornek, 2008, p3).

4.2 Presentation of the outcome space

In Table 7 the outcome space is presented, derived from Hakvoort (2018), which highlights six 'ways of understanding' (A-F). R understandings are also presented which provide the specific meaning attributed to each way of understanding and S horizons to illuminate how the ways of understanding are constructed both externally and internally. Key definitions and explanations regarding each heading, outcome and description have been provided in the previous section (4.1 - Creation of the outcome space).

Table 7 The Outcome Space

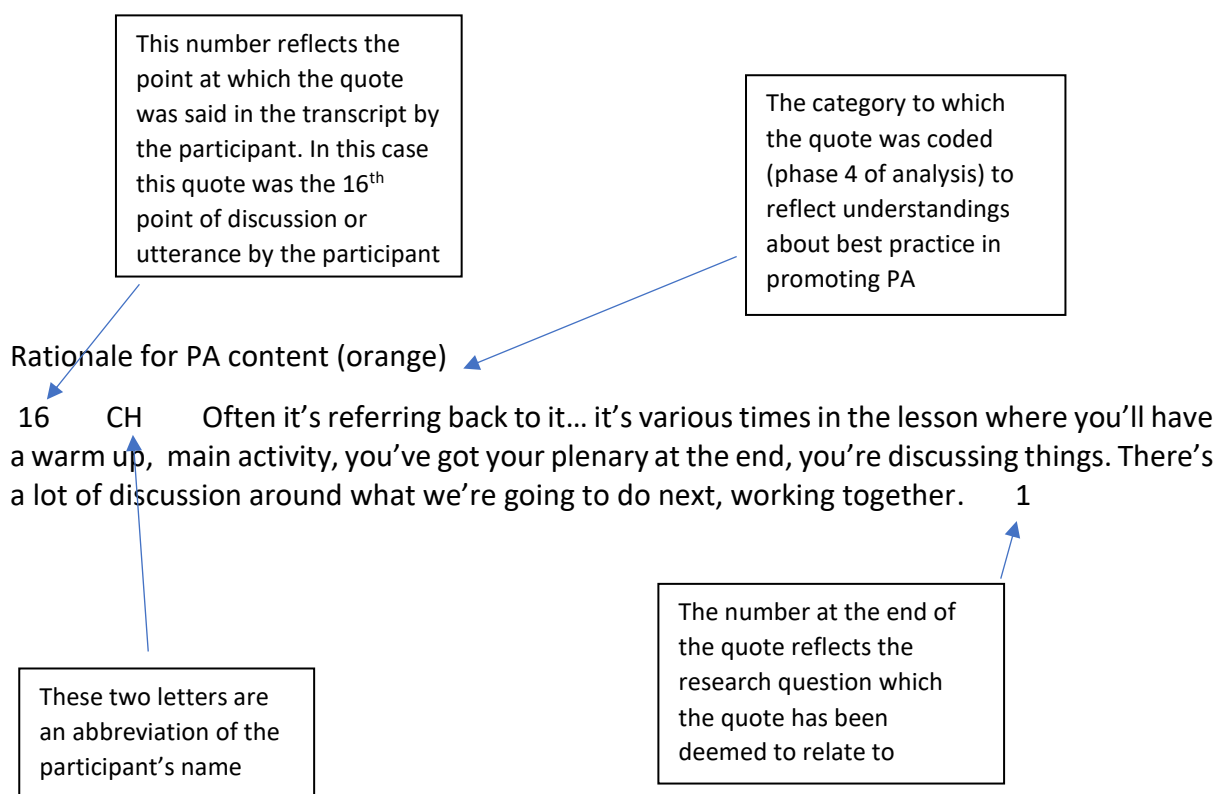
Way of understanding	Referential (What) 'role in promoting PA as...'	Structural (How) External Horizon	Structural (How) Internal Horizon
A	The collaborator	PA promotion being everybody's responsibility	Pupils' sense of learning process, enabling wellbeing, evaluation for PA offer
B	The egalitarian	The autonomous school	Being mindful of learning process, pupil voice, leadership for change, autonomy in self-learning
C	The ethos facilitator	PA as a societal, community endeavour	An ethos for growth, personnel impact, the

			wider community experience of PA
D	The wellbeing supporter	PA promotion as a tool to wellbeing	Wellbeing focus, PA for life, mindfulness and personal enrichment
E	The enhancer	The staff as individuals	Identifying needs, cyclical training, facilitating reflection, promoting commitment to the cause
F	The advocate of variety	A school to build confidence	Ensuring experiences to build confidence and skill, supporting evaluation, awareness of physical literacy and learning needs

This section will discuss the findings presented in the outcome space, how PE subject leaders understand their role will be highlighted, focussing on their ideals and practices to promote PA. Each way of understanding will be discussed in relation to the R and S meanings presented, using quotes from the transcripts to help evidence their inclusion and the discussion will be aligned to key literature to add further validity to this analysis.

Each quote was consistently categorised as in Figure 2 and is presented as such in this discussion.

Figure 2 - Quotes - explanation of terms



4.3 Way of Understanding A

The PE subject leader as 'the collaborator'

PE subject leaders working with others to provide PA and wellbeing improvement was a strong and recurring theme within the data. It is integral to how they understand their role in promoting PA and their actions and practices reflect this understanding. It is therefore the first way of understanding presented in the outcome space.

There is an understanding of the value of collaboration (external and internal) in the PE subject leader's decisions about how to best work with organisations and to fit their own provision and facilities in with this collaboration.

Externally promoting PA (Lilac) 100 SD

We're able to use our sports grant money a little bit more, were buying in, we have a tennis coach, rugby coach, my job is to turn up on a Friday and 'kick a few kids around!' (laughs) I mean kick a few balls around!! We're looking at ways we could probably use our grant money more effectively. We're all trying to use the school site a little bit more, we have a company in who are now doing things on a Saturday morning who are doing tots football, dodge ball for the parents, we now have a fitness class on a Monday, 2

Collaboration within a PA or sporting context has increased with the introduction of school sports premium funding, and its continued increase and renewal by the government in office.

PE subject leaders share a view that that high - quality PE and school sport impact positively on children and young people's wellbeing as highlighted by the Department for Education (2020). They agree that the guidelines have a real influence on the push to make PA promotion everybody's responsibility and that, although the PE subject leader can act as a facilitator to this, they cannot effectively do this independently.

Collaboration for PA (peach)

34 RL We organised our staff into teams probably about 12 years ago and we have a healthy living team here, which focuses on PE and PSHE (Personal, social and health education) and so within that there's two teachers, the other teacher (if I say I'm a PE specialist) the other teacher is a PSHE specialist). Then we've got two teaching assistants that sit on our team as well, we have meetings every half term when we look at what we're actually planning for our actions for the year and we assess what we need to be doing. 2

This supports Whitehead and Pack's (2010) argument that collaboration both within and beyond the school is a significant part of the PE teacher's role. The local authorities, parents, governors and external agencies must all play a role in ensuring the success of PE and school sport. In their paper providing guidelines for policy makers regarding quality PE (QPE), the United Nations Educational, Scientific and Cultural Organization (UNESCO) suggest that a 'provision of QPE depends on the concerted efforts of all relevant stakeholders around a common vision' (2015, p20). This sense of quality in PE (and associated PA) being everyone's responsibility is demonstrated in the data collected for this study, having a clear connection to this ideal environment (as evidenced by quote from HV).

Externally promoting PA (lilac)

50 HV we had a massive consultation process with parents, children and the community about our healthy eating policy. 2

None of the PE subject leaders mentioned involvement in the current conservative government trials to raise PA and engage the least active pupils (as outlined by the Department for Education's School Sport and Activity Plan in July 2019), their approach however does align to some of the practices expected in these pilots. For example, working with local organisations to develop a coordinated offer for sport, competition and activity both within and outside the school day. The PE subject leaders work to achieve mutually beneficial outcomes with a range of stakeholders and organisations and in the process develop a cohesion to build positive communities.

Collaboration for PA (peach)

57 SD there's a brilliant cluster that I work in harmony with, (school name anonymised) and when I arrived there the school sports programme was still in place, they've kept it going – even before the school sports premium came in. 2

Although there is a demonstrable longevity in promoting quality PE and PA opportunities in the schools involved in this study, which predates the sports premium funding, the opportunities to successfully collaborate with external providers would not have been possible without it. The PE subject leaders identify this and work in several ways to ensure that the funding utilised develops collaboration that is effective and sustainable.

Facilities, resources to support PA (pale blue)

13 SD so these are the actions that we had, we've got our PE apprentice, looking for the training for the 'real gym, real dance' ... we constantly refer back and evaluate this and my team will meet and look at the impact of the PE grant money on a regular basis. Our sports governors; I provide a termly report to our governors about where the money has gone. It's just makes me accountable really, more than anything else. 2

There is an increased accountability on schools to ensure the funding has demonstrable impact, through Ofsted's increased inspection. To do this, the PE subject leaders have systems in place that quality assure the collaborative offer they have, to include establishing attendance trends, pupil opinion of the provision and their staff subject knowledge/confidence after receiving external training. Of particular concern to PE subject leaders was the subject knowledge of their staff. To ensure effective teaching they believed

that their teachers' subject knowledge and their understanding of how pupils attain and manage the subject, has the strongest evidence of impact on student outcomes, as outlined by Coe et al (2014).

Supporting teachers' reflections, learning (dark blue)

39 SD you know yourself, within teaching if
people have observations that panic sets in, especially with PE
because we'd never done them before... and so there's a lot of people
who 'oh no....' So straight away the profile of PE went up cause straight
away they knew that they had to teach objective lead lessons for PE,
not just lets go play a game of rounders.... 1,3

Dissemination of best practice (green)

36 LM It's got to be sustainable hasn't it and this is really
important because if that money is no longer there how are you gonna
sustain everything that you're doing? That's why it's so important for
staff to have that valuable and that effective CPD because they find it
a scary subject, there's a lot more different aspects to it; one – you're
out of a classroom, you know there's a big space there, children act
very different in a big space, then there's the technical aspect to
teaching it; the skills, then applying it. You know, the safety, looking
at the equipment so I think staff can find it quite scary if they're not a
sport person or an active person so to speak. 3

Within a lesson, the teachers' ability to explain, demonstrate, provide examples from practice and have the confidence to answer questions embody the pedagogic outcomes of strong subject knowledge. This makes them more effective teachers (Rosenshine, 2012) and the PE subject leaders in this study looked to facilitate these skills through professional development courses and observing and supporting coaches in school.

Dissemination of best practice (green)

73 CH a main activity, made sure there was a clear learning
objective and at the end time for a brief reflection. We tried to follow
that tool as much as possible, once that person got more confident, it
was a case of saying, right ok at the end of the day, you start doing
your own lessons, come back to me and tell me how these go. 1

Making use of the school site to its full capacity justifies any successful bids for the facilities as well as allowing the funding to be more focused on pupils' outcomes rather than venue hiring. The government's 'Active Partnerships' scheme was facilitated to open up and

maximise the use of school facilities; some of the schools in this study were involved in this scheme but all of them found ways of achieving these aims.

Facilities, resources to support PA (pale blue)

12 JS We use the high school, we use other primary schools, who've got an outdoor space, for instance one of the primary schools they've got a fantastic big field so we use them and we can have multiple pitches, it'll allow us to have 3 or 4 pitches for everyone, A,B,C leagues and so on. So what do we do.... We have rounders competitions there. We have used the academy school in the past although we don't now; we are part of the (council name omitted) sports network, which is the old PDM and SS Co system still running. We use all sorts of facilities for them, (place name omitted) all high schools around the area. 2

A case study looking at a whole school approach developed in collaboration with Public Health Dorset and their Head Teacher Alliance (HTA) as a part of the Active Partnerships scheme, looked to build on the evidence that PA improves attainment, achievement, and wellbeing (Poitras, 2016; Rasberry, 2011). The PE subject leaders in this study recognise such positive impacts and accounted for them in their facilities usage, their curriculum design and enrichment planning. Creating health and wellbeing teams, either staff or pupil led and offering mental health training opportunities for the school community were common practices.

22 RL I think it's something that we feel very strongly about and I think it's something that we haven't erm.... Our screen does give messages about sugar, and all of those kind of messages at the beginning and the end of the day but I don't think we've been in the position to give healthy lifestyle workshops before and that's something that we think is particularly important next year for us. It's a change that we want to do, there's not particularly a need in the area but actually we think it's a growing need and we just think kids; it's something to do. 1

The best spending of sports premium funding has been highlighted by Ofsted to support a benefit to pupils' outcomes. These can embody multiple considerations for the PE subject leaders, to include promoting varied PA, raising attainment in specific sports and in other curriculum areas, developing leadership skills, offering a broad range of sports provision.

Facilities, resources to support PA (pale blue)

17 HV also since the school sports premium funding for the first couple of years we targeted curriculum support, so we managed to maintain that. 2

Many of these outcomes have been facilitated through collaboration by the PE subject leaders in this study such as active maths and literacy practices which essentially promote teaching of these subjects through physical pedagogy methods. These are often purchased or training has been externally provided through the sports premium funding. This resulted in many school lessons in these core subjects highlighted by the PE subject leader as involving outdoor and practical delivery, as well as a concerted effort to deliver maths and literacy knowledge in PE lessons.

Collaboration for PA (peach)

23 DW then after three or four years it's been right, we can't just jump in and say 'you're doing this', (PA across NC/school) it's been like... we've had days when we've called them fun days or festivals were we've said we're all out and we're gonna do maths for the morning altogether outside and their in house teams in school so your year 1/2 teacher would have one team for an hour and then just rotate so they do different things. 2

The ability to read, write, speak and listen are fundamental skills in all subjects (Jacobs, 2013), and the development of strategies to engage pupils with these skills is important to PE subject leaders. It was also noted that the collaboration to promote maths and literacy skills through a physical and practical approach educated school staff about the value of PA and motivated them to engage with the PE subject leaders' practices going forwards.

Rationale for PA content (orange)

4 SD I'm not saying we've got it all perfect, don't get me wrong but we've got a good staff at school who recognise the importance of good PE across the curriculum, it's also been quite high on the agenda since I've been here. Even prior to that it's been part of the school improvement plan, which has then been shared with all of the staff. 2

The concept of a broad range of provision is highlighted as an expectation in the PE NC (2014), to offer this variety of choice both in and out of school. PE subject leaders look to develop community links with sports clubs, bringing them in to deliver staff training, provision for pupils and develop links with their club to encourage pupils to attend out of school. This

collaboration is mutually beneficial for the pupils PA, health and socialisation opportunities, the sporting club's attendance figures, finances and achievements and community growth.

Externally promoting PA (lilac)

43 HV we have clubs that we have really strong links with, so let me give you an example, so (Gaelic football club name omitted), which is quite unique to our area cause we have a very big Irish community which is fading a little bit. We have a massive link with them we do promote their club and 60% of their club is made up of our students. But also on physical days they'll come in and deliver sessions so the family can engage with that. They come in weekly actually and come through the school doing little enrichment sessions, so that's really good. So, we do promote in the community in that way in terms of developing club links and giving kids a place to go on further. 1

It has been historically difficult to achieve a longevity associated with positive outcomes in this field; this led to certain policies being developed such as the '*PE, school sport and club links (PESSCL) strategy*' (2002), with the intention of developing an infrastructure where schools and local clubs/organisations worked together to improve this. The PE subject leaders in this study take a community driven approach to this work, centred on their own perceived development needs rather than a Governmental or 'top down' agenda which has created policies which do not necessarily represent or model the practices for what is needed locally (Phillpots and Grix, 2014).

Rationale for PA content (yellow)

87 LM our curriculum is very much based on developing children as deeper level thinkers and learners, and we want to instil the values for them as people as well. So yes, learning is very much a huge focus but our curriculum, we have got a very big equality/diversity focus within our curriculum, looking at our children's diverse needs. 2

The PE subject leader is mindful of the wider impact of collaboration with the families of pupils and there is a clear sense of the benefits of this with the PE subject leaders interviewed. Opportunities to engage parents are taken using a range of approaches. Making links with clubs and external organisations is often facilitated via parents through their ownership or association.

Externally promoting PA (Lilac)

27 LM parents are very supportive, erm... but it is educating parents as well and just kind of helping and supporting them in their understanding. We do a lot of, erm.... We've had a lot of like coffee mornings, with things like, not workshops but fairs and things when they can come in and learn about healthy eating and the change for life and how to look after, you know what is a healthy meal? How you can then plan that across your week and make sure it's feasible, planning. 3

The common view relating to working with parents was that it is essential to ensure healthy active lifestyles are promoted and that if parents were not a part of this learning the work done to support this in school does not usually result in successful outcomes. There are challenges for parents to make healthy food choices at home, such as their own food preferences, sibling variation in preferences, inconsistencies in caregivers' provision of food and work-related timing issues (Kim et al, 2019; Callender et al, 2020). An example of these issues is shared below and was frequently stated in line with interview question 4 (what hinders you in this work?) when discussing the improvements needed to promote PA or the challenges evident to doing so.

Externally promoting PA (Lilac)

54 HV you will find a lot of parents support physical activity but are not cooking well or helping kids make good choices for their diets. Last year I felt like I couldn't just keep going with the physical activity and not attack the food angle, so that's what we did and erm... it's been successful; there's still more work to do I think around family and after school. But you come to a point around 5.30pm where you can only advise and advocate. 4

They appeal to parents' desire to ensure likely positive outcomes for their children, as well as explicitly following up on parental input in school regarding healthy eating habits or current PA attendance and communicating with parents on any interventions or achievements in school. Hoover-Dempsey et al (2007) outlined these practices in a model of school leader and parent partnerships. This partnership model develops a better school climate, where teachers and the work they do are positively thought of and parents increase their interaction with their children at home (Devjak and Bercnik, 2020).

Working with parents to improve PA provision is important to PE subject leaders but not always something they consider to be good practice in their schools, especially regarding providing healthy eating at home and their capacity to engage with PA at home. They do provide classes in healthy eating, promote club links, provide information and ideas on how to stay active as a family. However, attendance is sometimes poor, and improvements are hard to sustain and difficult to measure; particularly for schools in areas with a higher

working-class demographic (Barg, 2019). These issues are frequently identified as a priority for improvement for the PE subject leaders as evidenced in the previous quote.

The responsibility for PA is also considered to be the pupils', with various quotes evidencing the types of collaboration between staff and pupils to achieve this and the rationale for these. In the following extract the PE subject leader exemplifies pedagogies which help pupils to lead their own learning; making decisions, understanding areas for their own development and the teacher being able to facilitate these.

Pupils' reflections on learning and PA (grey)

32 ZM *When we first changed the PE this year, it was done a little bit differently, so we like to have groups and we like for children to lead their own learning. So we like to have groups and different activities and children can say 'no actually, I want to challenge myself with that' or 'I'm struggling with this', 'I'd like to go there' but then again, the teacher or the coach with say; 'can you go and try that activity?'. So she'll even do that, she's adapted the activity and she's including that in her lessons, the children are aware of it. So, to me that's a good coach that is flexible to the school as well and to what we believe, what we want for our lesson, that's what she's done.*

3

As evidenced by the PE subject leaders, environments which support teachers work with pupils to develop their autonomy, pupils show better engagement, a willingness to pursue intrinsic learning goals and manage their time (Vansteenkiste et al, 2005) as well as a deeper content processing (Grolnick and Ryan, 1987) which demonstrates the learning achievements seen in these schools.

Pupils' leadership (dark green)

81 CH *children were actually giving the teaching points to other children and it worked beautifully. because they had the skills already it was almost like a teaching triangle.* 1

Teachers providing a task orientated motivational climate, where pupils' competence is measured and their levels of mastery understood, is predictive of intrinsically regulated or self-determined motivation in pupils (Standage et al, 2003). Giving pupils the skills and willingness to challenge themselves and take responsibility for their outcomes is a collaborative endeavour; involving pedagogies and assessment strategies to achieve autonomy for learning, and ultimately more effective learning outcomes, as outlined in the following quote.

Pupils' leadership (dark green)

9 LM *Some of the ideas just to kind of extend it further would be erm...they wanted kind of a mystery club, so they wanted a club and they would turn and each week would do something different. They wouldn't know what they were doing, erm so a different kind of sport or different aspect each week, they wanted to explore. 2*

The value in which the headteacher and senior leadership in the school hold PE and school sport has a demonstratable impact on the quality of the provision. The headteacher plays a fundamental role in the delivery of PE and school sport within their schools and particularly the implementation of government initiatives such as the PESS and sports premium funding (Rainer et al, 2012). Therefore, the importance of their involvement cannot be underestimated. There is evidence of teamwork at the senior level, a shared interest in quality PA between leadership and the PE subject leader and the desire for leadership to challenge the PE subject leader to strive for better. This is explicit in school improvement plans and staff understand the priorities and their role in achieving them. Although leadership sometimes challenge their PE subject leaders and do not necessarily agree with their ideals, or give them full autonomy, there is a professional respect evident, a willingness to explain this and work in collaboration to develop mutually agreed actions.

Collaboration for PA (peach)

63 SD *Through awareness of the teachers, through prioritising with our teachers, making sure, they know it's on school improvement plan, that it's a priority. They know that the head teacher will go out and do a formal observation; they'll come back and speak to me about those... 'Look I saw this in a PE lesson, is there any way that we can look at that side of things?' Then I'll go off have various chats and stuff. That's a priority from the top down... You know... if the head and the deputy head and everyone else is singing from the same hymn sheet then that's coming through to staff as well. I think that's important, there's no point me leading stuff if there's no support... 2*

Rationale for PA content

85 DW *headteacher name omitted) has got a sporting background, she will question me and it's good ... 'but why are you doing that? Oh no you're not ordering that until I know where that's going...' So, it is a hindrance, but I have to make sure that everything I do I have to run past (headteacher name omitted) and (headteacher name omitted) will have the say, which works. (Deputy head, name omitted) can be, again but she's wanting to know why, what we're going to get out of it, is it going to develop any more. 2, 4*

Through the examples highlighted in this section there is a definite sense that PA promotion and quality is the responsibility of many, this is facilitated by those in positions of responsibility but there is a pride in the collegial working to achieve this, people want to be involved as they understand the common goal.

Collaboration for PA (peach)

61 SD we've got a head teacher who is supportive, staff who are very supportive and on board, parents are very supportive. I've just, they appear to be in the right place at the right time...to be able to do sport and take it as far as they can. So really it's not just one person, it would be (name) head teacher, chair of governors, staff who are supportive and parents who are so if you like it's a whole school community

2

The collaborator is the most dominant way of understanding the PE subject leader's role evidenced in the data and is supported in the majority of cases by recent literature. Ways of working with a range of people and organisations are varied and innovative but are all achieved by the same sense of responsibility demonstrated by the PE subject leaders and those working within and around the school. The processes and outcomes of this collaboration are centred on developing pupils' sense of the learning process and enabling their wellbeing despite some of the collaborative practices being different.

4.4 Way of Understanding B

The PE subject leader as 'the egalitarian'

The second way of understanding demonstrates the PE subject leader as an egalitarian. This role is illustrated by the S external understanding of creating an autonomous school. Internally teachers are mindful of learning process, giving their pupils a voice, promoting leadership for change and autonomy in self-learning.

PE subject leaders implement leadership opportunities for pupils to benefit their learning and engagement with PA. This level of autonomy supports self and peer learning and motivation as the essence of (at least) a level of equality in decision making processes, a trust in pupils' effort and understanding of how to support their own and others development. Teachers and staff understand how to plan and deliver such opportunities within lessons and are advocates of the autonomous process set up in their schools.

Pupils' leadership (dark green)

43 CH (developing PA) I'd hope to see that the teachers allow the children to take on ownership of the lesson, example you're gonna get are in the warm up, a basic warm up which might involve simple running round games, tag type games, for loosening up, you might have a brief discussion. 1

Often specific PE models for teaching used in these schools (such as reciprocal teaching and guided discovery (Mosston and Ashworth, 2002), provide more leadership opportunities through coaching roles, peer feedback, problem solving and collaboration (Morgan et al, 2005). Leadership skills have a clear application for children and should be an integral part of their learning experience (Collins, 2003). These include many of the attributes and skills promoted by the PE subject leaders in this study, such as the ability to communicate ideas, make decisions, maintain a tenacity to find solutions and manage change. Also, by supporting, listening to and inspiring others as a team and individually (Ibid).

Pupils' leadership (dark green)

81 CH children were actually giving the teaching points to other children and it worked beautifully- because they had the skills already it was almost like a teaching triangle. 1

'Pupils tell the truth'; this was a frequent utterance within the data, and PE subject leaders relish in this fact. The pupils are given frequent opportunities to state their opinions and represent each other, giving a voice to their peers. According to Todd (2007) children should be central to any discussion or decisions that may affect them, listening to their views and acting on them and promoting more inclusive practices aligned to what they experience (Messiou, 2002). Developing interpersonal relationships in this way is linked to school effectiveness (Anderman, 2002; Hope, 2012). Pupil voice in this study is requested for multiple purposes, for example, to provide evaluations into perceived teaching quality as suggested in the following quote:

Pupils' leadership (dark green)

54 LM they've got a better understanding of kind of... staff roles in school, to kind of hold us to account a little bit as well and just for them to take on a bit more leadership responsibility as well. 2

They also look to pupils to evidence impact on learning, their ideals about the extra-curricular PA offer, the community offer, PE curriculum content, the facilities and resources desired. It is also evident is that PE subject leads give pupils the ability to make well informed judgments, by training them to be reflective and outlining what they are entitled to.

Pupils' leadership (dark green)

19 SD *we give the children a voice, cause part of our learning platform we've surveyed the kids, asked them what kind of clubs they want and we've used that information. We've submitted that, quite a lot of the questions were about enjoyment levels in PE, and you know engagement levels.* 2

Pupils' reflections on learning and PA (grey)

62 DW *the children know the reason, (for PA) they know the reason we're doing active learning is, they know at breaktime for those 15 minutes is why that's happening there, that's happening there and that's happening there. You can choose, you haven't got to go for those three activities, you can be running round, fair enough but we don't see you sitting.* 3

Showing pupils how their opinions have been listened to and their learning/engagement supported is a priority for PE subject leaders, there is often a collaboration to discuss feasibility and logistical implications, which has been evidenced in the first 'way of understanding'. The concept of empowering pupils involved through a democratic process (Bergmark and Kostenius, 2009) is achieved through this participatory approach to sharing understanding and understanding impact particularly. In being heard and valued the pupils are motivated to work harder and improve. In listening to pupils and allowing them to participate in a research or decision-making process, their voices can be closely linked to school improvement (Cook-Sather, 2002; Peacock, 2006).

Pupils' leadership (dark green)

58 LM *they wrote the impact things have had on them personally, enjoyment for them and their friends... (sports council).* 1

32 HV *in each class there's a box where everyone can put their recommendations in. They have the feedback sessions where in a meeting they have these ideas which feed into the evolvement of activities for lunchtimes and after school. They decide what activities they want, and we decide how we're going to deliver that and what format we're going to deliver.* 2

The egalitarian PE subject leader supports their staff to create an autonomous environment in which pupils are encouraged and given the skills to take responsibility for their learning, giving them choices about how they feel they will learn and engage and promoting leadership attributes through multiple activities both in and out of the lessons. The data and selection of

literature presented shows that these ideals and practices lead to positive outcomes for both the pupils and the whole school in terms of quality provision, attainment and culture development.

4.5 Way of Understanding C

The PE subject leader as 'an ethos facilitator'

As an ethos facilitator, internally the PE subject leader ensures that PA promotion is facilitated in some way through and with the local community and is reflective of the cultural practices seen in the local area. These ideals are presented through a whole school approach which develops an ethos to impact staff and pupils' experiences of PA. It underpins choices of aspects such as the systems, rewards, curriculum, initiatives which become features of practice in the school. The following quotes exemplify these ideals:

Rationale for PA content (orange)

29 LM we do sports newsletters as well, so there's always something on there, or try to have something on there with regards to being active, being healthy and kind of promoting that as well. Erm.. so it is just coming in at different angles. 1

61 LM we had a big push on pupil premium over the last few years, looking at kind of our EAL children (English as an additional language) girls in particular with the focus on physical activity in girls. 3

Dissemination of best practice (green)

11 RL yeah we do share... that's a school document but we do have people coming to us asking 'can you help us with assessment in PE?' Other local schools and we do share it when we go to sports partnerships as well, we're quite closely linked. 1

The value of whole school practices in the PA outcomes of their pupils has been reported in a US study by Colabianchi et al (2015). They established that in a national sample of secondary schools, those students who attended schools providing six identified whole school practices (shared use of facilities, intramural sports, interscholastic sports, active transport to sporting opportunities, 225 minutes per week of PE and active travel to school), were active for one third of a day more per week than students in schools without these practices. These practices were evidenced by PE subject leaders in this study.

Facilities resources to support PA (pale blue)

9 JS they (local sports centre) are fantastic, we use them a lot for our cluster competitions as well and we get the facility for free; not for swimming but for use which really helps. When the high school can't help us... 1,2

Competition to support PA (white)

31 JS we had 30-40 children, A leagues only at that point and now every tournament that we do I am getting 7-8 schools there, A leagues, B, C and sometimes even D leagues! As long as I can keep the tournament free I say bring as many as you want... those who rely on minibus support they're limited to 15. Depending on the sport I'm getting 80-130 at one tournament, which is why I need the bigger facilities. 1,2

The way in which staff engage with these practices has an impact on their own motivations to participate and outcomes. 'Given that teachers do not operate in socio-cultural vacuums, it would seem that school culture and the development of teachers are inherently linked' (Till et al, 2011, p227). There are benefits to a collegial and collaborative sharing of experiences between staff, as being the foundations of an effective organisational culture; this positivity affects staff's willingness to contribute and follow leadership (Schein, 1997) and build a sustainable PA culture. As a sporting/PA ethos is embedded throughout the school this has a demonstratable impact on pupils learning and engagement across other subjects. This encourages staff to engage with PA across lessons; pedagogically in lesson design and delivery and to enhance the pupils' ability to learn.

Collaboration for PA (peach)

3 LM so I see it as a team effort, but not obviously just that team, it's whole school. It's a whole school approach and that kind of underpins our kind of ethos if you like. 3

PA across a whole school context (yellow)

93 LM you've got those let's say the Olympic and Paralympic values which you'd want to develop as a child being a sportsman and being physically active which is all interlinked. But then you've got equality and diversity being discussed and being developed deeper. You've got reading and that's kind of there at the heart of it as well. Then writing obviously with kind of outcomes. 2

By sustained processes of evaluation, the quality of provision is tracked, and this data used to support decisions and further training. Evaluation is completed across multiple areas within the PE subject leaders' remit and forms an integral part of whole school improvement plans. Part of this successful evaluation requires a connectedness to foster interaction within the school community (Rowe and Stewart, 2009). This wider experience of PA, felt by all involved, allows any evaluation to be comprehensively meaningful and designed to be both supported and accountable to all.

Assessment for PA (pink)

3 RL *so I think that's really important that when we have an NQT (Newly qualified teacher) we always say to them 'how are you feeling about PE?, what can we do to support you?' Also if we have somebody coming in who's maybe 2 or 3 years into their career again we go through that same process, but we do make sure that we audit our staff probably every couple of years to see how they're feeling about PE and if they feel they have any development needs. 1*

The commitment to PE and school sport and the ethos created often predates sports premium funding and incumbent PE subject leaders. The support for this work is historic, longstanding and expected from all within the school community. These successful schools have never relied on the premium funding to provide PE and school sport provision, which contrasts to a number of schools where PE funding is relied upon and in some cases used inappropriately (not for the intended outcomes) as outlined in the recently updated Ofsted report (2020). In the interviews, the PE subject leaders inferred that any money needed was found out of alternative budgets suggesting that if the value in PA provision is there, most schools should be able to fund this provision.

PA across the whole school context (yellow)

2 HV *PA has always been high profile in terms of PE and sport, physical activity, it's never been... it's not new, so... it's not come since the PE and sports premium funding. This is at least... well I've been in the city 26 years and for 26 years it's always been at the forefront in (city name omitted). 2*

The PE subject leader as an ethos facilitator sees PA promotion as a societal, community endeavour, which has positive impact on everyone. Parents and the community support PA promotion, in the multiple ways it is offered. The ethos is manifested in a culture of PA being inherent in most of their school's practices across subjects and in enrichment. The PE subject leaders continually strive for improvement to impact on their pupils and the community who have become a part of this culture.

4.6 Way of Understanding D

The PE subject leader as ‘the wellbeing supporter’

PE subject leaders are mindful of the wellbeing of their pupils; their decisions and actions relate to potential impact on wellbeing and the longevity of pupils’ quality of health and PA engagement. These ideals and practices form way of understanding D - ‘the wellbeing supporter’. Opportunities to promote wellbeing across multiple areas of consideration are implemented throughout the school with key policies structuring this provision. It is considered as an important learning outcome.

Making memories, supporting learning and PA (blue)

1 LM that obviously the provision that we provide, it they’re happy, they’re engaged, they’re active and just overall they’ve got that love of either PE or sport or being physically active. 2

54 CH that excellence and enjoyment, that’s what matters at this school. We have got a list of things for that, I don’t have it with me but it is saying things like you have a right to be physically active, to learn a language, to be able to cook healthily, to learn not just English and maths; there’s a whole ethos in place around the school, that we expect children to do to make memories, to be safe, to be looked after, to have respect. 2

Ryan and Deci (2001) outlined perspectives of wellbeing as pertaining to hedonic approaches, which define wellbeing as the achievement of happiness and pleasure and the eudemonic approaches which focus on the effective functioning of the pupil and their realisation of this. Schools create policies and expectations for enrichment both within and beyond school (such as healthy eating and targeted health policies, target groups for PA, community and club links development plans). They look to achieve these approaches and work toward supporting their pupils to learn to ‘become somebody well’ (Wyn, 2007, p35).

Consistent timetable for provision (red)

85 HV we don’t have our own swimming pool but we also commit two years of swimming, 1

PA across the whole school context (yellow)

73 ZM but we’re a healthy school, so all lunches are healthy, we discuss... we don’t have birthday treats in terms of sweets; children are encouraged to bring raisons, bless them, or donate a book to the library with their name in. We do stuff like that instead of bringing in

treats. In science we talk about exercise and how this helps the body.... 1

PA sits within a spectrum of creativity that PE subject leaders want to promote, this enrichment is tailored to support pupils' capacity to understand how to impact their own wellbeing and their decisions to take responsibility for it, now and in the long term. This is achieved through providing a mastery learning environment, giving pupils a sense of relatedness which influences their autonomy and competence (Holt et al, 2018).

Making memories, supporting learning and PA (blue)

11 LM We always give them new opportunities and they don't get a lot of opportunity outside of school. So we're always in every single... not just in PE across every single subject across school we provide them with so many opportunities. 1

External advice and collaboration are used to validate decisions around wellbeing promotion. The influence of parents, clubs and other external or community organisations is known by the PE subject leaders, and they facilitate opportunities to work together for mutual benefit. The influence of the National Health Service (NHS) in one respect allows access to funding and a clear rationale for PA promotion to improve the health of children in specific localities. The involvement of stakeholders and engagement of parents is easier to facilitate because of this from which schools provide an environment which can better promote nutrition and health outcomes (WHO, 2004).

Externally promoting PA (lilac)

52 HV We wanted it to be a proper consultation and it did take a long time and we got a massive feedback from parents to formulate the policy, which was good. (healthy eating). 3

Supporting pupils in their difference, what individual pupils can offer and identifying enrichment opportunities or adaptive pedagogies based on really knowing their pupils (Graham et al, 2016) is highlighted as key practice by the PE subject leaders. They also work beyond a learning or attainment-based outcome of wellbeing intervention, showing pupils that their teachers care for them and support their socio-emotional learning and whole child development as an outcome (Tobia et al, 2018). The development of rewards systems linked to these personalised achievements is considered integral to wellbeing promotion, they are centred on multiple areas of PA participation; including effort, attendance, performance, support of peers. The following quotes exemplify some common practices.

Rewards to promote PA (purple)

94 CH so, there's a constant intra competition with children being part of a house, having an identity and building towards this. At the end of the year, we do sports awards, we have a sports personality of the year at the end, with children who have achieved are reflected with.... Every child at the end of the year receives a certificate, with the name of every sport they've represented the school at. 1

Making memories, supporting learning and PA (blue)

29 ZM the children are going to (football club ground anonymised) next week to play on their ground, that's their local team, where (football club name anonymised) play, so it's a big thing for them. It's things like that which get them enthused about the PE and they get to experience things they might never do. 3

As a wellbeing supporter, the PE subject leader recognises each pupil's individual needs through assessment practices, collaboration with parents and an awareness of community health issues as well as the National agenda. There is a focus on developing wellbeing by supporting mindfulness and encouraging pupils to be involved in the design of these activities/projects which mirrors other ideals presented in the outcome space. In doing this PE subject leaders ensure pupils are happy and engaged through the whole process; this is idealised as leading to better outcomes for their pupils' long term PA involvement.

4.7 Way of Understanding E

The PE subject leader as 'the enhancer'

Knowing their staff and their strengths and weaknesses is important to PE subject leaders, they understand their job roles and responsibilities and accurately evaluate their teaching, using this knowledge to develop appropriate professional development opportunities. This is often a collaborative endeavour where the perceived CPD needs of staff are discussed and actioned. This is an important process as the current CPD courses in PE are considered to be ineffective (Ward and van der Mars, 2020; Makopoulou, 2018) and there is limited time within ITE courses to both deliver PE content and for trainees to practice their PE delivery in school (Lander et al, 2015). This results in poor confidence and a negative attitude towards PE (Hardeman et al, 2008; Harris et al, 2012).

Supporting teachers' reflections (dark blue)

17 LM *they can be a little bit wary to start off with but I think that's just human isn't it? They do, they're very enthusiastic, engaged and they welcome those new opportunities.* 4

The support that staff receive from PE subject leaders develops their confidence to seek further support and to recognise where they may need it. There is a culture of encouraging reflections and disseminating good practice, through training and observation opportunities, so staff are happy to request help but also support others' need for it. New staff or staff who lack the confidence and ability are recognised quickly and frontloaded support is provided together with cyclical monitoring of their outcomes. Lander (2020) supports these practices, and states that instructional CPD which is visually focused (uses video demonstrations or narrated videos) related to delivering pedagogical content knowledge (Shulman, 1986) and being interactive, is valued by teachers as the type of CPD in PE they want. So too is the modelling of how to promote pupil self and peer assessment, being informed and translatable to teaching practice and facilitating communities of practice to sustain this learning.

Dissemination of best practice (light green)

61 SD *you know the teachers most of them are very competent in PE, we haven't got many that are that weak...they're very good at coming to me you know... 'I'm teaching this, can you help me with it?' I've got some time to go out to have a look, to talk with the teachers about the PE side of things, to observe and look to improve practice. I'm always looking for training opportunities; we buy into the SLA so that we can use that side of things ...* 1

The work done by PE subject leaders to provide CPD for staff and ensure they are teaching quality PE has been key in successfully attaining the quality mark with distinction. PE subject leaders themselves improved their practices and became more adept at enhancing staff training as they worked towards achieving the award. The positive outcomes of which promote recognition and the drive to maintain the same high quality.

Rationale for PA content (orange)

80, HV, *this year is more of a key focus year because it's a reapplication year for my quality mark with distinction, third time.* 2

Supporting teachers' reflections, learning (dark blue)

40 RL *(impact of having an SLT as PE subject leader) think the sports premium funding because it is quite a large pot of money, I'm sure it's about 18k, so because we have that much it is quite a... I don't know*

and because you have to justify it obviously, I think it is an important role and I've got a little bit more time. I've got more time to do, ensure that all the CPD is organised and because we're such a big school as well it takes quite a lot of time to manage all of that. I think all of the things, like the impact forms etc... I'm more used to writing them because I write them for other things as well so all of that tends to flow because I am in my role. Whereas as a class teacher you would rattle off a literacy or a numeracy plan and probably very quickly and that's what you're used to doing, so I suppose in that way it helps more. 2

Reviewing the schools' provision against externally set standards as outlined in the AfPE quality mark is considered informative and raises awareness for teaching staff (based on a study of the AfPE's professional development board). It should, however, avoid being judgemental (Keay and Lloyd, 2009). The PE subject leaders in this study have taken the positives (of which there were many to achieve a distinction in this assessment) and the negatives as developmental actions, so as to sustain their reflections on quality and challenge themselves to continue to improve.

A consistent timetable for provision (red)

38 ZM our head is very specific that PE is not to be covered by PPA. That is something that I've been passionate about as well but that was one of the criteria in the quality mark distinction, I had to justify and prove it and she came in and observed. She asked if it was a regular thing, which it is in our school so I wasn't concerned. It was a big thing and she said to me if it wasn't done that that we wouldn't have got the award, which I was really glad about. 3

Staff practices are enhanced and professionally developed based on their own subject and pedagogical knowledge development needs and the PE subject leaders' knowledge of the provision required for their pupils. Identifying needs through their observations of teachers' as well as teachers' own reflections ensure that relevant training is facilitated, and they understand the reasons behind these decisions. This cyclic system of tailored support limits any negativity involved in feedback and motivates teachers to reflect thoroughly on their development needs and the impact their practice has on learning.

4.8 Way of Understanding F

The PE subject leader as ‘the advocate of variety’

The PE subject leader is an advocate of variety in that they plan their curriculum to ensure a broad and balanced curriculum in line with national expectations; more specifically that staff are expected to deliver a large amount of it. This experience gives teachers the practice to build confidence and skill in teaching and develop an awareness of PL and learning needs. FMS content and understanding how children progress through PL skills towards competence, are important skills and knowledge which PE subject leaders want to develop in their staff. Providing multiple teaching opportunities in this respect improves the meaningful outcomes in PE (Ward, 2013).

Rationale for PA content (orange)

63 SD we do all that work (physical literacy) first before we move children into the games in KS2. Lots of people say, on twitter ‘why aren’t you buying into KS1 outdoor games?’ Because you’re not ready for it yet. 1

Staff in school are supported to facilitate teaching which supports public health objectives as a priority. This provision aligns with Health Optimising Physical Education (HOPE) objectives to; provide PA during class time, teach movement and behavioural skills and encourage present and future PA (McKenzie and Lounsbery, 2013). Elliot et al (2013) outline that primary teachers have low confidence levels and lack the skills and knowledge to deliver PE. If this is the case in the schools involved in this study, the PE subject leaders are not concerned, instead they work to build on those teachers’ advanced pedagogical skills (compared with those of coaches, without formal teacher training) (Blair and Capel, 2013) and apply them to the PE environment.

A consistent timetable for provision (red)

28 HV they’ll do everything throughout the year (teachers will teach each aspect of the provision) 3

Maintaining these consistent opportunities is prioritised in school. Keeping regular PE lessons each week, limiting disruption though pupils leaving for intervention; working with pupils over a period of time supports teachers’ long-term planning for progression. Studies show that many primary schools’ PE provision (and the time afforded for it) is affected by their busy primary school curriculum, with a focus on literacy and numeracy learning and a lack of support and informed whole school planning and resources (Morgan and Hansen, 2008b; DeCorby et al, 2005). This is not the case for the schools involved in this study, PE subject

leaders seem to negotiate the expectations and pressures on core subject attainment, in fact using PA provision as a means improving this.

A consistent timetable for provision (red)

100 HV some schools the TA's will be bringing the children in for intervention, 'it's PE so we'll do some reading' and that's the first thing we say 'no, PE's not for English, it's not for reading, it's not for intervention, we have an hour.' That is it, end of, and I think schools are still using PE to bring kids in and I just think that's wrong. 3

Value is placed in ensuring pupils have the necessary practice to show the best of their ability. Teachers can then evaluate pupils' attainment and reflect on how their teaching input has impacted on this. PE subject leaders want staff to gain an independence that encourages them to strive for better (which is a theme throughout the ways of understanding presented). Through maintaining a variety of teaching opportunities together with CPD they grow to understand what the important practice is and how they can facilitate this. Their staff are inclined to engage with continuous self-analysis and reflection, which creates ways to identify and apply various methods of teaching, identify quality practice, share practice and adapt their planning based on pupils emerging needs (Maksimovic, Osmanovic and Stosic, 2018). PE subject leaders have created a culture where their staff reassess their own values and their actions which enables them to understand their goals and values and find support for their practice (Ibid). This essentially trains them in self-evaluation methods and provides broader and more child centred learning opportunities.

Supporting teachers' reflections (dark blue)

47 DW I did the lessons to start with, so what we did was, I would say this is the curriculum, the 5/6 curriculum is... we try and get three lessons in a week, PE, this terms rugby, erm basketball but the middle lesson 'I want you to bring them both together in the fundamentals... so we're looking at the passes; the difference in passes, we're looking at attacking, defending and were working as a team, and that's what actually blew her mind cause she said 'they're different' and I'm like 'well they're not, we're still attacking, we're still defending, we still need to create space, plan tactics' So they're not different. 3

Both staff and pupils are provided with a variety of opportunities to develop in their learning, confidence and motivation, all provision has demonstratable benefit for both groups. This is achieved through CPD and multiple teaching and learning opportunities across a range of sports and activities and maintaining the provision over a consistent period. There is a focus on PL development and the learning needs of pupils, and teachers have the time to reflect on their understanding of how to recognise these in their pupils

across a variety of curriculum areas. Having a consistent and varied curriculum is identified in the literature as being difficult to achieve in many UK primary schools but the PE subject leaders and schools involved in this study successfully facilitate this.

4.9 Summary

This chapter has explained the researcher's decision-making processes, presenting an outcome space which effectively models the variation of opinion about how PE subject leaders promote PA in the primary school. This study has identified how the PE subject leaders experience and understand PA promotion practice through this outcome space and within the discussion has highlighted a selection of quotes which evidence how meaning was interpreted to form the categories of description in line with R and S aspects of understanding. Relevant literature has been presented in order to show how key practice in PA promotion has been evidenced and where applicable, provided contrasting research. The next chapter will summarise the findings presented, in the context of the research questions created for this study. This research will be situated in the current PE education/child wellbeing context and infer meaning that will support practitioners to evaluate their own provision and improve.

Chapter 5 Conclusions

5.1 Introduction

This chapter will express and illuminate the meanings collected through the formation of the outcome space. The categories presented in line with R and S understandings and the associated data which led to forming these categories will be discussed. Connections will be made from a discussion about how this outcome space has supported the researcher to answer the research questions (below), presenting each question together with relevant meanings gathered from the data. Finally, recommendations will be offered for those individuals and organisations working within the school sport and PA context.

Central Research Question:

How do PE subject leaders in primary schools promote optimal physical activity?

PE subject leaders in primary schools promote optimal physical activity in many different ways which will be illuminated in the answers to the secondary research questions.

Secondary Research Questions:

- What practices do PE subject leaders in schools adopt to promote optimal PA?
- What factors do they see as being instrumental in determining the practices adopted?
- What are the ideal practices that the PE subject leaders aspire to adopt?
- What are the barriers to implementing/adopting these aspired ideal practices?

5.2 The practices PE subject leaders adopt to promote optimal PA

This way of understanding as defined and pertaining to this research question shows that PE subject leaders understand and practice a role as an 'enhancer', they engage in quality assurance and sustainability practices with as much vigour as their practice implementation. The precarious nature of the sports premium funding is a big reason for this, but they also show a strong intention to support their staff to improve their teaching skills and confidence, investing in them for the long term by facilitating practices such as CPD, observation and shared teaching opportunities with PE specialist coaches. The PE subject leaders in this study share a focus on developing their teachers' subject knowledge, their understanding of the expected standards and how they can support pupils to continue to improve within a range of sports and activities. The PE subject leaders consider these a baseline of effective PE teaching and their decisions about teacher CPD look to assure these outcomes. The quality assurance of provision considers both tangible quantitative and qualitative opinion-based data which is used to continually improve their PA offer and ensure a demonstratable impact.

Promoting physical pedagogies is a valuable method of improving multiple outcomes for children. The PE subject leaders in this study extend the curriculum by providing training, and

resources to develop active literacy and numeracy in their schools. They recognise that to improve attainment in these areas, developing pedagogies which motivate pupils is important; their current PE and PA opportunities increase staff motivation to use these physical pedagogies for academic, social, and physical benefit.

In addition to this, giving opportunities for pupils to both lead and take autonomy for their own learning and participation outcomes in lessons and extra-curricular clubs is a key practice in these schools. The PE subject leaders talked about teachers collaborating with their pupils to create task orientated lessons which promote decision making skills, as an understanding of their own development needs. Being allowed to independently act on this is considered integral to pupils' learning. They believe that outcomes in terms of attainment and engagement in PE and their longer-term health and wellbeing are better as there is this focus on socio emotional learning, tailored for individual children, rather than a simple attainment focus. This practice is promoted in the participating schools through rewards systems which identify achievement in multiple areas of pupils' development.

The participating PE subject leaders were concerned with ensuring a broad balanced PE curriculum is offered with a focus on ensuring children achieve PL as a starting point for all PE lessons and enrichment activities; from which the teachers' confidence and skills in planning, teaching, and assessing learning in PL is prioritised. They achieve this through ensuring teachers have multiple opportunities to teach a wide range of sports and activities, to observe and assess learning and build confidence in adapting teaching to ensure progress over time.

Through multiple ways of understanding and practicing their roles, the PE subject leaders make choices which support staff CPD so that they can provide PA opportunities as deemed effective for their pupils. This CPD relates to their teachers' subject knowledge, which is considered the baseline of effective teaching from which their skills in recognising learning and engagement and pedagogical choices to facilitate this are enhanced. The broad and balanced curriculum is important to PE subject leaders as is a focus on PL and giving pupils skills in leadership and developing autonomy.

5.3 Factors instrumental in determining PE practices

In answering the second question about practices, the first category in the outcome space highlighted the PE subject leaders' values that they place in collaboration, in many different forms and for multiple purposes. This sense of value was imparted and then modelled amongst staff, pupils, and the wider community. The effort taken by the PE subject leaders to develop this culture and ethos was described multiple times in the data as they viewed it as essential for the continued promotion of PA. They felt that although they were often the impetus or starting point to 'get things going', without the presence of this culture and ethos (as developed through collaboration and mutually driven agenda for quality PA) the outcomes would be poorer. The way of understanding has been constituted from the ideal of PA promotion being everybody's responsibility, it allows the collaboration to be situated successfully in the setting and staff, pupils and parents take account of it.

The practices that PE subject leaders promote often utilise, but do not usually rely on the use of the sports premium funding, which allows enhancements to provision through work with local and regional clubs, organisations, and other stakeholders. This collaboration not only

provides an enhanced offer of PA in and out of the school day but a concerted effort (based on mutual benefit) to improve the participation for pupils and for the community. There is evidence in the research of the PE subject leaders working within current national agenda or regional expectations based on NHS initiatives or governmental policy around the activity or health of children. They talked about using any associated funding and being mindful of their school's role in ensuring these outcomes are met within school development plans or policies.

Quality assurance is consistent as a measure of ensuring high standards of participation, attainment, and whole child development. The PE subject leads track these outcomes to ensure the sports premium funding is being used to the best effect and to inform further provision. This sometimes resulted in changes to the school sport offer or its continued development. This quality assurance helps PE subject leaders to make important decisions about the direction of their school sport agenda, through a reflection on the bigger picture and overall goals they have for their setting. They are often motivated to use school sport to raise attendance at school and improve pupils' outcomes in terms of their health and wellbeing, their broader academic achievements and engagement with PA outside of school. As such, PE subject leaders work with other subject leads and the senior leadership team in their evaluations to ensure the PE and sport activities are supporting these aims.

In the schools that took part in the research, it is notable that the headteachers and senior leaders are fully supportive of the PE subject leaders' aims. There is a definitive shared interest in the quality of school sport and an understanding that this offer can and does lead to better outcomes for their pupils and the school community in multiple areas. Where the PE agenda is a part of whole school improvement, this supports a momentum from all staff to take a responsibility for PA promotion and continually strive for better. Headteachers often challenge PE subject leaders' ideals, sometimes rejecting these but there maintains a mutual respect and a clear drive to work together to promote PA.

Pupils' opinions are valued, and they are given frequent opportunities to both feedback on perceived quality and to help make decisions about their future PA provision. The schools in this study had developed a longevity to these approaches, the interpersonal relationships that staff have built with the children over time has supported inclusive provision and a school sport offer which is tailored to their pupils' needs. The learning and engagement of pupils within and beyond lessons is positively evaluated by the PE subject leaders, as having this autonomy motivates them to work harder to improve their skills. This work has also led to a mutually challenging environment, where pupils are empowered and confident to hold their teachers to account due to the investment they have in their PA participation and learning.

PE subject leaders enhance their staff CPD offering, firstly by understanding their confidences, skills and development needs and then by evaluating their teaching, using this evaluation to offer the most relevant CPD opportunities in line with the current AfPE and sector offering. It is seen as a collaboration; teachers and staff have an autonomy over their own development, reflection is encouraged, and staff become more skilled at recognising where pupils' learning, or engagement could improve and how they should facilitate this through this frequent reflection. PE subject leaders build up an environment where they are trusted to know the best methods to use and are approachable when further support is needed.

In summary there are several key factors which PE subject leaders consider instrumental to determining their practice. These are centred around maintaining a culture or ethos at their schools in which PA and sport is integral to achievement and enrichment in multiple areas. This links with sustained quality assurance to maintain high standards of provision and extensive collaboration with external agencies, staff, pupils, and the wider community, who all support the common goal to promote quality PA opportunities.

5.4 The ideal practices and potential barriers to achieving these practices

In answering the third and fourth research questions, the analysis showed that although there is consideration of ongoing political or national health agenda in PE subject leaders' work, there is an autonomy to their decisions, centred within the recognition that a more local, community driven approach is required based on the development needs of their setting and their community. Often the engagement of parents and guardians is a key priority to this approach, PE subject leaders appreciate their influence on their children's PA participation and motivation. They are a resource to help them with their work to improve this, but also a potential barrier. For example, they talked about supporting them to make healthy eating choices in their families, which is often an area where there are demonstrable issues. The consensus is that many parents/guardians are supportive and collaborative in enabling their child/ren to be physically active, in the large part due to the strong sporting ethos of these schools and the impact seen with their child/ren. The PE subject leads do feel this work is slightly redundant if parents/guardians are not addressing eating habits at home, however. There have been challenges with improving, sustaining, and measuring the impact of interventions in this area, and it was frequently outlined as an area where better outcomes were needed, and new initiatives were being considered. These will likely include educating parents as to the positive outcomes for their children if they support healthy eating choices and exercise at home as well as in the school. There was a limited account of barriers to achieving ideal PA practices in the data, probably due to a number of reasons. As the sample showed demonstrable effective practice and outcomes in this area, the PE subject leaders could more easily account for these and also recognise potential issues and understand what could be facilitated to improve with more clarity, due to their experiences.

Egalitarian practices are the ideal for PE subject leaders, as these create an environment where all people are equal, they have equal rights and opportunities. PA promotion and the school sports agenda within and beyond lessons is derived from mutual decision-making processes as they believe that pupils should be given the autonomy to contribute to their own development in these areas. All staff are supportive with these practices and understand how to best facilitate them. They see the honesty that children have and want to promote opportunities for them to vocalise this, to empower them and motivate them to challenge themselves.

School sport and PA is presented by the participating leads as a whole school endeavour. It underpins school improvement planning and transcends subject boundaries as it acts as a method to improve standards across multiple curriculum areas and sits centrally in many whole school initiatives designed to improve pupils' outcomes regardless of potential funding to promote this. Sustained evaluations of provision are consistently applied within whole

school improvement planning, with a focus on pupils' outcomes, community cohesion and staff engagement. They are essential elements of the PA provision, being linked to the outcomes appropriate to the school's sporting and community ethos, and as such are consistently applied throughout the year.

This ethos is linked fervently to the wellbeing of pupils, and opportunities are centred on outcomes which improve pupils' wellbeing. Developing mastery in learning environments through stakeholder and parental involvement supports this, created and facilitated within school policy guidance which guide wellbeing focused delivery. It is made explicit to the pupils how the provision can impact on their wellbeing, and they are given the knowledge and skills to take more responsibility for this impact. PE subject leaders maintain a consistent and broad, balanced curriculum offering for all pupils, regardless of other academic pressures, time constraints or Ofsted priorities. They understand that the promotion of PA should be prioritised as it supports learning as well as pupil's wellbeing and the schools in this study have shown a longstanding commitment to this ideal.

This section has provided a summary of the research findings, illuminating the PE subject leaders' understandings about how they promote practice in PA and sport in their schools. Through a role as the enhancer, they ensure staff are confident to promote quality PA, with their underpinning subject knowledge and skills in assessing pupils' progress and engagement a priority. They provide a PL driven curriculum with pupils' autonomy at the centre.

Concluding information about the practices which they facilitate to promote optimal PA has been provided; through collaboration, a culture is created in which PA is integral to achievement and enrichment. Sustained quality assurance and work with a variety of external agencies develops the success of provision and the involvement of the community. The factors which are instrumental in determining these practices are centred on an egalitarian approach in their schools, where everyone is involved in making decisions and this leads to a whole school endeavour and improvement planning which ensures positive outcomes for everyone involved in PA promotion. The ideal practices they exhibit are focused on ensuring pupils' wellbeing and a broad curriculum offer which is maintained despite other school priorities, and the challenges they have encountered are recognised by PE subject leaders as relating to parental involvement and their support of PA promotion and wellbeing activities at home.

5.5. Typology of Recommendations

This study has established how PE subject leaders understand their roles and practices to promote PA, the key influences, and the practices they would like to ideally adopt and the barriers they experience in adopting them. This section presents the key findings of this study, a typology which presents the various ways the PE practitioners perceive their role which might be of value for various stakeholders to consider the development needs of their own settings.

There are two parts for this typology, In Table 8, a Typology of Findings. The first column presents how the PE subject leaders identified their roles, the second column presents their key practices and values and how these are exhibited in their school setting. It is intended that this information may be helpful in two ways;

Firstly, to support all staff concerned with PA improvement to use it as a scaffold to reflect on their own values and practices and offer a useful tool for their professional development. Secondly, recommendations have been derived from the conclusions in this study, which were established from the key practices and ideals modelled by PE subject leaders and presented in the outcome space. These recommendations are viewed through a typology lens to best capture the range of conclusions used to answer to the research questions in this study (below):

- What practices do PE subject leaders in schools adopt to promote optimal PA?
- What factors do they see as being instrumental in determining the practices adopted?
- What are the ideal practices that the PE subject leaders aspire to adopt?
- What are the barriers to implementing/adopting these aspired ideal practices? The foci around the relevant stakeholders who would benefit from these.

Table 8 Typology of Findings

Way of Understanding: The PE subject leader understands their role as:	The PE subject leaders' role and how this is developed in the setting
The Collaborator	A collaborator sees PA promotion being everybody's responsibility; staff, pupils and other stakeholders are all involved in practices to enable wellbeing, support evaluation for positive impact and take accountability for learning processes.
The Egalitarian	An egalitarian values an autonomous school, where pupils' learning process is always considered through supporting their own ideals, developing leadership opportunities and self-learning.
The Ethos Facilitator	An ethos facilitator believes that society and community organisations have an important role in facilitating PA. They believe this creates better growth of PA, and greater impact on those involved stretching beyond the school and to the community.
The Wellbeing Supporter	A wellbeing supporter understands PA promotion as a tool for wellbeing, they ensure pupils recognise the importance of engaging in PA for their lifetime and focus on developing mindfulness and personal enrichment opportunities to help to achieve this.
The Enhancer	An enhancer believes staff have their own individual understandings, ideals and barriers which must be considered to help them promote PA. Enhancers facilitate reflection from staff which is used to identify their development needs.

The Advocate of Variety	An advocate of variety promotes experiences that build confidence through PA. They aim to develop skills through catering for pupils' physical literacy development needs.
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5.6 The typology of recommendations

For School leaders are to:

- Facilitate a culture of collaboration, where everyone is involved in improving school sport and PA as this is central to the success of the school, societal wellbeing and growth of the community.
- Give time for PE subject leaders to engage with assurance opportunities to monitor the success of PA provision and the impact on learning of physical pedagogies throughout the school.
- Recognise the influence of parents and guardians on the success of PA participation for life and work with PE subject leaders to offer further opportunities.

For PE subject leaders are to:

- Model a culture of collaboration, by ensuring staff believe in their PA promotion and wellbeing ideals and understand their important role in improving school sport and PA.
- Value quality assurance and take a responsibility for monitoring the success of PA provision in terms of engagement and learning across the school.
- Plan educational opportunities and offer advice to parents and guardians on PA promotion and healthy eating ideals.

For staff/community organisations are to:

- Plan and teach inclusive PE lessons which cater for all learning and physical needs and promote autonomy.
- Engage in reflection of their own development needs and how well they impact pupils learning.
- Work collaboratively with PE subject leaders and schools to develop a strong partnership with a common goal to promote quality PA opportunities and engage pupils for life.

5.7 Key contributions to knowledge and practical implications

This thesis has contributed to the existing body of knowledge of PE subject leaders' experiences and understandings of what key practice is in PA promotion in the primary school. By using a phenomenographical research method the PE subject leaders have illuminated their own ideals and experiences. The conclusions formed from this research have highlighted the practices, ideals, and management of effective PA provision, which other practitioners can use to inform their own ideas about how to improve PA promotion in their primary schools. A second major contribution has been the focus on the teachers' voice as most of the previous research has involved physiological testing or was based on researcher led interventions with a limited focus on teacher voice or the long-term implementation of PA programmes or initiatives.

The recommendations provide valuable information about how PE subject leaders understand their roles and how this is developed in their settings. The PE workforce will be able to reflect on their own innate motivations, ideals and how these drive the practices promoted in their settings. The presentation of these recommendations is framed in response to common barriers to PA promotion experienced by schools. Teachers and pupils can support those working in the field to identify common barriers to effective PA promotion and reflect on the recommended actions for improvement in relation to what would be productive in their own settings.

The implementation of phenomenography is not a prescriptive endeavour, the researcher's choices aimed to ensure the methodological and analytical decisions allowed an interpretative approach and different influences from previous studies could exist together to achieve the research aims (which were discussed in the methodology chapter). The decision to trial thematic coding alongside R and S coding in phase 5a of the analysis was a valuable way of 'rechecking' quotes against the categories of description and research questions to which they were assigned. This essentially allowed a formative evaluation of the analysis process and provided the most efficient and accurate way of collecting more holistic, participant provided data. This is a new refinement of the phenomenographic method and shows that researchers undertaking phenomenographic studies can have confidence to explore multiple methods of analysis at any point in their process based on a judgement about what they want to achieve in their research. While the researcher thinks it is important to maintain an analysis which finds and links variations of meaning and the body of knowledge in relation to the phenomenon, there is scope within the process to vary the analytical choices to make the phenomenographic process more robust as a result.

Using phenomenography as a research approach is valuable in school based, educative research. Phenomenography aims to establish the different ways in which people make sense of their work on a cognitive level (Larsson and Holmstrom, 2007) and provides the meaning associated with participants' work experiences. In this study, insights into the work of the PE subject leader and the ideals they exhibit have been illuminated and this has highlighted the importance of their role in school to achieve promotion of PA.

This study has highlighted how important it is to PE subject leaders that any practices they adopt are sustainable and of high quality. They are supported and challenged by leaders, staff, parents, and pupils in school to ensure this is the case. This study has also shown the significance of how PE subject leaders value their roles in enhancing subject and pedagogical

knowledge, giving teachers quality CPD and teaching and learning opportunities across a wide variety of sports and activities. This gives them the skills to be able to recognise effective progress in their pupils. Collaboration is key to the implementation and success of every practice they facilitate, because of this they have developed a sporting culture and ethos centred on promotion of PA and the wellbeing of their schools and communities. The PE subject leaders in this study use this ethos to improve multiple learning outcomes across subjects, and outcomes for whole school improvement are often realised. Having a variety of opportunities and a genuine desire to listen to pupils' opinion has a positive impact on pupils' leadership skills, their responsibility for their own learning and their PL development. These findings contribute knowledge which should be considered by policy makers, with a view to realising manageable as well as worthwhile expectations that can be developed in the primary school.

The understandings of and actions to promote PA established by this study are very important to PE subject leaders, leadership teams and those working within the primary school sector for the wellbeing of their pupils. These professionals can consider, interpret, use, adapt and reflect on these findings to inform and build on their own ideals for their school and their pupils. A practical implication for all involved in promoting PA is for them to use their knowledge gained to both validate their own confidences and build on these to plan the most engaging PA opportunities in PE lessons, throughout and beyond the school day which support children to be engaged with their own PA for life. The contributions to the practice of teachers could be echoed in those working in ITE or on PE/sports degree programmes which focus on developing pedagogical skill or knowledge of teacher's roles in facilitating PA.

In summary, this study adds meaningful information to the existing knowledge base about practice in promoting PA in the primary school. Through the phenomenographic method, PE subject leaders who are leading PE provision have illuminated their practices and ideals based on their understanding of their schools and pupils' development needs as well as the wider policy agenda. Their experiences and accounts of those who support them as well as the challenges they can sometimes face when promoting their ideals have been highlighted. Putting their understandings at the centre of all recognition of key practice was a clear motivation for this research, the findings of this study have provided valuable information for the PE community. The importance of the PE subject leaders' roles and the opportunity for them to reflect has been poorly accounted for in the research up to this point; this study has demonstrated this importance and given a voice to these practitioners. PE subject leaders and PE professionals working in education will benefit from comparing their own understandings with those demonstrated by the PE subject leaders in this study, hopefully prompting reflection as a starting point to better inform their own practice and ensure positive outcomes for their pupils. For researchers, the use of phenomenography as a research approach is valuable for those wanting to establish qualitatively different ways of understanding professionals' roles and practices in the school setting. The refinement of key processes (such as developing thematic analysis to check data and streamline the process) to support the facilitation and accuracy of findings, should be considered more often.

5.8 Impact on my practice – my own reflections

When teaching in higher education and schools, I intend to integrate key understandings about how PE subject leaders understand their professional roles, and how they have negotiated and managed PA practices. The PE subject leaders in this study provided multiple ways in which they worked to support pupils both to engage with and lead PA provision; next academic year I will be integrating key practices and ideals evidenced in these areas from which students can plan and evaluate their own teaching. This will focus on facilitating subject and pedagogical content knowledge for teaching a range of learners as well as the critical evaluation of the pedagogical and policy-based considerations for teachers working in the PE context.

My teaching models advanced pedagogies and theoretical considerations regarding the practical application of PE in school. I feel it pertinent to model the understandings garnered from this study about certain pedagogical practices that are effective in promoting PA, to build up my students' knowledge and confidence to deliver. This research has highlighted information about the jobs, activities and work that PE subject leaders do as a part of their roles and what they see as their responsibilities. This information would be valuable to future PE subject leaders, so I intend to develop curriculum content which evidences their roles and responsibilities. I will be modelling some of the most prevalent practices and ideals demonstrated by the PE subject leaders in this study, which will provide my students with both a desire and knowledge of how to promote PA in their settings, providing an accurate and up to date account of what key practice is for the primary sector. The ongoing drive to ensure children and young people are physically active for life is the responsibility of the PE professional, and my students will know this and be confident to facilitate this.

My background as a lecturer in higher education/ITE does instil a drive in me for my students and mentors to become independently research informed and proactive in their own CPD; I feel the conclusions of this research study provide the starting point to achieve this. Specifically, I identified PE subject leaders' understanding of the importance of working with parents to ensure the schools work to promote PA and improve the health and wellbeing of pupils, is continued out of school. I also identified that despite these schools showing PE and PA promotion practices, their work with parents was frequently considered in need of improvement, due to attendance issues, lack of communication or cultural stigmas. Further research which evaluates parents' perceptions of the schools' work to promote PA, how they feel about how their schools work with them to improve PA and wellbeing of their children, their own opinions of PA or the barriers which may limit their own/their children's PA participation out of school, would be a beneficial direction for future research. On completing this research, I have a better understanding of what it means to be a PE subject leader, how they understand their roles and the practices and the actions they engage with to facilitate PA promotion.

5.9 Research limitations

The relatively small sample used could be seen as a limitation. From the researcher's perspective however the eight participants have provided sufficient variations of opinion in answer to the research questions and as discussed in the methodology section. The PE subject leaders involved in this study worked in a range of schools displaying varied socio-economic pupil intake and locality as well as school type variance as sampled from primary schools across Northern England. It was evident in this study that conducting interviews with PE subject leaders from Southern England may have offered different understandings. The north-south divide when discussed in educational terms is still very pertinent and this may have provided a further range of understandings or practices, or indeed showed a commonality. Rigour was evident in illuminating the understandings as relevant to the outcome space and in considering select frameworks for evaluating qualitative research such as Spencer et al (2003) and Guba and Lincoln (1981). The researcher is confident that the research achieves these expectations.

Phenomenography as a method has its limitations. Sandburg (1997), Dortins (2002) and Cossham (2017) state that interviews are always unique conversations between the researcher and the participant. As the researcher planned for and experienced during the interview process, formal questions were delivered but the conversation developed in different ways depending on the need for clarity, expansion, or researcher interest or focus in pursuing a line of enquiry relevant to the aims of this study. Interviewees were not consistent in their answers, they may have focused on specific areas of their experiences and omitted others, maybe with a view to trying to impress or detract from an aspect of practice they were not happy with. They could also only respond based on their understanding at a particular point in time, which is contextually driven, but perhaps without consideration for their previous experiences (Yates et al, 2012). This would lessen the validity of the PE subject leaders' understandings in further data analysis.

It has been previously highlighted that some studies which use multiple analytical researchers, (who either work separately to create categories and then subsequently work together to build the outcome space) can act as a support to validity. For this study the researcher relied on their own experiences and knowledge of the field to recognise ways of understanding the role of the PE subject leader and the concepts which work to promote effective PA. The independent transcriptions and analysis were an important factor in enabling this process.

5.10 Implications for future research

The researcher is aware that interested parties may want a more specific presentation of the practices that the PE subject leaders have developed and used in their settings to achieve PA, with the hope of replicating these in their own setting, and as discussed previously this has not been a desired outcome for this study. Ashworth and Lucas, (1998) and Richardson, (1999) concur that in phenomenographic studies there can be a lack of rigour in the procedures for illuminating the participants' experiences in terms of a lack of specificity. From the researcher's perspective, while this is a valid ideal, and the sharing of specific practices can be successful to an extent (even if the contexts were similar), ideal provision needs to be tailored both initially and over time because of evaluation. Assessing the needs of pupils, staff,

and the school before establishing specific practices would give practitioners the best chance of being successful. A 'one size fits all' approach is not warranted as all schools have different ethos, ideals, pupil types, community expectations and the professionalism of the PE workforce gives confidence that anyone using this information will reflect on the conclusions and recommendations presented with their own schools' interests in mind. As Kvale (1989) Miyata and Kai (2009) and Sin (2010) suggest, a positive criterion for qualitative research will come from the way that external validity has been enhanced by providing a transferability of information from which a range of practitioners can extract the key information and apply this to their contexts.

This phenomenographical study has identified the variety of ways in which PE subject leaders understand their roles in promoting PA and how they facilitate this. What is needed now is for PE subject leaders in the primary sector to consider the same. Collaboration with their colleagues and people within the school community to establish how the findings presented in this study can be used as to make a meaningful change to their practices, and ultimately improve the wellbeing of their pupils. The researcher would like to see a comparative phenomenographical study undertaken with PE subject leaders in the independent school sector. One participant in this study alluded to occasional collaboration in competition with an independent school but this seems to be a rare occurrence (based on the data and personal experiences teaching in and working with this sector). There should be good practice in enrichment, education and the negotiation of barriers which each sector can learn from each other and could promote a willingness to collaborate, share facilities and strengths in ideals and practices. The researcher would be particularly interested in the independent schools' funding implications and their choices for PA promotion which are not as managed by external policy as the state sector.

It would also be beneficial to explore pupils/students' views on ideal PA promotion practices and the ways to involve them as stakeholders in their education and enrichment. This was a strongly evidenced practice in this study, particularly, how pupils value this autonomy and rationalise their choices, this would support teachers and ITE tutors planning. Lastly, there have been negative accounts of leadership priorities which limit the quality PA offer, or the wellbeing-based ethos developed in primary schools. From the researcher's perspective these priorities prevent practices (as identified in this study) such as developing PA in lessons and through enrichment, promoting CPD through teacher observation and shared teaching with coaching staff (instead of using PE lessons as PPA cover) or limiting interventions during PE lessons for core curriculum subjects when standards may be dipping. There are multiple pressures and an accountability which is wider than the wellbeing agenda, however the PE subject leaders in this study demonstrated that PA promotion and PE and school sport can be achieved alongside these considerations. It would be useful to facilitate focus groups or interviews with those school staff who experience challenges to promoting PA or fail to value it. These could be led by PE subject leaders or school leadership staff who could listen, advise, and support and perhaps engage with further CPD, as such PA promotion can and should be achievable for all primary schools as demonstrated by the PE subject leaders in this study.

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Zecevic, C.A., Tremblay L., Lovsin, T. and Michel, L. (2010) Parental influence on young Children's Physical Activity. *International Journal of Pediatrics*. 7, pp. u.k. Available from: <<https://pubmed.ncbi.nlm.nih.gov/20671967/>> [accessed 07.08.21]

Appendices

6.1 Appendix 1

AfPE Quality Mark criteria as evidenced by 'Bright PE, Design for Online (date unknown)
Available from:

<https://view.officeapps.live.com/op/view.aspx?src=http%3A%2F%2Fdesign-4-online.co.uk%2Fclientideas%2Fbrightpe%2Fafpe%2520Quality%2520Mark%2520-%2520Guidance%2520Notes.doc&wdOrigin=BROWSELINK> [accessed 21.06.20]

6.2 Appendix 2

Sjöström and Dahlgren's (2002) Seven steps of data analysis in phenomenographic research. Cited in Khan, (2014, pp. 6-7).

The steps are as follows:

- (i). Familiarisation step: the transcripts will be read several times in order to become familiar with their contents. This step will correct any mistakes within the transcript.
- (ii) Compilation step: The second step will require a more focused reading in order to deduce similarities and differences from the transcripts. The primary aim of this step is to compile teachers' answers to the certain questions that have been asked during interviews. Through this process, the researcher will identify the most valued elements in answers.
- (iii). Condensation step: This process will select extracts that seem to be relevant and meaningful for this study. The main aim of this step is to sift through and omit the irrelevant, redundant or unnecessary components within the transcript and consequently decipher the central elements of the participants' answers.
- (iv). Preliminary grouping step: the fourth step will focus on locating and classifying similar answers into the preliminary groups. This preliminary group will be reviewed again to check whether any other groups show the same meaning under different headings. Thus, the analysis will present an initial list of categories of descriptions.
- (v). Preliminary comparison of categories: this step will involve the revisions of the initial list of categories to bring forth a comparison among the preliminary listed categories. The main aim of this step is to set up boundaries among the categories. Before going through to the next step, the transcripts will be read again to check whether the preliminary established categories represent the accurate experience of the participants.
- (vi). Naming the categories: After confirming the categories, the next step will be to name the categories to emphasise their essence based on the groups' internal attributes and distinguish features between them.
- (vii). Final outcome space: in the last step, the researcher hopes to discover the final outcome space based on their internal relationships and qualitatively different ways of understanding the particular phenomena. It will then represent the categories in a hierarchy.

6.3 Appendix 3

Draft semi-structured interview schedule: PE subject leaders

Please note: questions to be used as a guide, this is not an exhaustive list and is open to adaptation or expansion to delineate further information.

Introduction

Thank for their participation.

Reiteration of consent and option to withdraw at any time.

Reminder that transcript of the interview will be sent out to the participant with a timescale within which to return any comments.

Use of the digital recorder – explanation of how it can be switched off, the recording stopped and the interview concluded at any time should the participant wish to do so.

The focus of questioning; to be shared with the PE subject leaders at the start of the interview.

Initial questions:

1/ When do you feel you have been successful in your role? Or what makes you a successful PE subject leader?

2/ Can you tell me about how you promote physical activity in physical education lessons?

3/ What is difficult or hinders you in this work?

4/ What helps you in this work?

These questions are needed to elicit different views of the phenomenon. Also, questions in the interview can follow the comments of the participant - probing on the process/approach, for conscious decisions about the approach and for intentions and conception

Could you explain further? What do you mean? Is there anything else you would like to say about this problem?

Probing on process/approach

Can you tell me any more about that?

When you are doing that, what are you thinking about?

When you say ... what exactly do you mean?

Can you give me an example of that?

Probing for conscious decisions about approach

Did anything make you change your mind about how to do this / that?

Was there anything you found difficult? What did you do then?

Probing for intentions and conceptions

When you use the word learning there, what exactly do you mean?

When you say you want to get more knowledge about this subject what do you mean?

What counts as understanding?

Is all learning the same?

6.4 Appendix 4



World Health Organisation – Health Promoting Schools Model (WHO, date unknown)
Available from: <https://www.who.int/images/default-source/infographics/health-promotion/who-hps-infographic_q1_2.jpg?sfvrsn=684f0c1f_3> [accessed 14.07.21]

6.5 Appendix 5 Ethical Approval



Liverpool Hope University	
Ethical Approval Request only for research involving human participants who are NOT children (below 18) or vulnerable adults	
1) For text-based projects not involving human participants, use the designated shorter request form rather than this one. 2) For projects involving children or vulnerable adult, use the designated longer request form rather than this one.	
<i>SECTION 1 [TO BE COMPLETED BY THE RESEARCHER]</i>	
1.1 Researcher For staff: Name: (For joint research conducted by staff, the names of all the researchers should be given with the Principal Researcher's name given in bold.) For students: Name, student ID, name of supervisor:	KAREN MCNICHOLL 14012252
1.2 Title of Proposed Project:	<i>Promoting Physical Activity in primary schools: A phenomenographical study exploring Physical Education Subject Leaders' perspective into their practice</i>
1.3 For students only: Programme Title and Level of Study (e.g. MA Education; Philosophy and Ethics Level H).	EdD
1.4 For staff only: Position held at Hope (e.g. Lecturer).	PROFESSIONAL TUTOR
1.5 Faculty and Department or equivalent : <i>(for research involving two Faculties or Departments, please state both. The name first</i>	Faculty of Education; School of Teacher Education

<i>given should be that of the Faculty and Department whose DEL is being asked to approve.¹)</i>	
1.6 Start date of proposed research (note: this must be later than the date at which approval may be given)	01 Nov 2017
End date of proposed research	31 July 2018
1.7 Professional guidelines referenced	BERA ethical guidelines (2011)

SECTION 2

NOTES ON ALL RESEARCH INVOLVING HUMAN PARTICIPANTS

Approval will be given by

- (a) The University Research Ethics Sub-committee for
- research that may involve deceptive or covert activity
 - empirical research into illegal activities
 - research that may be connected to any aspect of national security
 - and/or research deemed to pose a significant risk to the University's reputation.

The researcher should identify all such cases and refer them to their supervisor, who in turn will contact their Departmental Research Ethics Lead (DEL) for suggestions. The DEL will forward the application to the Faculty Research Ethics Sub-committee for consideration and, if necessary, for referral to the University Research Ethics Sub-committee

OR

- (b) The Faculty Research Ethics Sub-committee for research involving children (under 18) or vulnerable adults and recommended by a Departmental Research Ethics Lead (DEL)

OR

- (c) The DEL for research involving human participants but NOT children (under 18) or vulnerable adults.

OR

¹ The University does not require double approval for shared research. Where the research is cross-Faculty, the researcher should seek advice from an appropriate person about which Faculty should be asked to approve.

(d) An authorized staff who for good reason cannot refer the request to a supervisor

NOTE: For projects not involving human participants, use the designated shorter request form rather than this one.

In all cases, initial scrutiny will be carried out by the supervisor or DEL, as appropriate.

Initial scrutiny consists of a careful reading of the request coupled with ensuring completion of the checklist given at the end of this form. This process may need to be iterative with the researcher*. When ALL responses are satisfactory, the initial scrutineer should complete the last section of the checklist and should send this form (and any associated documentation) on to the next stage of the process as explained at the end of the checklist.

*If ANY prompt cannot be given an acceptable response, the initial scrutineer should return the form to the researcher, clearly explaining the remedial action needed, and advising of a deadline for the form to be returned to the initial scrutineer.

Section 3. INFORMATION ABOUT PROPOSED RESEARCH STUDY.

Note: the checklist given at the end of this document should be completed by the researcher. The initial scrutineer may either add to it, or simply endorse it as agreed. A supervisor or DEL receiving a form without the checklist having been completed will return it to the supervisor (for student research) or the researcher (for staff research) for completion.

3.1 GENERAL

a) Full title of the research project:

Promoting Physical Activity in primary schools: A phenomenographical study exploring Physical Education Subject Leaders' perspective into their practice

b) Aims and objectives:

To establish how PE subject leaders in primary schools promote optimal physical activity (PA) in PE lessons.

To understand:

- What practices do PE subject leaders in schools adopt to promote optimal PA?
- What factors do they see as being instrumental in determining the practices adopted?
- What are the ideal practices that the PE subject leaders would like to adopt?
What are the barriers to implementing/adopting these practices?

c) Brief outline of the research study. Please ensure that you include details of the **design** (qualitative/quantitative, etc) as well as the **methods and procedures** (questionnaire, interviews, experimental trial, observation, etc).

Qualitative approach will be adopted for this study. Semi-structured interviews will be conducted with PE subject leaders in primary schools identified as having high standard of practice in PE. Interviews will subsequently be analysed using a phenomenographic framework, in order to derive the variation of opinion amongst the interview participants. Initial questions would be:

1/ When do you feel you have been successful in your role? Or what makes you a successful PE subject leader?

2/ Can you tell me about how you promote physical activity in physical education lessons?

3/ What is difficult or hinders you in this work?

4/ What helps you in this work?

Associated probing around the answers from participants will seek to explore:

1/ The approach, model or process adopted in more detail

2/ The conscious decisions about the approach; i.e., thought processes, challenges

3/ The intentions and conceptions relating to the approach or opinion

d) As mentioned under Section 2 (a), some types of research must be referred (by the Faculty Ethics Research Sub-Committee) to the University Research Ethics Sub-Committee. Therefore, please state here if your research involves or may involve deception, the use of covert methods, is into matters involving national security, is into illegal activity or might endanger the University's reputation. Please also highlight the key aspects which cause it to fall into one or more of these categories.

N/A

e) Where will the study take place and in what setting? If in a workplace, or if the participants are from a workplace, identify what your connections are with that workplace.

Interviews will take place in the primary school in which the PE subject leaders work. There is unlikely to be any connection between myself and the participants or setting. Sampling procedure may result in schools selected for the study who I have previously worked with in an advisory capacity or who are involved in Liverpool Hope's teacher education partnership (the faculty within which I work). Such schools, with association with myself or the university, will be omitted from the sample. This should not affect the potential for quality data collection as I would ensure that the sample would include schools from all representative groups.

f) Give a brief description of your target sample (e.g. age, occupation, gender).

PE subject leaders in primary schools. Will hold positions of class teacher and may have extra responsibility (i.e. KS2 leader, deputy head, assessment coordinator etc...).

Mixed male and female (although proportionately more female teachers work in the primary school setting)
Age; 22-60 years

g) Is the participation individual or as part of a group?

Participation is individual for this research.

h) How will participants be selected, approached and recruited?

Clearly identify and fully analyse any issues of power relations that might arise and say what steps will be taken to alleviate them. This applies particularly if the location of the research is a place of the researcher's employment, or if they have other strong links with the participants.

Sampling will occur through identification of schools who have achieved and maintained the School Games Gold award in the Northwest of England between 2017 and 2018. Initially from this sample I will consider those schools situated in the Merseyside area only and will then scrutinise Ofsted inspection reports for these schools to establish those evidencing high standard PE and school sport practice. Using my own judgements (based on my professional experience as a former PE advisory teacher and current teacher education tutor) regarding the evidence of quality PE identified in each inspection report, I will then sample 10 schools evidencing the best practice and approach them to participate in this research.

The initial Merseyside sample should be sufficient to ensure a variation of opinion (that is the essence of phenomenographical enquiry) from the best practitioners. Further sampling beyond Merseyside could be facilitated if required, using the above process.

i) Free and informed consent and the right to withdraw at any time are indispensable.

Is written consent to be obtained? Please delete as appropriate **YES**.

If **YES**, please complete the appropriate sections of the standard Consent Form(s) and the accompanying Research Information Sheet(s) that can be found at the end of this documentation.

If **NO**, please state *why*. As free and informed consent is essential, you need to give strong and convincing reasons for not obtaining informed consent.

How will the participants' right to withdraw be ensured?

Participants will be advised both in writing and before the interview process that they can withdraw at any time, prior to the writing up of the thesis.

3.2 Risk & Ethical Procedures

Please note: all studies with human participants have the potential to create a level of risk. “No risk” is thus not an acceptable answer, although “Minimal risk” is. You are fully responsible for the protection of both yourself and your research participants. Please try to anticipate the context and perspective of your participants when completing this section.

a) What potential risks are there of physical harm to participants? Please specify and explain any steps you will take to address them.

Minimal Risk – Interviews will be conducted in a quiet space within the primary school setting. All emergency procedures will be discussed and followed. If the interviewees feel tired during the interview process, they would be given the option to do the interview over two or more sittings.

b) What potential risks are there of psychological harm to participants? In particular, how might participation in this research cause discomfort or distress to participants? Please specify and explain any steps you will take to address these issues.

Minimal Risk – Interview questions may elicit opinions and responses which the participant may feel uncomfortable discussing. They may be concerned about other colleagues hearing the discussion or the data or written accounts being made available.

Participants will be assured that data collected will be anonymous and any writing up will use pseudonyms as identification. The interview will be conducted in private with the researcher and participant only present. The participants will be informed about the rationale for the research and the potential implications for practice, for themselves and for the sector; this should support an honest discussion.

Participants will be able to read the transcripts of their interviews and will be able to ask for anything they are not happy with to be deleted. They will be informed of their right to withdraw from the research at any time prior to thesis writing up.

c) Are there any risks to you as the researcher (and / or your co-researchers, if you have any) in this project? If so, outline the steps you will take to minimise them.

Minimal Risk – Participants may not want to divulge negative aspects of their practice; this may affect the trust between myself and the participants and confidence I have assumed to lead the interview. I will ensure the participants are aware of the rationale for the interview; the research and the value placed on truthful responses aims to establish best practice for the sector. This should support a full and honest discussion.

d) How might participants benefit from taking part in this research?

Participating PE co-ordinators will have the opportunity to reflect on their own practices and what impacts the context has on their ideals. The process may enable them to reflect on their own strengths and weaknesses...

e) Does any aspect of your research require that participants be naïve (*i.e. they are not given full or exact information about the aims of the research*)? Please explain why and give details of the debriefing procedures you would use when the need for the naiveté is over.

N/A

3.3 Data Security, Confidentiality, Anonymity and Destruction

a) Where and how do you intend to store any data collected from this research? Give details of steps you will take to ensure the **security** of any data you collect.

Note that data protection regulations stipulate that data must be stored securely and not be accessible or interpretable by individuals outside of the project. Hence, data should be stored in a password-protected file on a password-protected device such as a desktop or laptop, and not on easily movable devices such as USB keys or CD ROMs.

All interviews will be transcribed and saved as secure files on a password protected computer; to which only I have access. Data collected during the interview process on audio recording devices will be deleted immediately following saving onto my computer. Following a successful VIVA all data collected (including transcripts) will be permanently deleted.

b) What steps will you take to safeguard the **confidentiality and anonymity** of personal records?

Password protected computer will be used to which only the researcher will have access. Pseudonyms will be used to identify participants and schools, both during interviews on audio recordings and within the thesis writing up.

c) Will this research require the use of any of the following (please delete as appropriate):

Video recordings	YES/ NO
Audio recordings	YES / NO
Photos	YES/ NO
Observation of participants	YES/ NO

If you answered YES to any of the above, please provide a more detailed explanation of how you will ensure confidentiality and anonymity.

Audio recordings will be saved onto a password protected computer. Recordings used during the interview on audio devices will then be deleted. In the recordings, the interviewees will not be named. Pseudonyms will protect anonymity and confidentiality.

d) Please confirm that you will destroy all personal data and indicate at which point you will do so.

For students: A date should be provided. This should normally be no later than the end of their degree programme. Students should NOT make this point dependent on a successful outcome of their studies.

Data will be destroyed on completion of a successful VIVA. It is estimated that this will be by January 2020.

For staff: A date should be provided. For certain types of research, it is acceptable for destruction of anonymised data to be indefinitely deferred. This must be clearly declared in the Research Information Sheet.

4 For students only: Supervisor's comments

(Please note that applications submitted without supervisor's comments will not be considered.)

There has been a careful consideration of ethical issues in the proposed research study, involving face to face meetings between Karen and ourselves as supervisors. In addition, we have scrutinised and commented on previous drafts of this ethics application.

We are confident that all potential ethical issues have been properly dealt with.

Supervisor's name: Prof Lin Norton and Dr Namrata Rao

Date: 8th Feb 2018

Blank Research Consent Form and Research Information Sheets are appended. Please ensure you complete the relevant forms, and delete any that are not required.

Note 1

The question of when childhood is deemed to end, such that mentally capable young people can themselves give free and informed consent without needing parental consent, is much discussed, and to some extent depends on the reason why the consent is being sought. As a precaution the University takes the age of personal consent for research participation as being 18, and this should be applied throughout. Only if ALL participants in this research are over 18 should this form be used.



LIVERPOOL HOPE UNIVERSITY

RESEARCH CONSENT FORM

Title of research project: *Promoting Physical Activity in primary schools: A phenomenographical study exploring Physical Education Subject Leaders' perspective into their practice*

Name of researcher: Karen McNicholl

I confirm that I have read and understand the information sheet for the above research project and have had the opportunity to ask questions.

Yes	No
-----	----

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

Yes	No
-----	----

I agree to take part in this research project and for the anonymised data to be used as the researcher sees fit, including publication.

Yes	No
-----	----

Name of participant:

Signature:

Date:



LIVERPOOL HOPE UNIVERSITY

RESEARCH INFORMATION SHEET

Outline of the research (a couple of sentences in non-specialist language):

In this research I want to explore how you as a physical education lead in a primary school promote optimal physical activity. In this research I am particularly concerned with finding out your views about practices, which are effective in promoting physical activity.

Who is the researcher?

Name: Karen McNicholl

Institution: Liverpool Hope University

Researcher's University email address: 14012252@hope.ac.uk

What will my participation in the research involve?

Engaging in an interview with the researcher, which should last for not longer than an hour. It will be done at a mutually convenient time and place. The interviews will be audio recorded.

Will there be any benefits to me to taking part?

You will have the opportunity to reflect on your own practices and what impacts your context has on your ideals. The process may enable you to reflect on your own strengths and weaknesses.

Will there be any risks to me in taking part?

There will be minimal risks to you taking part in the interview. If you feel tired during the interview process, you would be given the option to do the interview over two or more sittings. All emergency procedures will followed, as per your school setting.

The interview questions may elicit opinions and responses, which you may feel uncomfortable discussing. All data collected will be anonymous and any writing up will only use pseudonyms as identification. The interview will be conducted in private with the researcher and you only present. The rationale of the research will be further discussed with you before the interviews start, to support your understanding of the benefits of taking part.

You will be able to read the transcripts of your interviews and are able to ask for anything you are not happy with to be deleted. You have the right to withdraw from the research at any time prior to thesis writing up.

What happens if I decide that I do not want to take part during the actual research study, or decide that the information given should not be used?

You have the right to withdraw from the research at any time by informing the researcher, prior to the writing up stage of the research. Should you wish to withdraw the data you would have contributed to the research simply email me at [Error! Hyperlink reference not valid.](#), prior to the writing up stage.

How will you ensure that my contribution is anonymous?

You and your school will be identified using pseudonyms during the recordings of interviews, analysis of transcripts and during writing up.

Any conference proceedings or dissemination will maintain the use of pseudonyms to ensure anonymity.

Please note that your confidentiality and anonymity cannot be assured if, during the research, it comes to light that you are involved in illegal or harmful behaviours that I may need to disclose to the appropriate authorities.



**CHECKLIST FOR RESEARCH ETHICS APPROVAL REQUESTS
(STAFF OR STUDENT)**

Name of researcher: Karen McNicholl

Name of Supervisor (if student): Lin Norton, Namrata Rao

Date completed: 08.02.18

For use by staff or students to help improve the Ethics Approval request before submission

For use by supervisors before completing the Supervisor comments section of the form. If you cannot answer 'Yes' to every prompt, please discuss with, or return the form to, the student.

Checklist completed by: Prof Lin Norton and Dr Namrata Rao

Date: 8th Feb 2018

PROMPT	See form:	Yes/ No
1 Start-date is after date of scrutiny	1.6	Y
2 Appropriate professional guidelines are identified	1.7	Y
3 Informed consent is being sought from ALL relevant parties and Consent Form(s) and Research Information Sheet(s) are included.	3.1.i, end of document – Research Information Sheet(s) and Consent Forms. Check that they match.	Y
4 Power relations are clearly defined and discussed and appropriate steps to address any issues are set out	3.1 e and 3.1. h	Y
5 Risk to research subjects is adequately discussed and addressed. 'No risk' is not an acceptable response, although 'minimal' is. <i>Note that if questionnaires or interviews are involved, part of the assessment of risk is linked to the questions to be asked. It is therefore helpful if these can be attached, or at least if there can be as full information about them as possible.</i>	3.2 a–c	Y
6 Risk to the researcher is adequately discussed and addressed	3.2 d	Y
7 The right to withdraw is explicit and fully thought through in this Request Form. The Inform Consent Forms the Research Information Sheet(s) contain further information. It might be necessary for the researcher to give quite detailed information about HOW participants can withdraw and how possible psychological harm could be avoided.	Often discussed under 3.1 i	Y
8 Anonymity is adequately dealt with in the Request Form and is confirmed in the Research Information Sheet(s)	3.3	Y

9 Confidentiality is adequately dealt with in the Request Form and is confirmed in the Research Information Sheet(s)	3.2 b	Y
10 Security of information is adequately dealt with in the Consent Form and is confirmed in the Research Information Sheet(s)	3.3 a	Y
11 Destruction of information is adequately dealt with in the Request Form and Research Information Sheet(s) For students: destruction of the data should not be made dependent on successful completion of the research project. An expression such as 'when my studies are complete' covers all eventualities. For staff: it is acceptable for staff research to have a 'never destroyed' statement, but this must be transparent in the Research Information Sheet(s) and Consent Form(s).	3.3 d	Y
12 The research is NOT into illegal activities	2.a & 3.1. d Likely to be buried in the narrative	Y
13 The research does NOT employ deceptive or covert methods, such as to negate or impede the ability of the participants to give informed consent.	2.a & 3.1. d Likely to be buried in the narrative	Y
14 The research HAS NO interaction with issues of national security	2.a & 3.1. d	Y

Note that if any of the last three prompts indicates that the problem scenario is present, the request will not necessarily be refused, but it will need to be sent (by the Faculty Sub-committee) to the University Sub-committee. Please flag this up when sending the form to the Faculty Sub-committee, but it would be helpful if you also completed the rest of the checklist.

APPROVAL

Please select A or B, as appropriate. Delete the other.

A: For STUDENT RESEARCH – to be completed by the DEL:

Name: Claire Lloyd

Role (i.e. supervisor or a different DEL acting in lieu of supervisor): DEL

This application is APPROVED. Research may begin immediately.

Approval for this project has been granted as the research strategies and procedures described in the document below conform to the requirements set out in Liverpool Hope University Research Ethics Policy and BERA Ethical Guidelines (2011).

Please ensure that this form is appended to your thesis when you submit it.

Date (must be earlier than proposed start date): 24/02/2018