

**Enhancing Motivation in Primary Physical
Education: Evaluating a Self Determination
Theory-Informed Teaching Resource
Through Pupil Outcomes and Teacher
Experiences**

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3. This dissertation is the result of my own independent work / investigation, except where otherwise stated.

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ABSTRACT

Low levels of physical activity (PA) among children remain a persistent public health concern, with motivation recognised as a key determinant of engagement in physical education (PE). Drawing on Self-Determination Theory (SDT), this study critically examined whether an SDT-informed teaching strategy resource could influence pupils' motivation for PE, while also exploring teachers' experiences of implementing the approach in practice.

A pragmatic mixed methods design was adopted within a primary school context.

Quantitative data were collected using pre- and post-intervention motivation questionnaires from treatment (n = 67) and control (n = 42) groups over a 10-week period, alongside qualitative data generated through semi-structured interviews with three teachers. Statistical analysis indicated significant increases in motivation in both groups, with a greater effect observed in the treatment group. However, improvements within the control group complicate causal claims, suggesting that motivational change is shaped by broader contextual and developmental influences.

Qualitative findings provided explanatory depth, indicating that increased motivation was reflected in enhanced pupil engagement, persistence, and enjoyment, alongside shifts in teachers' pedagogical practices. Competence-supportive strategies were most readily enacted, while autonomy support presented greater pedagogical and ideological challenges, reflecting the influence of teachers' prior experiences as conceptualised through Occupational Socialisation Theory.

Overall, the findings suggest that while SDT-informed approaches show promise, their effectiveness is shaped by context, teacher interpretation, and sustained professional support.

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GLOSSARY OF TERMS

Acculturation (OST)

The pre-training phase of occupational socialisation, often referred to as the “apprenticeship of observation,” where individuals’ prior experiences as pupils shape initial beliefs about teaching (Lawson, 1983a; Lortie, 1975).

Autonomy (SDT)

The need to experience a sense of choice, control, and volition in one’s actions (Deci and Ryan, 2000; Ryan and Deci, 2017).

Autonomy-Supportive Teaching

A teaching approach that promotes pupil choice, uses non-controlling language, and supports ownership of learning (Reeve, 2012; Aelterman et al., 2019).

Competence (SDT)

The need to feel capable, effective, and able to achieve desired outcomes (Deci and Ryan, 2000; Ryan and Deci, 2017).

Competence-Supportive Teaching

Teaching practices that provide appropriate challenge, structure, and feedback to enhance pupils’ confidence and skill development (Cheon, Reeve and Vansteenkiste, 2020).

Control Group/Wait Group

The group that does not receive the intervention and serves as a comparison within experimental or quasi-experimental research designs. In this study, a wait group waited until after the study period to receive the potential benefits of the intervention.

Controlled Motivation

Motivation driven by external pressures, rewards, or obligations rather than personal interest or value (Ryan and Deci, 2017).

Effect Size (Cohen's d)

A statistical measure indicating the magnitude of difference between groups or conditions (Cohen, 1988).

Internalisation (SDT)

The process through which externally motivated behaviours are gradually adopted as personally valued and self-endorsed (Ryan and Deci, 2000).

Intrinsic Motivation

Engaging in an activity for inherent enjoyment, interest, or satisfaction (Deci and Ryan, 2000).

Motivation

The process that influences the initiation, direction, intensity, and persistence of behaviour (Maehr and Zusho, 2009).

Need Frustration (SDT)

The experience of having basic psychological needs (autonomy, competence, relatedness) undermined, leading to reduced motivation and negative outcomes (Bartholomew *et al.*, 2011).

Need Satisfaction (SDT)

The fulfilment of the basic psychological needs for autonomy, competence, and relatedness, supporting more self-determined forms of motivation (Deci and Ryan, 2000; Ryan and Deci, 2017).

Occupational Socialisation Theory (OST)

A framework explaining how teachers' beliefs and practices are shaped through three phases: prior experiences, formal training, and workplace contexts (Lawson, 1983a).

Organisational Socialisation (OST)

The phase in which teachers' practices are influenced by the norms, culture, and expectations of their workplace (Lawson, 1983a).

Physical Activity (PA)

Any bodily movement produced by skeletal muscles that results in energy expenditure (World Health Organization, 2020).

Physical Education (PE)

Planned, progressive learning within the school curriculum that develops pupils' physical competence and broader skills through a range of physical activities, including sport and dance (Association for Physical Education, 2019)

Pragmatism (Research Paradigm)

A philosophical approach that prioritises practical solutions and the use of multiple methods to address research questions (Creswell and Plano Clark, 2018; Feilzer, 2010).

Professional Socialisation (OST)

The phase during formal teacher education where individuals develop professional knowledge, skills, and pedagogical approaches (Lawson, 1983a).

Quasi-Experimental Design

A research design that examines intervention effects without random assignment to groups (Cohen, Manion and Morrison, 2018).

Relatedness (SDT)

The need to feel connected, valued, and supported by others (Deci and Ryan, 2000; Ryan and Deci, 2017).

Relatedness-Supportive Teaching

Teaching practices that foster positive relationships, inclusion, and a sense of belonging (Ryan and Deci, 2017; White et al., 2021).

Self-Determination Theory (SDT)

A theory of motivation that explains how the quality of motivation is shaped by the satisfaction of three basic psychological needs, autonomy, competence, and

relatedness. Greater need satisfaction supports more self-determined and adaptive forms of behaviour (Deci and Ryan, 2000; Ryan and Deci, 2017).

Semi-Structured Interview

A qualitative data collection method using guided but flexible questioning to explore participants' experiences.

Subjective Warrant (Lortie)

A concept referring to the personal beliefs, values, and prior experiences that shape individuals' perceptions of teaching and influence their decision to enter the profession. These interpretations act as a filter through which new pedagogical approaches are understood and enacted (Lortie, 1975).

LIST OF ABBREVIATIONS

- AGT** – Achievement Goal Theory
- BPNT** – Basic Psychological Needs Theory
- IBM SPSS** – Statistical Package for the Social Sciences
- OST** – Occupational Socialisation Theory
- PA** – Physical Activity
- PD** – Professional Development
- PE** – Physical Education
- PETE** – Physical Education Teacher Education
- SDT** – Self-Determination Theory
- T1** – Teacher 1
- T2** – Teacher 2
- T3** – Teacher 3
- WHO** – World Health Organization

CHAPTER 1: INTRODUCTION

This chapter introduces the research by outlining its context, rationale, aims, and structure. It situates the study within the broader field of physical education (PE) and motivation, establishes its relevance within current social and educational contexts, and presents the research questions guiding the investigation. The chapter also outlines the structure of the dissertation.

Physical activity (PA) is widely recognised as essential for both physical and mental wellbeing; however, global participation levels among children and young people remain persistently low. The World Health Organization (WHO, 2018) reports that approximately 81% of adolescents do not meet recommended PA guidelines, highlighting a sustained and significant public health concern. If current trends continue, it is estimated that there will be almost 500 million new cases of preventable non-communicable diseases between 2020 and 2030, resulting in annual treatment costs of \$27 billion (WHO, 2022).

This issue is particularly pronounced within the Scottish context. Despite favourable policy environments and supportive infrastructure, Scotland ranks among the lowest internationally for adolescent PA participation (Active Healthy Kids Report Card, 2021), with girls consistently underrepresented (Scottish Health Survey, 2023). These trends are concerning, particularly given the well-established relationship between early PA experiences and long-term behavioural trajectories (Ladwig et al., 2018; Rhodes and Kates, 2015; Sohail and Ludvigsson, 2025). As such, low engagement in PA during childhood not only presents immediate health risks, but also has implications for participation across the lifespan, reinforcing the broader public health and economic burden associated with physical inactivity (WHO, 2022).

Within this landscape, PE has been positioned as a key context through which PA engagement can be promoted. As a compulsory subject, PE provides one of the few universal opportunities for children to engage in PA and, importantly, to develop the knowledge, skills, and motivation required for sustained participation beyond the school environment (Bailey and Dismore, 2006; Fairclough et al., 2002; Lonsdale et al., 2017). However, while PE is frequently positioned within policy and research as a

vehicle for lifelong engagement in PA, this assumption remains insufficiently investigated in relation to pupils' lived experiences. Empirical evidence indicates that pupils' experiences of PE are highly variable and, in many cases, problematic. While some pupils report positive and enjoyable experiences, others experience PE as disengaging, anxiety-inducing, and overly performance-oriented (Adank *et al.*, 2024; Hamilton, 2025; Youth Sport Trust, 2025). Importantly, these disparities appear to widen over time, with motivation and enjoyment declining across childhood and adolescence, particularly among girls (Cairney *et al.*, 2012; Youth Sport Trust, 2023). However, positioning PE as a vehicle for lifelong engagement risks overlooking the complexity of pupils' lived experiences, where participation does not necessarily equate to meaningful or motivating engagement. As such, there remains a need to move beyond access to participation towards a more critical examination of the quality of pupils' experiences within PE.

These patterns highlight the centrality of motivation within PE. Motivation has been defined as 'the process that influences the initiation, direction, magnitude, and persistence of goal-directed behaviour' (Maehr and Zusho, 2009). Within PE, this extends beyond participation alone to the quality of engagement and the underlying reasons for involvement. Contemporary motivational theories emphasise that motivation is shaped through dynamic interactions between the individual, the social environment, and contextual factors. This is particularly relevant within PE, where teaching practices, peer relationships, and lesson structures interact to shape pupils' experiences. Despite this, traditional approaches to PE have often prioritised performance, competition, and technical proficiency, with less explicit attention given to pupils' affective and motivational experiences (Pill, SueSee and Davies, 2024). This tension between performance-oriented and learner-centred pedagogies remains a persistent issue within the field.

Self-Determination Theory (SDT) (Deci and Ryan, 1985; Ryan and Deci, 2000, 2017) provides a theoretically robust framework for understanding motivation within educational contexts. SDT conceptualises motivation along a continuum from controlled to autonomous forms and posits that more autonomous forms of motivation are associated with more adaptive behavioural and psychological outcomes. Central to the theory is the satisfaction of three basic psychological

needs: autonomy, competence, and relatedness. When these needs are supported, individuals are more likely to experience intrinsic or self-determined forms of motivation; when they are thwarted, motivation is more likely to be controlled or diminished (Cook and Artino Jr, 2014; Deci and Ryan, 1985; Ryan and Deci, 2000, 2017). See Appendix 1 for the theoretical model of SDT. Within PE, a substantial body of research demonstrates that need-supportive teaching practices are associated with increased motivation, engagement, and intentions for future PA participation (Ng et al., 2012; Vasconcellos et al., 2020; White et al., 2021). However, despite this strong theoretical and empirical foundation, a gap remains between SDT-informed principles and their enactment in practice. Research suggests that teachers often prioritise competence-supportive practices, while autonomy-supportive approaches are less consistently implemented (Reeve and Cheon, 2021), highlighting challenges in translating theory into practice within authentic PE contexts. This gap is particularly significant within primary PE, where generalist teachers may lack subject-specific confidence and rely on established practices, potentially limiting the translation of theory into practice.

To support the implementation of SDT-informed pedagogical approaches, a teaching strategy resource (Appendix 2) was developed by the researcher. The resource was informed by a synthesis of relevant literature on motivation and SDT, alongside contextual insights gathered through observation of PE practice and engagement with existing research on need-supportive teaching behaviours. It was designed as a practical tool for teachers, translating theoretical principles into accessible strategies that could be applied within everyday PE lessons. The resource focuses on supporting the three basic psychological needs of autonomy, competence, and relatedness through specific pedagogical approaches, including the use of meaningful rationales, non-controlling language, structured opportunities for success, and development of positive teacher–pupil and peer relationships.

Closely linked to motivation is the concept of enjoyment, which represents a key affective outcome of PE and is strongly associated with engagement, persistence, and future PA behaviour (Beni et al., 2017; Domville et al., 2019). From an SDT perspective, enjoyment is positioned as a central component of intrinsic motivation and is most likely to occur when pupils' psychological needs are satisfied. However,

enjoyment has not always been prioritised within PE practice, where performance outcomes and curriculum demands may take precedence (Engels and Freud, 2020). This reflects a broader tension within PE between its educational aims and performative traditions, further emphasising the need to examine how pedagogical practices shape pupils' motivational experiences.

The role of the teacher is central in shaping these experiences. However, teaching practices are not developed in isolation. Occupational Socialisation Theory (OST) highlights that teachers' beliefs, values, and practices are shaped through a complex process of acculturation, professional socialisation, and organisational socialisation (Lawson, 1983a). These influences act as filters through which new pedagogical approaches are interpreted, often resulting in the reproduction of established practices. Consequently, the implementation of SDT-informed approaches cannot be understood solely in terms of strategy adoption, but must be considered in relation to teachers' prior experiences, beliefs, and contextual constraints. This has significant implications for teacher professional development (PD), which has often been criticised for being decontextualised and insufficiently responsive to teachers' existing practices (Engels and Freud, 2020).

As such, there remains a need for research that not only evaluates the effectiveness of SDT-informed approaches, but examines how they are interpreted and enacted within primary PE contexts. First, much of the existing research examining SDT within PE has been conducted in secondary school settings, with comparatively limited attention given to primary-aged pupils. Second, there remains limited research exploring how teachers interpret and implement structured SDT-informed resources within real-world contexts. Finally, the relationship between theory-informed pedagogies and pupils' lived motivational experiences within primary PE remains underexplored. These gaps are particularly significant given that primary school represents a critical period for shaping attitudes towards PA.

This study is situated within a Scottish primary school context and focuses on pupils aged 6–11 years and their class teachers. It examines the implementation of an SDT-informed teaching strategy resource within everyday PE lessons, allowing

exploration of both pupil outcomes and teacher experiences within an authentic school setting.

The research is guided by the following questions:

1. Does the use of an SDT-informed teaching strategy resource influence pupils' motivation for physical education?
2. How do teachers experience and interpret the implementation of the resource in practice?

In addition to its theoretical and practical significance, this study is informed by the researcher's personal and professional interests. This includes personal experiences of high enjoyment and engagement in primary PE, followed by a notable decline in motivation during secondary school, ultimately resulting in disengagement from both PE and sport until after adolescence. This trajectory reflects patterns identified in the literature and has informed a critical interest in understanding how positive early experiences can be sustained. Alongside this, the study is shaped by a professional interest in teacher learning, specifically the role of sustained professional development and the institutionalisation of evidence-informed pedagogies within school contexts. Rather than viewing pedagogical change as the adoption of isolated strategies, this perspective emphasises the importance of ongoing support, collaboration, and contextual adaptation in embedding meaningful and lasting change in practice.

Overall, this study responds to the need for a more nuanced understanding of how motivationally supportive pedagogies can be developed, enacted and sustained within everyday primary PE teaching practice. By examining both pupil outcomes and teacher experiences, it seeks to contribute to the development of more meaningful, enjoyable, and sustainable PE practices that support lifelong engagement in PA.

The structure of this dissertation reflects these aims. The following chapter provides a comprehensive and critical review of the literature, examining key concepts related to motivation, enjoyment, SDT, and teacher professional development. The methods chapter then outlines and justifies the research design and philosophical positioning

underpinning the study. The findings chapter presents the quantitative and qualitative results, identifying key patterns and themes, which are subsequently interpreted and critically discussed in the discussion chapter in relation to theory and existing research.

CHAPTER 2: LITERATURE REVIEW

This chapter provides a comprehensive and critical review of the literature relevant to researching the impact of a Self-Determination theory (SDT) informed teaching strategy resource on primary pupils' motivation for physical education (PE), and the views of teachers who implement the resource. The literature review sets out the theoretical and empirical foundation for this study by examining key concepts related to motivation, enjoyment, teacher professional development (PD), and previous qualitative research within PE contexts. While existing research highlights strong links between motivation, enjoyment, and PE participation, two key gaps remain. First, most previous studies on the effect of SDT on pupils' motivation levels have been conducted in secondary school settings, with limited understanding of how SDT-informed strategies may influence motivation and enjoyment in primary-aged children. Secondly, limited research has explored teachers' experiences of interpreting and implementing structured SDT-informed resources. Therefore, this review evaluates theory, practice and previous research to support the current study, which seeks to examine primary pupil motivational outcomes and teacher experiences of implementing an SDT teaching resource in primary PE.

SDT (Deci and Ryan, 1985; Ryan and Deci, 2000, 2017) is introduced as the central theoretical framework underpinning this research. SDT provides a well-established lens for understanding how motivation is shaped through the satisfaction of the basic psychological needs of autonomy, competence, and relatedness, and has been widely applied in PE research. Enjoyment is then examined as a critical affective outcome of PE, strongly linked to pupils' engagement, motivation, and long-term PA participation. Given the pivotal role teachers play in shaping motivational climates, this chapter finally reviews the literature on teachers' PD, highlighting approaches that support the implementation of motivational teaching strategies. Although these areas are discussed separately for clarity, they are conceptually interconnected within the context of PE. SDT provides the theoretical framework for understanding how teaching practices can support pupils' motivation through the satisfaction of basic psychological needs. Enjoyment represents a key affective outcome of such motivationally supportive environments and plays an important role in sustaining engagement in PA. However, the extent to which these motivational conditions are

realised in practice is strongly influenced by teachers' beliefs, professional learning, and the organisational contexts in which they work. Examining these areas together therefore provides an important foundation for understanding both the potential impact of SDT-informed teaching strategies on pupils' motivation and how teachers interpret and implement such approaches in primary PE settings.

Self- Determination Theory

SDT (Deci and Ryan, 1985; Ryan and Deci, 2000, 2017) posits a framework for understanding the origins of motivation and its influence on human behaviour and well-being. As a meta-theory, it comprises six mini-theories that collectively explain human motivation and behaviour. This discussion focuses on Basic Psychological Needs Theory (BPNT) and Organismic Integration Theory (OIT).

A central tenet of SDT is the continuum of motivational quality, which extends beyond the dichotomy of intrinsic and extrinsic motivation. OIT outlines various forms of controlled and autonomous motivation, ranging from amotivation to intrinsic motivation. Between these are four types of extrinsic motivation, differentiated by their degrees of autonomy. The more autonomous forms of extrinsic motivation include identified regulation and integrated regulation. BPNT, embedded within this framework, hypothesises a pathway to more autonomous forms of motivation. BPNT asserts that the fulfilment and support of three basic needs are essential for optimal wellness and psychological functioning (Ryan and Deci, 2000). These needs are autonomy, defined as the necessity to experience a sense of volition and self-initiation in one's actions; competence, the need to feel effective in one's interactions with the environment; and relatedness, the need to feel understood, connected, and cared for by others (Ryan and Deci, 2017). When these needs are satisfied, there is potential for the active transformation of controlled forms of regulation into more autonomous forms through the process of internalisation. Conversely, when these needs are frustrated or thwarted, individuals are more inclined to regulate their actions and behaviours for controlled reasons or motivations (McDavid, Cox, and McDonough, 2014; Mouratidis, Barkoukis, and Tsorbatzoudis, 2015; Ntoumanis, 2001; Standage, Duda and Ntoumanis, 2005). The degree to which individuals perceive control over their actions and feel autonomous influences their persistence in behaviour. Individuals who act for autonomous reasons are more likely to persist

in the absence of external rewards or contingencies (Chatzisarantis *et al.*, 2003; Fortier and Kowal, 2007; Hagger and Hamilton, 2020; Ng *et al.*, 2012; Pelletier *et al.*, 2001). Consequently, a key area of interest for researchers is the promotion of autonomous forms of motivation to sustain individuals' engagement in persistent PA over time.

SDT has demonstrated robust efficacy in enhancing positive outcomes in PE by fostering environments that support the satisfaction of pupils' basic psychological needs for autonomy, competence, and relatedness (Vasconcellos *et al.* 2020; White *et al.* 2021). Empirical evidence indicates that when these needs are supported, pupils are more likely to experience autonomous forms of motivation, which have been consistently linked to adaptive behavioural outcomes in PE, including higher engagement, improved skill development, and intentions to participate in sustained PA (Ng *et al.*, 2012; Teixeira *et al.*, 2012, Vasconcellos *et al.*, 2020, White *et al.* 2021). A comprehensive meta-analysis of 256 studies further confirmed that basic psychological need satisfaction is strongly correlated with autonomous motivation, which in turn is associated with adaptive outcomes such as enjoyment and PA intentions (Vasconcellos *et al.*, 2020).

SDT offers a theoretically robust framework for structuring PE environments in ways that are likely to optimise intrinsic motivation. Despite strong empirical support for autonomy, competence, and relatedness as core motivational drivers, research indicates that PE teachers tend to prioritise competence support, often at the expense of autonomy-supportive practices (Reeve and Cheon, 2021). This imbalance highlights the need for targeted pedagogical approaches that more explicitly address pupils' autonomy needs within PE settings.

A fundamental component of enhancing intrinsic motivation in PE is the implementation of autonomy-supportive teaching strategies that align with the principles of SDT. One well-established approach involves providing pupils with meaningful rationales for activities, which facilitates internalisation by helping them understand the personal relevance and value of tasks beyond immediate performance demands (Reeve *et al.*, 2002; Vansteenkiste *et al.*, 2004). When teachers explicitly connect activities to broader outcomes, such as personal

development, health, or social interaction, pupils are more likely to engage meaningfully (Jang, 2008).

The use of non-controlling invitational language is another effective strategy. Educators who adopt a warm, supportive communication style and emphasise choice in their use of language, create learning environments in which pupils feel empowered to participate voluntarily, thereby enhancing their perceptions of autonomy (Su and Reeve, 2011). Similarly, offering pupils choices, such as selecting activities or modifying rules, promotes feelings of control and ownership over their learning experiences, thereby increasing motivation and participation (Lonsdale *et al.*, 2009, 2013; Patall, Cooper, and Robinson, 2008; Standage *et al.*, 2003). However, research cautions against excessive choice, suggesting that offering two to four meaningful options per lesson is optimal for supporting motivation without creating unnecessary stress (Patall Cooper, and Robinson, 2008; Schwartz 2000).

Another strategy is to encourage student initiative. Allowing pupils to lead activities or make decisions within the PE setting fosters a sense of ownership and volition, which has been shown to strengthen autonomous motivation while also fostering leadership and decision-making skills (Jang, Reeve and Halusic, 2016; Patall *et al.*, 2013). Crucially, autonomy support is most effective when combined with clear structure. Providing explicit expectations, instructional guidance, and constructive feedback alongside autonomy-supportive practices has been shown to enhance both motivation and perceived competence in PE (Aelterman *et al.*, 2019; Cheon, Reeve, and Vansteenkiste, 2020). This balanced approach ensures that pupils feel both self-directed and capable, which is essential for sustaining their intrinsic motivation.

In PE, teachers are instrumental in addressing pupils' psychological needs. The core elements of teacher behaviour that bolster motivation and engagement are autonomy support, competence support, and relatedness support (Cheon, Reeve and Moon, 2012; Reeve and Cheon, 2021).

Equally important to autonomy support is competence support. By setting clear expectations, offering guidance, and providing constructive feedback, teachers help pupils build confidence in their abilities, which enhances engagement and motivation

(Cheon, Reeve and Vansteenkiste, 2020; Carpentier and Mageau, 2016). This aligns with and is supported by self-efficacy theory, which posits that pupils' perceptions of their ability to succeed in physical tasks influence their motivation and participation in PA (Bandura, 1997; Biddle *et al.*, 2011).

Relatedness support, which involves fostering a sense of connection and belonging in the PE environment, is also vital. Teachers who nurture positive relationships with pupils, promote teamwork, and create a supportive classroom atmosphere contribute to pupils' intrinsic motivation and willingness to engage in PA (Gairns, Whipp, and Jackson, 2015; Jackson *et al.*, 2013). Interestingly, peer support has been found to fulfil the need for relatedness more effectively than teacher support, highlighting the importance of both teacher and peer interactions in motivating pupils (Vasconcellos *et al.*, 2020; White *et al.*, 2021). While teachers are pivotal in meeting these needs, it is crucial to recognise the challenges they face. Teachers must balance autonomy and structure, especially in large or diverse classes. Additionally, peer relationships, which can either support or hinder motivation, play a significant role in shaping pupils' experiences and should be considered when planning PE lessons (Vasconcellos *et al.*, 2020; White *et al.*, 2021).

By employing a range of need-supportive strategies, such as offering rationales, using invitational language, providing choices, and encouraging student initiative, teachers can foster intrinsic motivation in PE, ultimately leading to more engaged and self-motivated pupils. Furthermore, supporting pupils' basic psychological needs for autonomy, competence, and relatedness is essential for long-term participation in PA and positive health outcomes. This literature is therefore particularly relevant to this research as it seeks to contribute to the refinement and standardisation of these strategies and to check their effectiveness in diverse contexts, particularly in primary PE settings.

Enjoyment in PE

Enjoyment in primary PE is commonly defined as a positive affective response characterised by fun, interest, satisfaction, and pleasure derived from participating in PA (Emm-Collison *et al.*, 2022; Mo *et al.*, 2024; Papadopoulos *et al.* 2022; Teraoka *et al.*, 2020). Within PE, enjoyment is a multidimensional construct shaped by

psychological, social and pedagogical influences. Children consistently identify enjoyable PE experiences as engaging, inclusive, socially supportive, and appropriately challenging (Beni *et al.*, 2017; Adank *et al.*, 2024).

SDT provides a robust theoretical framework for understanding enjoyment in PE, positioning it as a central affective component of intrinsic motivation (Ryan and Deci, 2000). According to SDT, enjoyment is most likely to occur when the basic psychological needs for autonomy, competence, and relatedness are satisfied. Empirical evidence supports this proposition, with perceived competence emerging as the strongest predictor of enjoyment, followed by autonomy and relatedness (Leisterer and Gramlich, 2021; Domville *et al.*, 2019). Complementing SDT, Achievement Goal Theory (AGT) highlights the importance of the motivational climate, demonstrating that mastery-oriented environments emphasising effort and personal improvement are associated with higher enjoyment than performance-oriented climates focused on comparison and competition (Adank *et al.*, 2024).

Enjoyment plays a critical role in shaping pupils' engagement, effort, and persistence in PE classes. Children who enjoy positive experiences in PE display higher levels of behavioural engagement, more positive attitudes towards PA, and greater willingness to participate. On the other hand, negative experiences can result in disengagement, reduced self-concept, and avoidance behaviours even during primary school (Hayes, 2017; Moreno-Murcia *et al.*, 2009; Domville *et al.*, 2019). Importantly, enjoyment in childhood PE has implications beyond the immediate educational context. Positive affective experiences contribute to the development of physical self-concept and intrinsic motivation, which are key determinants of sustained PA participation in adolescence and adulthood (Ladwig *et al.*, 2018; Rhodes and Kates, 2015; Sohail and Ludvigsson, 2025). Conversely, repeated experiences of failure, embarrassment, or exclusion may undermine motivation and reduce the likelihood of future PA engagement (Cairney *et al.*, 2012; Ladwig *et al.*, 2018; Rhodes and Kates, 2015). Enjoyment is also central to physical literacy, where it is viewed as interdependent with motivation, confidence, and competence, reinforcing its importance for lifelong engagement in PA (Whitehead 2010). From this perspective, primary PE represents a critical period during which experiences may shape lifelong relationships with movement.

Stodden *et al.*'s (2008) developmental model of motor competence and PA extends this understanding by conceptualising participation as a spiral of engagement. The model proposes that early experiences of enjoyment and success enhance perceived competence, which, in turn, strengthens motivation and increases PA participation. This increased engagement provides further opportunities to develop motor competence and reinforces a positive developmental trajectory. In contrast, low enjoyment and repeated negative experiences may initiate a downward spiral characterised by declining perceived competence, reduced motivation, and disengagement from PA (Stodden *et al.*, 2008). Within PE, enjoyment can therefore be understood as a key affective mechanism that supports adaptive motivational pathways during childhood.

Given the centrality of enjoyment, pedagogical approaches in PE play a crucial role in shaping pupils' affective experiences. Game-based and play-centred pedagogical models, such as Teaching Games for Understanding (TGfU), are strongly associated with enjoyment as they integrate skill development with tactical understanding and social interaction, aligning with children's preferences for active, varied, and cooperative learning experiences (Bunker and Thorpe, 1982; Mandigo *et al.*, 2008). Inclusive and differentiated instruction further enhances enjoyment by supporting perceived competence and minimising frustration, particularly for lower-skilled pupils (Beni *et al.*, 2017; Adank *et al.*, 2024). Additionally, supportive peer interactions and positive teacher–pupil relationships contribute to relatedness satisfaction, which has been shown to strengthen enjoyment and engagement in PE (Domville *et al.*, 2019; White *et al.*, 2021).

Despite the strength of the evidence base, several limitations should be acknowledged. Much of the research examining enjoyment in PE relies on self-report measures, which may be influenced by social desirability and children's limited capacity to accurately articulate affective experiences (Toure-Tillery and Fishbach, 2014). Furthermore, the predominance of cross-sectional designs limits causal inferences regarding the relationships between teaching practices, enjoyment, and long-term PA behaviour. Research has also tended to focus on specific pedagogical interventions within controlled settings, which may not fully capture the complexity of real-world primary PE contexts, particularly those taught by generalist teachers.

These limitations highlight the need for longitudinal and mixed-methods research in authentic school environments.

In summary, enjoyment is a central affective outcome in primary PE that underpins motivation, engagement, and participation in PA. The literature demonstrates that enjoyment is maximised when teaching practices support autonomy, competence, and relatedness through inclusive, developmentally appropriate, and game-based pedagogies. However, gaps in the existing evidence suggest the need for further research examining how enjoyable PE experiences translate into sustained PA behaviours over time. Prioritising enjoyment in primary PE is therefore essential for fostering positive, self-sustaining relationships with PA across the lifespan.

Teachers' Professional Development

One perspective to frame the understanding of what and how PE teachers teach is Occupational Socialisation Theory (OST). Lawson (1986) defines OST as “all kinds of socialization that initially influence persons to enter the field of PE and that later are responsible for their perceptions and actions as teacher educators and teachers” (p. 107). Rather than viewing teaching practice as a product of formal training alone, OST emphasises that teachers' beliefs, values, and pedagogical practices are shaped through a lifelong socialisation process.

OST conceptualises socialisation as occurring across three interrelated phases. These are acculturation, professional socialisation, and organisational socialisation (Lawson, 1983a). Acculturation refers to the biographical experiences that individuals accumulate prior to entering teacher education. This phase begins early in life and includes interactions with family members, peers, coaches, and teachers, as well as experiences of school PE and extracurricular sport (Curtner-Smith, Hastie and Kinchin, 2008; Stran and Curtner-Smith, 2009; Dillon et al., 2021). School experiences are particularly influential through what Lortie (1975) termed the “apprenticeship of observation,” whereby individuals develop implicit beliefs about teaching by observing teachers over extended periods. The apprenticeship of observation shapes perceptions of what PE is, what constitutes effective teaching, and which pedagogical practices are valued (Richards, Templin and Graber, 2014). Schempp and Graber (1992) argue that this process has a “distinct and traceable

influence” on teachers’ future practices and ideologies (p. 333). This influence appears to be especially pronounced for non-specialist teachers. Morgan and Hansen (2008) identified strong links between teachers’ own PE experiences and their later approaches to PE delivery, demonstrating how early socialisation can constrain pedagogical decision-making. Beliefs formed during acculturation contribute to what Lortie (1975) described as a teacher’s “subjective warrant,” defined as perceptions of what teaching involves and whether one is suited to the profession (Lawson, 1983a). Subjective warrants shape teachers’ confidence, professional aspirations, and openness to pedagogical change.

Lawson (1983a, 1983b) proposed that PE teachers typically develop either teaching-oriented or coaching-oriented belief systems, a distinction supported by subsequent research (Curtner-Smith, 1999, 2017; Richards, Templin and Graber, 2014). Teachers with teaching-oriented warrants are more likely to value inclusive, educationally aligned PE programmes consistent with policy expectations, often having personally experienced high-quality curricular PE and limited competitive sport involvement (Curtner-Smith, 2009). In contrast, coaching-oriented teachers tend to prioritise extracurricular sport, minimise formal instruction in PE lessons, and circumvent curricular requirements, reflecting biographies characterised by high-level sport participation and poor-quality PE experiences (Crum, 1993; Ennis, 2014). These entrenched orientations present a challenge for teachers’ PD, as beliefs formed during acculturation act as filters through which later messages are interpreted or resisted.

This interpretive filtering aligns with wider scholarship on educational change, which highlights that successful reform is fundamentally reliant on teachers’ actions and thoughts (Fullan, 2016). Without opportunities to interrogate and reconstruct meaning collectively, professional learning risks reinforcing existing warrants rather than reshaping them. Furthermore, Fullan’s change cycle provides additional insight into how teachers experience pedagogical change (Fullan, 2016). Fullan (2016) suggests that educational change is not a linear process but a developmental cycle characterised by stages of initiation, implementation, and institutionalisation. During the initiation phase, teachers are introduced to new ideas or practices, often generating both interest and uncertainty. The implementation phase involves

experimentation, adaptation, and reflection as teachers attempt to integrate new approaches into their practice. Finally, institutionalisation occurs when new practices become embedded within routine teaching and school culture. Importantly, Fullan (2016) emphasises that change is frequently accompanied by ambiguity and initial declines in confidence as teachers challenge established beliefs and routines. Sustained collaboration, reflection, and support are therefore essential to help teachers move beyond superficial adoption towards meaningful pedagogical transformation.

Conceptual developments in PE further complicate technical understandings of teacher development. Backman and Barker (2020) argue that dominant constructions of pedagogical content knowledge (PCK) in PE remain heavily influenced by behaviour-analytic traditions that prioritise correct technique, error detection, and measurable competence. While such approaches can highlight important aspects of instructional expertise, they risk reducing teaching to the application of predefined strategies and instructions. Backman and Barker (2020) propose a more context-sensitive and ethically attuned conception of PCK, emphasising judgement, responsiveness, and interpretation in situated practice. From this perspective, professional learning involves not only acquiring techniques but refining practical wisdom shaped by relational and institutional conditions. This reconceptualisation strengthens the argument that PD must engage teachers' interpretive frameworks and professional identities, not simply their technical skillsets.

The second phase of OST, professional socialisation, begins upon entry into initial teacher education (ITE). This phase involves acquiring the values, knowledge, and skills deemed appropriate for PE teaching (Lawson, 1983a). However, evidence consistently suggests that professional socialisation exerts less influence than acculturation, particularly when ITE programmes are fragmented or lack coherence (Stran and Curtner-Smith, 2009). Park and Curtner-Smith (2018) noted that preservice teachers experience ITE programmes of varying quality, from progressive and coherent to minimal and custodial. High-quality Physical Education Teacher Education (PETE) can reinforce teaching-oriented beliefs and influence recruits with moderate coaching orientations (Curtner-Smith, 1997; Curtner-Smith, Hastie and

Kinchin, 2008). However, recruits with entrenched coaching orientations often remain resistant to change regardless of programme quality (Sofa and Curtner-Smith, 2010). Additionally, some recruits engage in “pupilship” or strategic compliance, outwardly conforming while retaining their original beliefs (Graber, 1991). These patterns limit the transformative potential of PETE and highlight the need to explicitly uncover and challenge subjective warrants.

The third phase, organisational socialisation, begins during school placements and continues throughout teachers’ careers. Organisational socialisation refers to how teachers adapt to schools’ norms, expectations, and cultures (Lawson, 1989). Schools are often characterised as custodial bureaucracies that prioritise stability and conformity, exerting institutional pressures that reinforce traditional pedagogies (Zeichner and Tabachnick, 1983). Newly qualified teachers commonly experience “reality shock” as training ideals conflict with school realities (Veenman, 1984), resulting in washout effects where progressive practices are diluted or abandoned (Zeichner and Tabachnick, 1981). Teachers may also engage in strategic compliance for professional survival (Etheridge, 1989). However, organisational socialisation is not uniformly negative. Supportive school cultures and leadership can enable teachers to practice in alignment with their training (Curtner-Smith et al., 2008).

Fullan (2016) describes schools as frequently operating through a “cellular” structure, where teachers work in relative isolation and develop practice largely through individual habit rather than shared technical culture. Such conditions limit opportunities for ‘deprivatised practice’, where teaching becomes a shared professional endeavour with collaborative inquiry and collective responsibility, rather than a private classroom activity. This cellular structure, he argues, constrains the transformative potential of PD.

Research examining workplace learning environments further demonstrates that organisational conditions significantly mediate teachers’ engagement with professional learning. Attard Tonna and Shanks (2017) distinguish between expansive environments, characterised by collaborative professional dialogue, leadership support, and structured opportunities to integrate learning into practice, and restrictive environments, where compliance-driven training and professional

isolation prevail. This distinction is significant in primary PE, where non-specialist teachers' confidence and willingness to experiment with innovative pedagogies may depend less on access to one-off workshops and more on relational and cultural support within schools. Organisational socialisation should therefore not be conceptualised solely as a constraining factor but rather, as a contextual filter that shapes the extent of pedagogical reform.

Given the strength of acculturation and organisational pressures, effective PE PD must be sustained, collaborative, and designed to engage teachers' beliefs and motivations. However, PD provision remains inconsistent, often relying on short-term workshops that rarely produce lasting change (Desimone and Garet, 2015; Elliot *et al.*, 2013; Tannehill *et al.*, 2021; Zorde and Lapidot-Lefler, 2025). This limitation is particularly evident in primary PE, where generalist teachers frequently report inadequate preparation during ITE. For example, in Scotland, primary PGDE programmes may include as little as four hours of PE-specific training, contributing to low confidence and reliance on custodial approaches (Blair and Capel, 2011; Morgan and Bourke, 2008). In this context, PD becomes critical for addressing gaps left by ITE. Research indicates that PD grounded in collaborative action research and reflective inquiry positions teachers as active agents of change and supports meaningful pedagogical transformation (Bendtsen *et al.* 2022). Communities of practice (CoPs), defined as groups who learn through regular interaction around shared concerns (Wenger, 2006), have emerged as particularly effective in PE, supporting dialogue, reflection, and pedagogical experimentation (MacPhail *et al.*, 2014; Parker *et al.*, 2022).

However, collaboration alone does not guarantee improvement. Research demonstrates that professional communities can either foster innovation or reinforce traditional practice, depending on the quality of inquiry and shared purpose (McLaughlin and Talbert, 2001). According to Fullan (2016), strong professional cultures are defined by more than just collegial interactions. Instead, they have collective responsibility for student learning, engage in reflective discussions, and have a sustained focus on enhancing teaching practices. Mentoring and peer collaboration further counteract professional isolation and help sustain innovative practices, particularly when leadership supports them (Bendtsen *et al.*, 2022).

Empirical research in PE further illustrates both the potential and complexity of collaborative professional learning. In a cross-school CoP, Yoon and Armour (2017) identified clear links between shared professional inquiry and shifts in teachers' pedagogical approaches and instructional behaviours. Teachers reported increased reflective practice, and greater consistency between their teaching methods and educational values, alongside observable changes in classroom interactions. There was also some evidence of positive impact on pupils' cognitive and behavioural outcomes. However, the study highlighted that the translation of teacher learning into sustained pupil change was not linear or guaranteed. Instead, pupil dispositions, school structures, and cultural expectations mediated the outcomes. These findings suggest that while collaborative PD can support meaningful pedagogical change, its effectiveness is shaped by wider organisational and cultural conditions. This perspective is consistent with the explanatory role of organisational socialisation within OST.

Collectively, this literature indicates that PD cannot be understood as the simple transmission of pedagogical strategies, but rather as a socially mediated process shaped by teachers' beliefs, collaborative cultures, and organisational conditions. As such, the literature suggests PD is most effective when it is embedded within supportive professional cultures that enable shared inquiry, informed judgement, and sustained reflection. Within this context, PD programmes that integrate SDT principles and include experience-based learning, such as lesson modelling, rehearsal, and reflective feedback, are more effective in supporting motivating pedagogies (Burel, Tessier and Langdon, 2021; Mayo-Rota et al., 2025).

Fullan (2016) conceptualises this process of capacity-building through the framework of professional capital, comprising human capital (individual expertise), social capital (the quality of collaborative relationships), and decisional capital (informed professional judgement). While policy discourse frequently prioritises the development of individual competence, the literature suggests that social capital may represent a more influential lever for change. Collaborative cultures appear to support both individual professional growth and the development of collective efficacy. In turn, decisional capital enables teachers to exercise informed judgement, ensuring that collaboration deepens professional learning rather than reinforcing

established routines. Supporting teachers' emotional experiences is also essential, as positive emotions are linked to greater relatedness support and reduced controlling behaviours (Burel, Tessier and Langdon, 2021).

These perspectives reinforce the importance of examining not only whether an SDT-informed teaching resource influences pupil motivation, but how teachers interpret, employ and adapt a resource within the professional and organisational contexts that shape their practice.

If custodial pedagogies continue to dominate PE, opportunities to foster student motivation, enjoyment, and lifelong engagement in PA (PA) may be diminished (Bailey and Dismore, 2006; Lonsdale et al., 2017). Positive experiences in PE are consistently associated with favourable attitudes towards PA and sustained participation into adulthood (Ladwig et al., 2018; Sohail and Ludvigsson, 2025). PD therefore carries significant implications, not only for teachers' pedagogical growth but also for pupils' long-term engagement with PA.

Overall, the literature demonstrates that PE teacher PD must be understood within a broader socialisation framework that acknowledges the enduring influence of acculturation, the limited yet important role of PETE, and the constraining or enabling effects of school culture. Effective PD is sustained, collaborative, reflective, and motivationally supportive, engaging teachers' beliefs, emotions, and professional identities rather than simply transmitting instructional techniques.

Despite extensive research on OST and PD, relatively little research has examined how targeted pedagogical interventions may disrupt custodial practices in authentic primary PE contexts. This study responds to this gap by critically examining teachers' lived experiences of interpreting and implementing an SDT-informed teaching resource, in a real-life primary school context, shaped by socialisation and mediated by the organisational context.

Conclusion

This literature review has synthesised research across three areas and demonstrated an interconnectedness between them: SDT and motivation in PE,

enjoyment as a key affective outcome in PE and teachers' PD through the lens of OST. The evaluated body of research collectively underscores the pivotal importance of teaching methods that support motivation in shaping pupils' experiences in PE. It also highlights the intricate social, cultural, and professional factors that affect teachers' ability to adopt, implement and sustain these practices.

Throughout the review, SDT emerged as a robust theoretical framework for understanding motivation and enjoyment in PE. Substantial empirical evidence demonstrates that when pupils' basic psychological needs for autonomy, competence, and relatedness are supported, more autonomous forms of motivation are fostered, leading to higher enjoyment, engagement, and intentions for sustained PA (Ng *et al.*, 2012; Vasconcellos *et al.*, 2020; White *et al.*, 2021). Enjoyment was consistently identified as a critical mechanism linking pedagogical practice to long-term PA behaviour, particularly in primary PE where early experiences may shape lifelong attitudes towards PA (Rhodes and Kates, 2015; Ladwig *et al.*, 2018; Sohail and Ludvigsson, 2025). These findings demonstrate the importance of need-supportive, inclusive, and developmentally appropriate teaching approaches that balance choice and structure.

The review also highlights that teachers' pedagogical practices cannot be understood in isolation from their professional histories and working contexts. OST provides a valuable lens for explaining why custodial and traditional practices persist in PE despite strong evidence supporting motivationally aligned pedagogies. Acculturation, professional socialisation, and organisational socialisation shape teachers' beliefs, orientations, and openness to change (Lawson, 1983a; Curtner-Smith, 2017). In primary PE, where generalist teachers often report limited preparation and low confidence, these influences may be particularly constraining (Morgan and Bourke, 2008).

Furthermore, scholarship on educational change highlights that the implementation of new pedagogical approaches is rarely straightforward, often requiring sustained support, collaboration, and opportunities for teachers to interpret and adapt new practices within their professional contexts (Fullan, 2016). The literature suggests that short-term or fragmented PD is unlikely to disrupt entrenched beliefs, whereas

sustained, collaborative, and reflective approaches, such as communities of practice, hold greater potential for meaningful change (MacPhail *et al.* 2014; Parker *et al.* 2022).

Collectively, the literature highlights two key gaps relevant to the present study. First, although SDT has been widely applied within PE research, much of the existing evidence examining motivational outcomes has been conducted in secondary school contexts, leaving limited understanding of how SDT-informed teaching strategies influence motivation and enjoyment among primary-aged pupils. Second, while research has explored SDT-based pedagogies, less research has focussed on teachers' experiences of interpreting and implementing structured SDT-informed teaching resources, particularly within primary PE settings delivered by generalist teachers.

By examining the impact of an SDT-informed teaching strategy resource on pupils' motivation, alongside teachers' experiences of implementation, this study seeks to address the gap between theory and practice identified in the literature. Specifically, it seeks to contribute to the understanding of how structured, motivationally aligned resources are interpreted and used by primary teachers within real-world contexts shaped by socialisation and institutional pressures.

The next chapter outlines the methodological approach adopted in this study and explains the research design used to explore both the impact of an SDT-informed teaching resource on pupil motivation and teachers' experiences of implementing the resource within an authentic primary school context.

CHAPTER 3: METHODOLOGY

This chapter outlines and justifies the research design, philosophical positioning, and methods used in the study. It offers a rationale for adopting a pragmatic mixed methods approach and details how quantitative and qualitative methods were integrated to evaluate the impact of an SDT-informed teaching strategies resource on pupils' motivation for PE, while also exploring teachers' experiences of its implementation. The chapter provides transparency regarding participant selection, data collection, analysis procedures, and ethical considerations. The methodological design was developed to address the study's two research questions. Firstly, does the use of an SDT-informed teaching strategy resource influence pupils' motivation for PE? Secondly, how do teachers experience and interpret the implementation of the resource in practice?

Paradigm

This study was situated within a mixed methods research paradigm, underpinned by a pragmatic philosophical perspective, to address the dual focus of the research, which was to evaluate the impact of an SDT-informed teaching strategy resource on pupils' motivation for PE and to explore teachers' feelings regarding its implementation. Pragmatism prioritises methodological decisions based on their capacity to answer applied research questions, rather than adherence to a single ontological or epistemological stance, making it particularly suited to educational research that seeks both outcome evaluation and experiential insight (Moon and Blackman, 2014). Ontologically, the study adopted a pluralistic position, recognising pupils' motivation as a construct that can be measured objectively through questionnaires, while also acknowledging that teachers' experiences of implementing SDT-informed strategies are socially constructed and shaped by contextual factors within school environments. Epistemologically, knowledge was viewed as provisional and generated through interaction between participants, researcher, and context, aligning with pragmatism's emphasis on practical usefulness and action-oriented inquiry (Martina Yvonne Feilzer *et al.*, 2010).

The study employed a parallel complementary mixed methods design to address the distinct but complementary research objectives. The quantitative strand adopted a

post-positivist orientation to assess the effectiveness of the SDT-informed approach by measuring pupils' motivation for PE using validated motivation questionnaires, enabling the identification of patterns and potential changes associated with the intervention. Complementing this, the qualitative strand was guided by an interpretivist paradigm and focused on exploring teachers' feelings and experiences of implementing the resource through semi-structured interviews, which captured subjective meanings, professional judgements, and contextual influences that cannot be accessed through quantitative measures alone (Fossey et al., 2002). The study was conducted over a 10-week period within one primary school term. Quantitative data were collected at two time points; prior to the implementation of the SDT-informed teaching strategy resource (pre-test) and following the completion of the 10-week intervention (post-test). Pupils were divided into a treatment group, whose teachers implemented the SDT-informed resource within their normal PE lessons, and a control/wait group who continued with usual PE teaching practices. Qualitative data were collected after the intervention period had finished, which allowed teachers to reflect on their experiences of implementation and perceived impacts on pupil motivation.

Intervention

Teacher participants attended a brief training session, where they learned about SDT, its implementation in education and positive outcomes from previous studies. Strategies to support pupils' basic psychological needs of autonomy, competence and relatedness were shared and discussed. The teachers were then given the resource, a single page of evidence-based strategies along with condensed descriptors. They were also provided with some useful websites, where supportive teaching models and materials could be accessed. Over a 10-week period during their allocated 2 hours of PE lessons, teachers used the teaching strategies to inform planning and delivery of lessons.

Measuring Pupils' Motivation

This study employed a quantitative quasi-experimental pre-test/post-test design to examine changes in pupils' motivation following an SDT-informed intervention. Motivation was measured at two time points, prior to and following the 10-week intervention using an adapted version of the *Motivation to Exercise and Diet*

Questionnaire (Pietrabissa *et al.*, 2020), excluding diet-related items to align with the study's focus (Appendix 6). The inclusion of both a treatment group and a control/wait group enabled comparison of motivational change over time, enhancing internal validity within a natural school context. The study followed a deductive approach, consistent with post-positivist research traditions. Participants were drawn from a convenience sample of pupils attending the researcher's current primary school. The sample included boys and girls aged 6–11 years old, reflecting a typical primary school population. Data was initially collected from a larger sample, however, due to pupil absences, 24 participants' data could not be included as they did not complete both the pre- and post-questionnaires. The final sample comprised 67 valid paired pre- and post-questionnaires in the treatment group and 42 valid paired questionnaires in the control/wait group. While convenience sampling limited the representativeness of the sample, the final sample size was sufficient to conduct inferential statistical analysis and examine changes in motivation within this context.

Method

Motivation was measured using *Motivation to Exercise and Diet Questionnaire* (Pietrabissa *et al.*, 2020), a validated motivation questionnaire, conducted pre-intervention and post-intervention. The questionnaire consisted of age-appropriate, closed-ended items using a Likert-type scale, allowing motivation to be operationalised as a measurable construct. As previously stated, items relating to diet were removed from the questionnaire as they were irrelevant to the study. The use of a validated instrument supported the reliability and validity of the data, while standardised administration procedures ensured consistency across both measurement points.

Alignment

The quantitative methodology was aligned with a post-positivist epistemological stance, which assumes that motivation exists as a real phenomenon that can be measured through empirical methods, albeit imperfectly. The use of standardised instruments, numerical data, and statistical analysis reflected an emphasis on objectivity and measurement, while recognising the influence of contextual factors and potential measurement error. Findings were therefore treated as probabilistic rather than absolute, consistent with post-positivist assumptions.

Data Analysis

Data was analysed using IBM SPSS. A paired-samples *t*-test was conducted to examine differences between pre- and post-intervention motivation scores within the treatment and control groups. Descriptive statistics were also used to examine overall trends and variability in motivation scores. Results were interpreted cautiously, acknowledging the limited generalisability of the findings due to the use of convenience sampling and the specific school context.

Exploring Teachers' Experiences

The qualitative strand of the study aimed to explore teachers' experiences of implementing an SDT-informed resource in primary PE. The purpose was to develop a contextualised understanding of how teachers interpreted, enacted, and reflected on the resource within a shared school environment. An interpretivist epistemological position underpinned this strand, recognising that teachers' experiences of PD are socially constructed and shaped by personal histories, professional relationships, and organisational contexts.

Method

Semi-structured interviews were employed as the primary qualitative research method. This approach is widely used in educational research to explore participants' perspectives and lived experiences in depth while allowing flexibility for probing and clarification (Elhami and Khoshnevisan, 2022). An interview guide (Appendix 7) was used to ensure consistency across participants, while open-ended questioning allowed teachers to articulate their individual experiences and interpretations of implementing the SDT-informed resource.

Semi-structured interviews are particularly appropriate for research into teacher PD due to the complex and relational nature of professional learning. Teachers' engagement with PD is shaped by personal biographies, confidence levels, school culture, leadership relationships, workload demands, and emotional responses to pedagogical change. Interviews allow these intersecting influences to be explored in ways that structured methods often cannot (Amorim and Ribeiro-Silva, 2024; Elliot et al., 2013; Taylor, 2020). Within this study, semi-structured interviews enabled

exploration of how teachers understood SDT principles, how they adapted SDT-informed strategies in practice, and how they perceived impacts on pupil motivation and their own teaching experiences.

Participants and Sampling

Participants consisted of three primary school teachers (T1, T2 and T3) who implemented the SDT-informed teaching strategy resource. All participants worked within the same primary school, allowing the study to examine implementation within a shared organisational and cultural context. A convenience sampling approach was adopted, as all participants worked in the school with the researcher and showed interest in using the resource. The three teachers who took part had a range of professional experience. One teacher had over 20 years of teaching experience, one teacher had seven years of experience, and one teacher was a newly qualified teacher. This variation enabled exploration of how career stage and professional confidence shaped engagement with the resource, perceptions of pupil motivation, and experiences of professional learning. The researcher worked alongside the participating teachers within the same school and conducted the interviews but did not take part as an interviewee. This positioning provided the researcher with contextual familiarity while maintaining a clear distinction between researcher and participant roles.

Data Collection

Data were collected through semi-structured interviews conducted after participants had engaged with, and implemented, the SDT-informed resource. An interview guide was developed in alignment with the research questions and existing literature on teacher motivation and professional learning. Questions progressed from descriptive prompts, such as teaching background and confidence in PE, to more reflective questions focusing on implementation, perceived impact on pupils, and professional learning.

This progression supported participants in articulating their experiences before engaging in deeper reflection and evaluation. Open-ended prompts and follow-up questions allowed the researcher to explore adaptations to the resource, perceived supports and barriers to implementation, and emotional responses to teaching with

SDT-informed strategies. Previous research suggests that such interview designs are effective in revealing complex motivational and professional learning processes not captured by fixed-response methods (Avidov-Ungar, 2016). Given that all participants worked within the same school, ethical considerations were particularly important. Teachers may perceive risks when discussing confidence, practice, or organisational factors (Avidov-Ungar, 2016). Informed consent, confidentiality, and anonymity were therefore emphasised.

Alignment

This qualitative approach aligns with an interpretivist epistemology, which assumes that meaning is constructed through social interaction and contextual experience. From this perspective, teachers' experiences of implementing the SDT-informed resource are understood as subjective and situated, shaped by individual interpretations and the shared culture of the school.

Semi-structured interviews are well suited to this epistemological stance, as they prioritise participants' voices and allow exploration of how teachers make sense of their professional learning experiences. Rather than seeking objective or generalisable measures of effectiveness, this strand aimed to understand how teachers interpreted SDT principles, negotiated contextual constraints, and constructed meaning around motivation, engagement, and teaching practice.

The researcher's position as a colleague within the same school required careful reflexive consideration. While this insider proximity supported rapport and contextual understanding, it also raised potential challenges related to assumptions, power dynamics, and social desirability in responses. Reflexive awareness was therefore maintained throughout data collection and analysis to acknowledge how the researcher's positionality may have shaped interactions and interpretations (Buys *et al.*, 2022).

Analysis

Interview data were analysed using a rapid qualitative analysis approach informed by principles of framework analysis and matrix-based comparison (Brown *et al.*, 2025). This approach is well suited to applied educational research where the aim is to

generate timely, contextualised understanding of participants' experiences (Vindrola-Padros and Johnson, 2020). Analysis focused on identifying patterns in teachers' accounts of implementing the SDT-informed teaching strategy resource, with particular attention to how personal, relational, and organisational factors shaped professional learning experiences.

Following each interview, structured interview summaries were produced using an analytic framework aligned with the research questions and Self-Determination Theory constructs (Appendix 9,10 and 11). As a rapid qualitative analysis approach was adopted, formal line-by-line coding was not undertaken. Instead, data was organised into a cross-interview matrix organised by key domains, which enabled systematic comparison across participants (Appendix 12). This process supported identification of both convergence and variation in teachers' experiences, particularly in relation to differences in teaching experience and confidence in PE, while remaining grounded in individual accounts.

To enhance trustworthiness, the analytic process was conducted reflexively. Patterns identified within the matrix were revisited against the original interview data to ensure interpretations remained closely linked to participants' accounts. While interview data reflect self-reported perceptions and may be influenced by recall or social desirability bias, the rapid analysis approach was appropriate for the study's exploratory aims. The qualitative findings were intended to complement quantitative measures of pupil motivation by providing contextual insight into how teachers experienced, interpreted, and enacted SDT-informed practice.

In summary, semi-structured interviews provided a suitable and rigorous method for exploring teachers' experiences of implementing an SDT-informed teaching strategy resource within a primary school context. Situated within an interpretivist framework, this qualitative strand prioritised depth, reflexivity, and contextual understanding. By capturing perspectives from teachers at different career stages within a shared organisational setting, the study generated nuanced insights into professional learning, motivation, and pedagogical practice in primary PE, complementing the study's quantitative findings.

Ethical Considerations

Ethical considerations were central to this research, ensuring the protection of participants' rights and dignity (Cavan, 1977). Informed consent was obtained from teachers and from legal guardians through plain language statements (Appendix 4 and 5) and assent was secured from the children, with the option to withdraw at any time by clear indication or when a child's behaviour indicated that they wished to withdraw (Pillay, 2014). As a teacher at the school, the researcher held a position of power and influence so it was clearly stated that participation in the study would have no bearing on academic outcomes and data would be entirely anonymised and stored securely (Basit, 2010). The research adhered to ethical guidelines from the British Educational Research Association (2024), UNCRC (1989), and UNICEF (2013) and was approved by University of Wales, Trinity Saint David (Appendix 3).

Conclusion

This methodology chapter outlines and justifies the research design, philosophical positioning, and methods underpinning the study, which aimed to evaluate the impact of an SDT-informed resource on pupils' motivation for PE and to explore teachers' experiences of its implementation. Situated within a pragmatic mixed methods paradigm, the study adopted a pluralistic ontological stance and a provisional, action-oriented epistemology, enabling the integration of quantitative and qualitative approaches to address complementary research objectives.

A parallel mixed methods design was employed. The quantitative strand followed a post-positivist orientation, using a quasi-experimental pre-test/post-test design with treatment and control groups to examine changes in pupils' motivation for PE. Motivation was measured using an adapted, validated questionnaire and analysed using inferential statistics to identify patterns of change associated with the SDT-informed intervention. The qualitative strand was underpinned by an interpretivist framework and used semi-structured interviews to explore teachers' subjective experiences of implementing the resource, capturing contextual, relational, and professional influences on practice.

Ethical considerations were prioritised, particularly given the involvement of children and the researcher's insider position within the school context. Overall, the methodological choices are shown to be aligned with the study's aims, enabling both outcome evaluation and in-depth understanding of implementation processes.

The next chapter presents the findings from the quantitative and qualitative strands of the study.

CHAPTER 4: FINDINGS

This chapter presents and analyses the quantitative and qualitative findings from the mixed methods investigation into pupils' motivation for PE following the implementation of SDT-informed teaching strategies, identifying key trends, patterns, and themes within the data and drawing connections between statistical outcomes and teachers' experiences of practice. Quantitative data were collected through pre- and post-intervention motivation questionnaires, while qualitative data were generated through semi-structured teacher interviews. Theoretical interpretations and possible implications are explored in the discussion chapter.

Quantitative Findings

Quantitative data were gathered from paired pre- and post-intervention motivation questionnaires completed by pupils in both the treatment and control/wait groups. Statistical analyses were conducted using IBM SPSS (Appendix 13 and 14).

Paired-samples *t*-tests were conducted to examine changes in motivation scores over time. For the treatment group ($n = 67$), mean motivation scores increased from 32.18 ($SD = 6.96$) at pre-test to 34.84 ($SD = 6.27$) at post-test. This increase was statistically significant, $t(66) = -5.20$, $p < .001$, with a moderate-to-large effect size (Cohen's $d = -0.64$).

For the control/wait group ($n = 42$), mean motivation scores increased from 33.17 ($SD = 5.98$) to 34.38 ($SD = 4.33$). This change was also statistically significant, $t(41) = -2.09$, $p = .042$, although the effect size was small (Cohen's $d = -0.32$).

Both groups showed statistically significant increases in motivation, with a larger effect observed in the treatment group.

Qualitative Findings

Qualitative data were generated through semi-structured interviews with three teachers following the intervention period (Appendix 8). Cross-case analysis was used to identify shared and contrasting experiences across participants, allowing for the development of key themes grounded in teachers' accounts.

Teachers reported that engagement with the SDT-informed resource led to changes in lesson planning, classroom organisation, and pupil engagement. Despite differences in prior experience and confidence, all participants described positive shifts in both their pedagogies and pupils' responses to PE.

Teacher 1 (T1), who reported lower initial confidence in PE lesson delivery, emphasised increased use of autonomy-supportive strategies. Teacher 2 (T2) prioritised practices that built relatedness and inclusion, while Teacher 3 (T3) focused on competence support, particularly for pupils with additional support needs. These differences illustrate how SDT principles were adapted to individual teaching contexts.

All teachers highlighted the ease of using the one-page resource as a key facilitator of change. The clarity and practical focus of the resource allowed for quick translation of theory into practice. As T2 stated, the resource was "*condensed and just to the point,*" (T2, p.2) allowing immediate classroom application.

Teachers also observed improvements in pupil motivation, particularly among previously hesitant or disengaged learners. Detailed examples of increased persistence, confidence, and enjoyment were provided, especially in relation to competence-supportive practices.

Quantitative Trends

Motivation scores increased in both the treatment and control groups, with a larger effect size observed in the treatment group ($d = -0.64$) compared to the control group ($d = -0.32$). While both changes were statistically significant, the difference in effect size suggests that the magnitude of change was greater where the SDT-informed strategies were implemented.

Qualitative Themes

Cross-case analysis identified several dominant themes across the three teacher interviews. These themes were developed through systematic comparison of interview summaries and matrix entries and were grounded in participants' own accounts of implementing the SDT-informed resource.

Theme 1: Resource Accessibility and Usability

All teachers emphasised the importance of the resource's concise and practical design in supporting implementation. The one-page format enabled quick reference and ease of use within lessons, reducing the need for extensive planning or additional preparation.

T2 described the resource as *"condensed and just to the point... it's just the information you need"* (T2, p.2), while T3 noted that it *"laid out exactly what you want to do"* and was easy to refer to when needed (T3, p.2). T1 highlighted the value of the additional games-based materials, describing them as *"comprehensive"* and useful for supporting lesson ideas and reported that *"the children absolutely love them"* (T1, p.3).

Theme 2: Competence Support and Pupil Persistence

Teachers consistently linked scaffolded success and differentiated activities to improvements in pupil persistence and confidence. Lessons were adapted to provide achievable challenge, allowing pupils to experience more frequent success in different ways.

T2 provided a detailed example of a pupil who previously *"would just give up immediately... go and sit at the side, curl up in a ball,"* but became *"much more relaxed to join in"* when activities were designed so that pupils could *"feel competent in succeeding in different ways"* (T2, p.4). She also described another pupil who initially avoided a task but later engaged fully, with it becoming *"his favourite thing to do"* (T2, p.4).

T3 emphasised the removal of fixed standards of success, explaining that there was *"no... 'this is what a good one looks like'"* (T3, p.4), and that pupils were able to

modify tasks independently as *“the equipment was all out for them just to take and put...where they wanted”*. This created an environment where pupils could regulate challenge levels without fear of failure.

T1’s account highlighted how limited content knowledge could constrain competence support, particularly in gymnastics, noting *“I genuinely don’t know what the next step is... how do you make that harder?”* (T1, p.5). Despite this, she described using peer demonstration as a way of enabling progression, observing *“even a forward roll was a hard deal. But... by the end, we had mastered the forward roll”* (T1, p.5). This indicates a competence-supportive environment that reduced pressure and supported self-regulation.

These examples suggest that competence-supportive practices were associated with increased enjoyment, persistence, confidence, and willingness to participate.

Theme 3: Autonomy and Pupil Agency

A strong theme across interviews was the shift towards autonomy-supportive teaching. Increased pupil choice and reduced controlling practices were associated with greater participation and ownership of learning.

T1 described autonomy support as a significant shift in her teaching identity, moving away from directive practices, saying, *“I was always one of those teachers... ‘No, you do this.”* (T1, p.1). She emphasised a change in power dynamics, explaining that pupils *“can adapt it and change it... it’s like giving the power back”* (T1, p.3). However, she also found this challenging, noting that *“every fibre in my being wants to intervene”* (T1, p.4).

T3 similarly highlighted *“student choice,”* explaining that while curriculum goals remained, lessons were designed so pupils felt motivated to return. She described involving pupils in decision-making, allowing them to take ownership of their learning (T3, p.3). T2 also adapted lesson structure to increase agency and reduce queues to support more active participation time, stating, *“I used to have like quite a few queues... and I’ve kind of got rid of that now”* (T2, p.3).

Collectively, these accounts demonstrate how autonomy support was enacted through both teacher behaviour and lesson design, encouraging greater engagement and pupil ownership.

Theme 4: Relatedness and Inclusion

Peer interaction and relatedness-supportive practices were perceived as important in improving engagement and social inclusion. Teachers described efforts to build positive relationships and supportive peer environments through changes to grouping, collaborative tasks, and classroom climate.

T2 described moving away from fixed groupings, *“I used to have them in more set groups... now they’re just happy to work with anyone”* (T2, p.4), linking this to pupils becoming *“more comfortable and enthusiastic to join in”* (T2, p.4). T3 highlighted an inclusive climate shaped by openness and reduced judgement, stating *“no one felt left out... there was no one saying... ‘If you can’t do one... you’ve been unsuccessful’”* (T3, p.5). She also reinforced a supportive tone saying that in her SDT-informed lessons *“there is no right and wrong answer... you’re coming in to give it your best shot”* (T3, p.5). T1 observed improvements in teamwork, noting pupils initially became *“super competitive”* but now *“work much better as a team”* (T1, p.4).

Across cases, relatedness-supportive practices appeared to enhance engagement by reducing anxiety, promoting belonging, and encouraging collaboration.

Theme 5: Teacher Confidence and Professional Growth

Participants reported increased confidence, enjoyment, and reflective practice when using the SDT-informed resource. Teachers felt more assured in their PE teaching and more willing to experiment with new approaches.

This theme was particularly strong for T1, who linked the intervention to a shift away from established routines, reflecting *“you get into a groove... ‘I’ve always taught tennis this way’”* (T1, p.2). She described the intervention as transformational, *“it’s blown that out the water... it makes it more fun for me. Therefore, the children are having more fun, more quality PE”* (T1, p.6). She also described an increase in

confidence linked to pupil response, *“as they grew in confidence, and I grew in confidence... I did get more confident”* (T1, p.6).

T2 similarly reported increased confidence, explaining that the resource was *“evidence backed,”* which supported confidence in her delivery (T2, p.5). T3 emphasised enjoyment and clarity, describing PE as *“so much fun”* and easier to teach when broken into *“manageable chunks”* (T3, p.7).

These accounts suggest that engagement with the resource supported both pedagogical development and professional confidence, with improvements in teacher confidence perceived to reinforce pupil motivation.

Theme 6: Sustainability and Collaboration

Teachers expressed interest in extending SDT-informed practice and highlighted collaboration as key to sustaining long-term use.

T1 noted limited time for discussion but expressed a desire for whole-staff engagement, suggesting a collegiate meeting to *“share it with everybody”* (T1, p.7). She described collaboration as *“the most valuable part... it gives motivation, ideas and builds your confidence”* (T1, p.8). T2 similarly described ongoing reflection with colleagues as *“really valuable”* and suggested the approach *“should probably be delivered to the whole school staff”* (T2, p.6). T3 strongly supported professional learning communities, including cross-sector dialogue between primary and secondary teachers. She highlighted the lack of PE-focused training, noting of school PD sessions that *“none of them are on PE... and it’s actually probably one of the areas where... teachers would feel less confident because you’re not given that training”* (T3, p.9).

Overall, collaboration was seen as essential for sustaining and embedding SDT-informed practice, with emphasis on shared development, accessible resources, and structured professional dialogue.

Themes relating to resistance and negative pupil responses were explored but not developed further due to limited evidence across cases.

Integrated Findings

In line with the parallel complementary mixed methods design, integration focused on identifying areas of convergence, complementarity, and contrast between the pupils' quantitative data and the qualitative teacher accounts.

Convergence Between Quantitative and Qualitative Findings

The quantitative analysis revealed statistically significant increases in motivation scores for both the treatment and control groups, with a more pronounced effect observed in the treatment group ($d = -0.64$) compared to the control group ($d = -0.32$). While these results indicate change over time, the qualitative data illustrate how that change was experienced in practice. Across cases, teachers consistently reported that pupils were more inclined to participate, persist in their efforts, and re-engage in lessons even after encountering difficulties. For example, T3 observed upon using SDT-informed strategies that, *"after the first lesson in gymnastics, I never had another moan"* (T3, p. 6). She also reported increased enthusiasm and a desire to repeat activities, *"they would come in each week and ask to do something that we'd already done again, because they enjoyed it"* (T3, p. 6). Similarly, T1 noted that *"you can see they're enjoying it more, they're more confident"* (T1, p. 6). T2 described increased participation among previously disengaged pupils, including one child who had typically withdrawn from activities, *"she'd stop taking part. She'd go and sit at the side, curl up in a ball... but actually... I saw her much more relaxed to join in"* (T2, p. 4). She also reported broader class-wide enthusiasm, *"I feel like they're really enthusiastic, they've really enjoyed the tasks as games"* (T2, p. 4).

Together, these observations align with the statistical trends and suggest that increases in questionnaire scores corresponded with observable behavioural and emotional changes in lessons. This convergence suggests that the intervention may be associated with meaningful shifts in pupil engagement rather than isolated score fluctuations.

Reasons and Processes Behind Motivational Change

While the quantitative findings indicate improvement, the qualitative data highlight the pedagogical mechanisms that may have contributed to this change. Across interviews, teachers described structuring lessons to reduce performance pressure

and enable differentiated success. T3 emphasised *“breaking it down into manageable chunks”* (T3, p. 7), while also removing fixed standards of success, explaining that *“there was no ‘this is what a good one looks like’”* (T3, p. 4). T2 similarly noted that pupils were provided with *“different ways they could practise that skill”* without pressure to succeed immediately (T2, p. 4).

Teachers also described shifts toward greater pupil agency. T1 reflected on moving away from directive instruction, stating, *“I was always one of those teachers... ‘No, you do this’”* (T1, p. 1), before describing how pupils *“can adapt it and change it... it’s like giving the power back”* (T1, p. 3). Structural changes, such as reducing queues (T2, p. 3) and incorporating pupil ideas into planning (T3, p. 3), further reinforced active engagement.

In addition, teachers described changes in peer dynamics that contributed to a more inclusive climate. For example, T2 reported that pupils were now *“happy to work with anyone”* (T2, p. 4), while T3 observed that *“no one felt left out”* (T3, p. 5).

Taken together, these findings suggest that motivational improvements were associated with changes in lesson structure, classroom climate, and teacher practice. Rather than a single element driving change, the integration of autonomy-supportive, competence-supportive, and relatedness-supportive practices appeared to create a learning environment in which pupils were more willing to participate, persist, and re-engage.

Differences Across Cases

Although all teachers reported positive outcomes, the qualitative data revealed contrasts in how SDT principles were prioritised and enacted. T1, who initially reported lower confidence in teaching PE, prioritised autonomy-supportive practice. She reflected on her previous directive style stating *“I was always one of those teachers... ‘No, you do this. Come and demonstrate’”* (T1, p. 1) and described the intervention as a shift in power dynamics, where pupils *“can adapt it and change it... it’s like giving the power back”* (T1, p. 3). She also acknowledged the challenge of relinquishing control, noting that *“every fibre in my being wants to intervene”* (T1, p. 4).

In contrast, T2 emphasised relatedness and inclusion. She described deliberately altering grouping practices so that pupils were *“happy to work with anyone... they're all a lot more comfortable and enthusiastic to join in and work with new people”* (T2, p. 4).

T3 prioritised competence support, particularly for pupils with additional needs, by removing fixed standards of success. She explained *that “there was no ‘this is what a good one looks like’”* (T3, p. 4) and described how equipment was made freely available so pupils could *“modify it to suit them without having to ask for help”* (T3, p. 4).

These variations illustrate that SDT-informed pedagogy was adapted to individual teaching identities and classroom contexts. Despite different emphases, quantitative improvements were observed across the treatment group. This suggests that motivational change was not dependent on any single psychological need in isolation, but rather on the flexible and contextual application of autonomy, competence, and relatedness-supportive practices. The qualitative findings therefore complement the quantitative results by demonstrating that multiple pathways to motivational enhancement were evident in practice.

Conclusion

The integration of quantitative and qualitative findings demonstrated clear complementarity. Statistically significant increases in motivation scores were supported by teacher accounts describing observable improvements in pupil engagement, confidence, and persistence in PE lessons. The qualitative data provided explanatory depth, illustrating how adjustments to lesson structure, classroom climate, and teacher practice were associated with these changes. Although teachers prioritised different aspects of SDT-informed practice, the flexible application of autonomy-, competence-, and relatedness-supportive strategies appeared effective across contexts. The findings suggest that the SDT-informed resource may be associated with positive motivational outcomes through shifts in pedagogical approach and teacher confidence.

The following chapter builds on these findings by critically discussing them in relation to Self-Determination Theory and Occupational Socialisation Theory, considering their broader theoretical and practical implications.

CHAPTER 5: DISCUSSION

This chapter interprets and critically discusses the findings of this study in relation to the research questions, theoretical framework, and existing literature. Specifically, this chapter examines whether the implementation of an SDT-informed teaching strategy resource influenced pupils' motivation for PE, and how teachers experienced and interpreted its implementation in practice. Drawing on both quantitative and qualitative findings, the discussion situates the results within SDT, research on enjoyment in PE, and literature on teacher PD, particularly through the lens of Occupational Socialisation Theory (OST). In doing so, this chapter seeks to provide a theoretically informed and critically evaluative account of how and why changes in motivation may have occurred.

Key Findings and Results

The findings of this study indicate that pupils' motivation for PE increased over time, with a more substantial effect observed in the treatment group compared to the control group. Specifically, motivation scores in the treatment group increased from a mean of 32.18 (SD = 6.96) to 34.84 (SD = 6.27), representing a statistically significant improvement, $t(66) = -5.20$, $p < .001$, with a moderate-to-large effect size ($d = -0.64$). In comparison, the control group also demonstrated a statistically significant increase from 33.17 (SD = 5.98) to 34.38 (SD = 4.33), $t(41) = -2.09$, $p = .042$, although the effect size was smaller ($d = -0.32$).

While both groups demonstrated statistically significant improvements, the moderate-to-large effect size in the treatment group suggests that the SDT-informed teaching strategies may have contributed to enhanced motivation. However, the statistically significant improvement in the control group complicates a straightforward causal interpretation. Rather than attributing change solely to the intervention, these findings suggest that motivational development may also be influenced by broader contextual, developmental, or temporal factors. This aligns with the post-positivist stance adopted in the methodology, where findings are understood as probabilistic, context-dependent, and open to multiple interpretations. This reinforces the inherent complexity of measuring motivational change in naturalistic educational settings.

The qualitative findings provide critical explanatory depth to these quantitative trends. Teachers consistently reported increased pupil engagement, persistence, confidence, and enjoyment, alongside observable shifts in classroom dynamics and their own pedagogical practices. For example, Teacher 1(T1) noted that pupils were “*more confident*” and that “*you can see they’re enjoying it more*” (T1, p.6) , while Teacher 2 (T2) described how previously disengaged pupils became “*much more relaxed to join in*” rather than withdrawing from activities (T2, p.4). These findings suggest that motivational change was not limited to questionnaire scores, but was reflected in behavioural, emotional, and relational dimensions of pupils’ experiences. This demonstrates that changes in motivation were meaningful in practice, rather than simply statistical artefacts, strengthening the ecological validity of the findings. Pupils were described as “*really enthusiastic*” and motivated to repeat activities “*because they enjoyed it*” (T2, p.4; T3, p.6)

Importantly, the convergence between quantitative improvements and qualitative accounts of increased participation and enthusiasm strengthens the credibility of the findings, indicating that the observed changes were meaningful within the classroom context rather than measurement-related effects. This convergence supports the value of the mixed methods design in capturing both measurable outcomes and lived experiences of pedagogical change.

While the greater increase in motivation within the treatment group suggests a potential effect of the intervention, the quasi-experimental design limits the extent to which causal relationships can be established, as changes may also reflect contextual or developmental influences.

Taken together, these findings suggest that the SDT-informed intervention may have contributed to increased pupil motivation, while also highlighting the influence of contextual factors.

Understanding Motivational Change Through SDT Framework

From an SDT perspective, these findings can be interpreted as the result of enhanced satisfaction of pupils’ basic psychological needs for autonomy,

competence, and relatedness (Deci and Ryan, 2000; Ryan and Deci, 2017). The qualitative data demonstrate that teachers implemented a range of need-supportive strategies, including offering meaningful choice, differentiating tasks, reducing performance pressure, and fostering inclusive and collaborative learning environments. These practices align closely with those identified in existing literature as promoting autonomous motivation in PE (Reeve et al., 2002; Aelterman et al., 2019; Cheon, Reeve and Vansteenkiste, 2020), providing empirical support for the applicability of SDT-informed pedagogies within primary PE contexts, an area previously identified as under-researched.

The observed increases in participation and persistence, particularly among previously disengaged pupils, are consistent with research demonstrating that need satisfaction is associated with adaptive outcomes such as engagement, effort, and intention to continue PA (Ng et al., 2012; Vasconcellos et al., 2020). This suggests that SDT-informed approaches may have the potential to influence not only immediate classroom behaviour, but also pupils' longer-term orientations towards PA, reinforcing the broader educational value of motivationally supportive pedagogies.

However, a more critical reading of the findings reveals that the three psychological needs were not equally emphasised in practice. Competence support emerged as particularly dominant across the qualitative data, with teachers frequently describing how scaffolded success, differentiated activities, and opportunities for progression enhanced pupil confidence and persistence. One teacher described a pupil who previously *“would just give up immediately... curl up in a ball,”* but became *“much more relaxed to join in”* when activities were structured so she could *“feel competent in succeeding in different ways”* (T2, p.4). This reflects wider empirical evidence identifying perceived competence as a key predictor of motivation and enjoyment in PE (Leisterer and Gramlich, 2021; Domville et al., 2019), and suggests that competence may act as the most accessible pedagogical entry point for motivational change, particularly in contexts where pupils have previously experienced failure or disengagement. The examples of pupils overcoming initial reluctance and gradually re-engaging in activities illustrate the process of internalisation described within SDT,

offering a concrete illustration of how theoretical motivational processes may unfold in classroom practice.

At the same time, the prominence of competence support reflects a broader trend identified in the literature, where teachers tend to prioritise competence-supportive practices over autonomy support (Reeve and Cheon, 2021). This points to a potential imbalance between theoretical frameworks and classroom enactment, suggesting that some elements of SDT may be more readily operationalised than others, particularly within the constraints of primary school contexts.

Autonomy support, while evident within the findings, appeared more complex and challenging for teachers to implement. Teachers described shifts towards offering greater choice, reducing controlling language, and allowing pupils to take ownership of their learning, yet these changes were often accompanied by tension and uncertainty. One teacher reflected on moving from a controlling style, *“No, you do this”*, to one where pupils *“can adapt it and change it... it’s like giving the power back”* (T1, p.1; p.3). However, this shift was accompanied by tension, with the same teacher acknowledging that *“every fibre in my being wants to intervene”* (T1, p.4) . This indicates that autonomy support extends beyond the application of discrete strategies, requiring a more fundamental shift in pedagogical beliefs and classroom power dynamics. Such challenges can be understood through the lens of OST, which emphasises the enduring influence of acculturation on teachers’ beliefs and practices (Lawson, 1983a). From this perspective, teachers’ prior experiences act as filters through which new approaches are interpreted, suggesting that professional learning (PL) interventions must engage with existing beliefs and identities rather than assuming uniform adoption of new practices.

Relatedness support was also evident in the findings, particularly through teachers’ efforts to create more inclusive and collaborative learning environments. Teachers described pupils becoming *“happy to work with anyone”* and *“more comfortable and enthusiastic to join in”* (T2, p.4), while another emphasised that *“no one felt left out”* (T3, p.5). This reinforces the role of social relationships as a key mechanism through which motivation is fostered in PE settings, aligning with research that highlights the importance of belonging and peer interaction in supporting engagement

(Vasconcellos et al., 2020; White et al., 2021). However, relatedness support appeared to be embedded within broader pedagogical shifts rather than explicitly conceptualised by teachers. This suggests that while relational aspects of teaching were present, they may not have been intentionally developed, indicating a potential area for further PL within SDT-informed practice.

Enjoyment as an Affective Outcome of PE

The findings also provide important insights into enjoyment as an affective outcome of PE. The statistically significant increases in motivation scores, particularly within the treatment group, may partially reflect enhanced enjoyment as a key component of intrinsic motivation. This interpretation is supported by qualitative accounts of increased enthusiasm and engagement. Teachers consistently reported increased enthusiasm, willingness to participate, and sustained engagement. For example, pupils were reported to return to lessons asking “*to do something that we’d already done again, because they enjoyed it*” (T3, p.6). Similarly, teachers described pupils as “*really enthusiastic*” and highly engaged in activities (T2, p.4). Enjoyment is strongly associated with intrinsic motivation and long-term PA participation, suggesting that the intervention may have implications beyond immediate classroom outcomes.

The data also indicate that enjoyment was closely linked to need-supportive practices. For instance, environments that reduced pressure and avoided fixed standards enabled pupils to participate without fear of failure, with one teacher emphasising that there was “*no right and wrong answer... you’re coming in to give it your best shot*” (T3, p.5). This suggests that enjoyment may act as a mediating mechanism through which SDT-informed strategies influence motivation. The observed behavioural indicators of enjoyment support literature positioning enjoyment as a central component of positive PE experiences (Ryan and Deci, 2000; Beni et al., 2017). This highlights the role of affective experiences in shaping pupils’ ongoing engagement with PA. These findings can be further understood through Stodden et al.’s (2008) developmental model, which proposes that early positive experiences of enjoyment and perceived competence contribute to a reinforcing cycle of engagement, whereby increased motivation leads to greater participation, further skill development, and continued positive affect. This suggests that the

intervention may have contributed to the development of more positive trajectories of engagement, particularly for previously disengaged pupils.

However, as conclusions regarding enjoyment are based on teacher-reported observations rather than direct pupil data, this may limit the extent to which pupils' affective experiences are fully captured.

Teachers' Experiences and Professional Learning

Teachers reported increased confidence, enjoyment, and reflective practice. This is important as teacher confidence is a key determinant of teaching quality, particularly in primary PE contexts where non-specialists may lack subject expertise (Morgan and Bourke, 2008). This finding also reflects broader research suggesting that teachers' beliefs about their own competence influence both their willingness to engage with new pedagogies and the quality of learning experiences they provide (Bandura, 1997; Biddle et al., 2011). One teacher reflected on breaking away from habitual practices, stating *"you get into a groove... 'I've always taught tennis this way',"* but that the intervention *"blew that out the water... it makes it more fun for me. Therefore, the children are having more fun"* (T1, p.2; p.6). Increased confidence may therefore have enabled teachers to adopt more flexible, responsive, and pupil-centred approaches, which are central to need-supportive teaching within SDT and may have contributed to the increased motivation scores observed in the treatment group.

The accessibility and usability of the resource emerged as a key facilitator in teachers' implementation. Teachers valued its simplicity, with one describing it as *"condensed and just to the point"* (T2, p.2). This challenges dominant models of PD that emphasise extended training, suggesting instead that concise, practice-focused resources may be particularly effective in supporting pedagogical change. At the same time, the findings indicate that initial implementation alone is insufficient to sustain long-term change, reinforcing Fullan's (2016) argument that pedagogical transformation requires ongoing collaboration, reflection, and support to become embedded in practice. This aligns with critiques of traditional PD, which highlight that short-term, decontextualised training often fails to translate into sustained classroom practice (Tannehill et al., 2021).

This need for long-term, contextualised PD was highlighted in the teachers' emphases on the importance of collaboration and whole-school engagement in sustaining SDT-informed practices. One teacher emphasised that sharing approaches *"gives everybody motivation... and builds your confidence as a teacher"* (T1, p.8). This suggests that individual-level interventions may have limited impact without supportive organisational structures. Research on collaborative professional cultures highlights that PL is most effective when situated within environments that promote shared inquiry and collective responsibility (Fullan, 2016; Attard Tonna and Shanks, 2017; Parker et al., 2022). In this context, collaboration functions as a form of social capital, enabling the sharing of ideas and supporting the consolidation of new practices. However, the findings suggest limited institutionalisation, as teachers described a lack of structured opportunities for collaborative reflection. Without such support, innovations risk remaining at the level of individual practice rather than becoming embedded within school culture, reflecting the "cellular" nature of schools described by Fullan (2016).

From an OST perspective, variability in implementation reflects prior experiences. This is significant because it highlights that PL is not a uniform process, but is shaped by individual beliefs and teaching orientations. Teachers' differing emphases on autonomy, competence, and relatedness support can be understood as a product of their acculturation and prior experiences within PE, which act as filters through which new practices are interpreted (Lawson, 1983a; Curtner-Smith, Hastie and Kinchin, 2008). This supports the idea that teachers' "subjective warrants" influence their openness to change and the extent to which they adopt new pedagogical approaches (Lortie, 1975). Furthermore, the findings align with research suggesting that PL is most effective when it engages teachers' beliefs and identities, rather than simply introducing new techniques (Backman and Barker, 2020). In this context, the SDT-informed resource may have acted as a catalyst for reflection, but the depth and nature of implementation were shaped by teachers' prior socialisation and professional confidence.

It is also important to acknowledge that the researcher's position within the same school context may have influenced participant responses, potentially encouraging socially desirable answers during interviews despite efforts to ensure openness.

Sustaining and Embedding SDT-Informed Practice

While the findings of this study suggest that SDT-informed teaching strategies may contribute to increased pupil motivation, a more critical consideration relates to the extent to which such practices can be embedded and sustained within everyday teaching practice. As highlighted in the introduction, the effectiveness of theory-informed pedagogies is not solely determined by their initial implementation, but by the conditions that support their longer-term integration within practice.

The qualitative findings indicate that teachers were able to interpret and apply elements of the SDT-informed resource in ways that aligned with their existing practices, confidence levels, and contextual constraints. However, this variability in enactment reflects the influence of teachers' prior experiences and beliefs, as conceptualised within OST (Lawson, 1983a). From this perspective, pedagogical change is not a process of simple adoption, but one of interpretation and adaptation, shaped by individual and organisational factors.

Furthermore, while the resource was perceived as accessible and effective in supporting initial changes in practice, the findings suggest that implementation alone may be insufficient to support sustained pedagogical change. This aligns with Fullan's (2016) conceptualisation of educational change as a developmental process requiring ongoing support, collaboration, and reflection to move beyond initial adoption towards institutionalisation. Without such conditions, there is a risk that SDT-informed practices remain isolated or temporary, rather than becoming embedded within routine teaching.

These findings therefore reinforce the importance of considering not only what works in promoting pupil motivation, but how and under what conditions such practices can be sustained within school contexts. In this sense, the study extends beyond an evaluation of intervention effectiveness to highlight the central role of teacher learning, PD, and organisational culture in shaping the longevity and impact of motivationally supportive pedagogies.

It is acknowledged that the relatively short duration of the intervention limits the extent to which longer-term changes in motivation and practice can be inferred.

Unexpected Findings

Several unexpected findings emerged from the study, most notably the statistically significant improvement in motivation within the control group and the prominence of competence-supportive practices in teachers' accounts. These findings diverge from initial expectations and highlight the complexity of interpreting motivational change within real-world educational settings. The improvement observed in the control group, where motivation scores increased from a mean of 33.17 (SD = 5.98) to 34.38 (SD = 4.33), representing a statistically significant change, $t(41) = -2.09$, $p = .042$, albeit with a small effect size ($d = -0.32$), is notable. While this increase was smaller than that observed in the treatment group ($d = -0.64$), it suggests that factors beyond the intervention, such as developmental progression, increased familiarity with PE routines, or broader school influences, may have contributed to changes in pupil motivation. This reinforces the view that motivation is shaped by multiple interacting variables and cannot be fully isolated within quasi-experimental designs conducted in naturalistic contexts.

The dominance of competence support across the qualitative findings was also notable. While SDT emphasises the importance of autonomy, competence, and relatedness as equally essential psychological needs (Deci and Ryan, 2000; Ryan and Deci, 2017), teachers appeared to prioritise competence-supportive strategies such as differentiation, scaffolding, and task adaptation. For example, one teacher described how a pupil who previously “*would just give up immediately... curl up in a ball*” became “*much more relaxed to join in*” when tasks were structured so she could “*feel competent in succeeding in different ways*” (T2, p.4). Similarly, another pupil who initially avoided participation later engaged fully, with the activity becoming “*his favourite thing to do now*” (T2, p.4). This finding aligns with existing research suggesting that competence is often the most immediately observable and actionable dimension of need support in PE (Reeve and Cheon, 2021), but also raises questions about whether autonomy and relatedness are more difficult to operationalise in practice.

The strong role of teacher confidence also emerged as an important and somewhat unexpected finding. Teachers consistently linked their own increased confidence and enjoyment to perceived improvements in pupil engagement and motivation. For instance, one teacher who described having a more custodial style of PE teaching, reflected that the intervention “*blew that out the water... it makes it more fun for me. Therefore, the children are having more fun*” (T1, p.6), while another noted that “*it increased my confidence a lot... I felt more confident to deliver it because I felt like it was evidence backed*” (T2, p.5). This suggests a potentially reciprocal relationship, where teacher development influences pupil outcomes, which in turn reinforces teacher confidence. Such findings align with literature highlighting the importance of teacher beliefs and self-efficacy in shaping pedagogical practice (Bandura, 1997; Biddle et al., 2011), but also indicate that teacher confidence may act as a key mediating mechanism within SDT-informed interventions.

Conclusion

This chapter has critically interpreted and discussed the findings of the study in relation to the research questions, theoretical framework, and existing literature. Overall, the findings suggest that the implementation of an SDT-informed teaching strategy resource was associated with increased pupil motivation in PE, particularly within the treatment group. While improvements were also observed in the control group, limiting definitive causal claims, the convergence of quantitative and qualitative data indicates that meaningful changes in motivation occurred within classroom practice. These findings reinforce the complexity of motivational development in naturalistic educational settings, where multiple contextual and developmental factors interact.

From a theoretical perspective, the findings provide empirical support for the applicability of SDT within primary PE. Teachers’ use of need-supportive strategies appeared to enhance pupils’ experiences of competence, autonomy, and relatedness, contributing to increased engagement, persistence, and enjoyment. However, the uneven emphasis across these psychological needs highlights a gap between theoretical ideals and classroom enactment. In particular, the dominance of competence-supportive practices suggests that while SDT offers a holistic

framework, certain components may be more accessible or immediately actionable for teachers, raising important considerations for how theory is translated into practice.

In relation to the research questions, the findings suggest that the SDT-informed teaching strategy resource was associated with increased pupil motivation for PE, while teachers experienced its implementation as both accessible and professionally transformative, though shaped by prior beliefs and contextual constraints.

Overall, the study highlights that motivationally supportive pedagogies may be most effective not simply when theoretically sound, but when they are practically interpretable, contextually adaptable, and supported within the wider culture of the school.

The following conclusion chapter synthesises these insights, drawing together the key findings to address the research aims, while reflecting on the study's limitations and implications for future research.

CHAPTER 6: CONCLUSION

This chapter synthesises the key findings of the study and presents conclusions in relation to the research aims. The study examined whether the implementation of an SDT-informed teaching strategy resource influenced pupils' motivation for PE and how teachers experienced and interpreted its use in practice. Drawing on both quantitative and qualitative data, the chapter integrates findings to provide a critical and theoretically informed understanding of motivational change within primary PE, alongside reflections on strengths, limitations, and implications for future research.

Overall Conclusions

The findings suggest that while SDT-informed teaching strategies may support increases in pupils' motivation for PE, these changes must be understood within the complexity of classroom practice and broader contextual influences. Quantitative results indicated a statistically significant increase in motivation within the treatment group, with a larger effect size than the control group. However, statistically significant improvement within the control group complicates direct attribution to the intervention, reinforcing the need to interpret findings as context-dependent rather than causal.

Qualitative findings provide explanatory depth, indicating that changes in motivation were reflected in pupils' engagement, persistence, and willingness to participate, rather than questionnaire scores alone. Teachers described shifts in classroom dynamics, particularly among previously disengaged pupils, suggesting that motivational change was meaningful within the lived context of PE lessons. Together, these findings indicate that SDT-informed approaches may contribute to more adaptive motivational experiences, while highlighting the complexity of measuring and attributing change in naturalistic settings.

From a theoretical perspective, the findings support the applicability of SDT within primary PE. Teachers implemented a range of need-supportive strategies aligned with autonomy, competence, and relatedness, including offering choice, scaffolding success, and fostering inclusive environments. However, these needs were not equally emphasised. Competence support emerged as the most consistently

enacted element, suggesting that it may represent the most accessible entry point for teachers seeking to enhance motivation. This aligns with existing literature and highlights a gap between theoretical frameworks and classroom enactment.

In contrast, autonomy support appeared more complex and challenging to implement. Teachers described tensions associated with relinquishing control and adapting established practices, indicating that autonomy-supportive teaching requires deeper shifts in pedagogical beliefs and classroom power dynamics. From an Occupational Socialisation Theory (OST) perspective, this reflects the influence of teachers' prior experiences, which shape how new approaches are interpreted and enacted. SDT-informed teaching is therefore not simply the application of discrete strategies, but a broader reorientation of practice.

The findings also provide insight into enjoyment as an affective outcome of PE. Teachers reported increased enthusiasm, participation, and sustained engagement, particularly among previously reluctant pupils. While enjoyment was not directly measured, these behavioural indicators suggest that SDT-informed practices may contribute to more positive affective experiences. Given the established links between enjoyment, intrinsic motivation, and long-term engagement in PA, this is significant. However, reliance on teacher perceptions limits the strength of conclusions and highlights the need for direct measures in future research.

A key conclusion is the central role of teachers in shaping motivational experiences. Teachers adapted SDT-informed strategies in ways that reflected their confidence, experience, and contextual constraints, demonstrating that pedagogical change is not a process of uniform adoption, but one of interpretation and adaptation. While the resource supported initial changes in practice, sustained implementation appeared dependent on teacher confidence, collaboration, and wider organisational support. Improving pupil motivation in PE is therefore not solely a pedagogical issue, but a complex, context-dependent process shaped by professional learning and school culture.

Collectively, these findings highlight the importance of considering not only whether SDT-informed strategies work, but how and under what conditions they can be

embedded and sustained within everyday teaching practice. The study therefore extends beyond evaluating a specific intervention to contribute to a broader understanding of how motivationally supportive pedagogies are developed and enacted in primary PE contexts.

Strengths and Limitations

This study has several strengths. The mixed methods design enabled a comprehensive understanding of both outcomes and processes associated with the intervention. By integrating quantitative measures with qualitative insights, the study captured both measurable change and the contextual factors underpinning it, strengthening the credibility and depth of the findings. The inclusion of teacher perspectives provided valuable insight into the practical realities of implementing SDT-informed strategies.

The study was conducted within an authentic primary school setting, enhancing ecological validity. Examining SDT-informed practices in real-world contexts provides meaningful insight into how theory-informed pedagogies are enacted, particularly within primary PE where teachers are often non-specialists.

However, several limitations must be acknowledged. The quasi-experimental design limits the ability to establish causal relationships, as improvements in the control group indicate that factors beyond the intervention may have influenced outcomes. Additionally, the use of convenience sampling within a single school limits generalisability.

There are also limitations related to measurement. Motivation was assessed using self-report questionnaires, which may not fully capture the complexity of pupils' experiences. Similarly, conclusions regarding enjoyment were based on teacher perceptions rather than direct pupil data. Furthermore, the researcher's position as a teaching colleague within the school may have had an influence on participants' responses in both the questionnaires and the interviews.

Finally, the relatively short duration of the study (10 weeks) limits insight into sustainability. While short-term improvements were evident, it remains unclear whether these would be maintained without ongoing support.

Implications for Future Research

This study highlights several areas for future research. Firstly, longitudinal studies are needed to examine whether changes in motivation are sustained over time and whether they translate into longer-term engagement in PA.

Secondly, future research should incorporate direct measures of affective outcomes such as enjoyment alongside motivation to provide a more comprehensive understanding of pupils' experiences.

Thirdly, further research is needed to explore how SDT-informed pedagogies can be supported through sustained and contextually relevant professional development, including collaborative approaches that engage with teachers' beliefs and prior experiences, as highlighted by OST.

Future studies should also explore implementation across a wider range of school contexts and examine how motivationally supportive pedagogies can become embedded and institutionalised within school culture.

Conclusion

This study contributes to a growing body of research emphasising the importance of motivation within PE and the potential of SDT-informed pedagogies to support more positive pupil experiences. While such approaches may support increases in motivation and engagement, their effectiveness is shaped by how they are interpreted, implemented, and supported within practice.

By examining both pupil outcomes and teacher experiences, the study provides a nuanced understanding of the relationship between theory and practice in primary PE. It highlights the importance of creating learning environments that support not only immediate participation, but the development of positive and enduring relationships with PA over time.

Understanding and utilising motivational processes is critical in addressing physical inactivity. Given persistently low participation rates among young people and associated health consequences, enhancing the quality of pupils' experiences in PE is essential. The findings of this study, reinforce that motivation is not simply an outcome of PE, but a key mechanism through which sustained engagement in PA may be developed. As such, SDT-informed pedagogies offer a meaningful approach to promoting more active and healthier futures.

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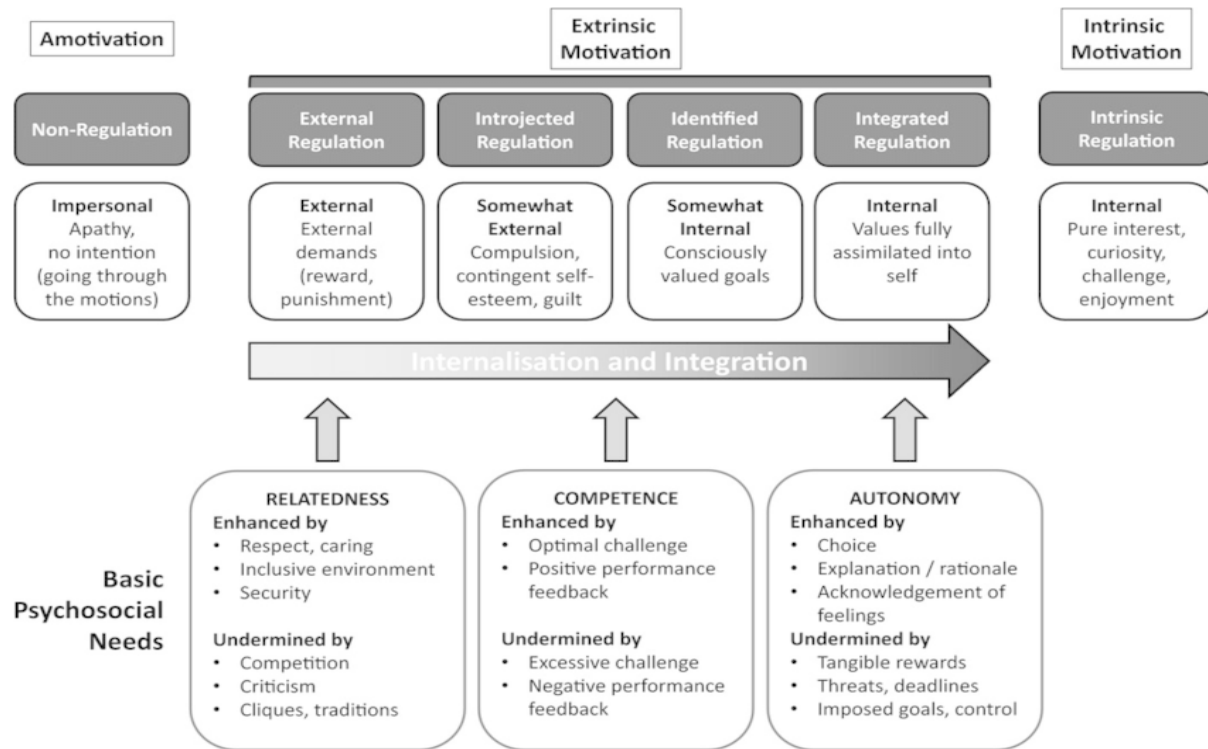
AI Acknowledgement statement

I acknowledge the use of the AI tools listed below. I confirm that I have not presented any AI generated text as my own work. I confirm I have copies of my drafts, notes, and other resources I used before, and after the use of AI tools which I may be asked to provide in evidence.

AI Tool (with url)	Date used	Why did you use this tool	Example prompt(s)
<i>UWTSD Library – Primo Research Assistant</i>	<i>22/12/25</i>	<i>To find recent research papers</i>	<i>find latest research on self determination intervention in primary education</i>

APPENDICES

APPENDIX 1: MODEL OF SELF DETERMINATION THEORY



Cook and Artino Jr (2014)

APPENDIX 2: TEACHING STRATEGIES RESOURCE

PLANNING TO ENHANCE AUTONOMOUS MOTIVATION IN PE

AUTONOMY

The need to feel that you are the origin of your own actions

What could you do to support autonomy?



MAKE LEARNING MEANINGFUL

Give a rationale for the tasks and suggest relevance to learners' lives
Learners value improved skills, performance, friendships and community

USE NON CONTROLLING LANGUAGE



'you could do it like this'
'you might like to try it this way'



'you need to do it like this'
'you must do it this way'

TAKE SUGGESTIONS AND PROVIDE CHOICE

What do the learners want to try? Ask before class.
Try a free play warm up or equipment exploratory time

PROVIDE CHANCES FOR INITIATIVE

Could some children create cue cards for techniques?
With parameters, could some design a warm up, a station or a mini-game?

CLEAR EXPECTATIONS

Collaboratively clarify the success criteria - modelling, visuals and cues

PRACTICAL SKILLS AND OPTIMAL CHALLENGE

- Provide lots of opportunities for repeated practice and success
- Consider physical skills level - not too hard, not too easy, just right.
- Gamify tasks - with a mix of abilities, you could provide a variety of challenge levels. A bigger/smaller ball? A lower/higher target?
- Give choice of partaking in a competitive game or a no-score game

INFORMATIONAL TASK FEEDBACK

'That was successful because... you followed through with your throwing arm'
'You could try swinging harder at the ball'

COMPETENCE

The need to feel to feel effective and successful in your interactions with the environment

What could you do to support competence?



RELATEDNESS

The need to feel to feel a connection with others around you

What could you do to support relatedness?



ATTUNEMENT AND EMPATHY

Pay attention to your learners' - what knowledge do you have about them?
How might they be feeling?
Show your genuine appreciation and concern for them

ENCOURAGE PEER RELATEDNESS

- Avoid peer comparison of performance
- Pair work and group work - model effective language for communication and feedback
- The instructional models on the next page offer teaching methods that emphasise communication skills and teamwork

APPENDIX 3: ETHICAL APPROVAL



PG2 / E1 FORM

APPLICATION FOR ETHICAL APPROVAL

RESEARCH STUDENTS

This form is to be completed by the student within **SIX** months for full-time students and **TWELVE** months for part time students, after the commencement of the research degree or following progression to Part Two of your course.

Once complete, submit this form via the **MyTSD Doctoral College Portal** at (<https://mytsd.uwtsd.ac.uk>).

This document is also available in Welsh.

RESEARCH STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of **research activity**: "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the "principal researcher".

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity. Please see Checklist for details of process for different categories of application.

SECTION A: About You (Principal Researcher)

1	Full Name:	Cara O'Connell			
2	Tick all boxes that apply:	Member of staff:	☐	Honorary research fellow:	☐
	Undergraduate Student	☐	Taught Postgraduate Student	☒	Postgraduate Research Student
3	Institute/Academic Discipline/Centre:	Institute of Management and Health			
4	Campus:	Carmarthen			
5	E-mail address:	2304992@student.uwtsd.ac.uk			
6	Contact Telephone Number:	07802 538 114			
For students:					

7	Student Number:	2304992
8	Programme of Study:	MA PE, Sport and Physical Literacy
9	Director of Studies/Supervisor:	Dr. Nalda Wainwright

SECTION B: Approval for Research Activity

1	Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)	YES	☐	NO	☒
				Date	
2	If Yes, please indicate source of approval (and date where known): Approval in principle must be obtained from the relevant source prior to seeking ethical approval	Research Degrees Committee	☐		
		Institute Research Committee	☐		
		Other (write in)	☐		

SECTION C: Internal and External Ethical Guidance Materials

	Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, location-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines. You may add rows to this table if needed.	
1	UWTSD Research Ethics & Integrity Code of Practice	☒
2	UWTSD Research Data Management Policy	☒
3	<i>British Educational Research Association Guidelines</i>	☒

SECTION D: External Collaborative Research Activity

If there are external collaborators then you should gain consent from the contact persons to share their personal data with the university. If there are no external collaborators then leave this section blank and continue to section E.

1	Institution	
2	Contact person name	
3	Contact person e-mail address	
4	Is your research externally funded?	YES ☐ NO ☐
5	Are you in receipt of a KESS scholarship?	YES ☐ NO ☐
6	Are you specifically employed to undertake this research in either a paid or voluntary capacity?	Voluntary YES ☐ NO ☐
7		Employed YES ☐ NO ☐
8	Is the research being undertaken within an existing UWTSD Athrofa Professional Learning Partnership (APLP)?	If YES then the permission question below does not need to be answered. YES ☐ NO ☐

9	Has permission to undertake the research has been provided by the partner organisation?	(If YES attach copy) If NO the application cannot continue	YES	☐	NO	☐
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Where research activity is carried out in collaboration with an external organisation

10	Does this organisation have its own ethics approval system?	YES	☐	NO	☐
	If Yes, please attach a copy of any final approval (or interim approval) from the organisation (this may be a copy of an email if appropriate).				

SECTION E: Details of Research Activity

1	Indicative title:	What is the impact of a Self Determination Theory (SDT) informed teaching strategy resource on primary pupils' motivation for PE?			
2	Proposed start date:	17.9.25	Proposed end date:	1.3.26	
Introduction to the Research (maximum 300 words per section) Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the points below: <i>Purpose of Research Activity</i> <i>Proposed Research Question</i> <i>Aims of Research Activity</i> <i>Objectives of Research Activity</i> Demonstrate, briefly, how <u>Existing Research</u> has informed the proposed activity and explain <i>What the research activity will add to the body of knowledge</i> <i>How it addresses an area of importance.</i>					
3	Purpose of Research Activity <u>Context and rationale</u> Physical activity (PA) is crucial for both physical and mental well-being, and the benefits of an active lifestyle are well-documented by the World Health Organization (WHO, 2018). Worldwide, 81% of adolescents do not meet WHO guidelines for PA, and this lack of PA participation is especially evident in Scotland. Despite favourable environmental influences and policy in Scotland, the country ranks last among 38 nations for adolescent physical activity levels (Active Healthy Kids Report Card, 2021). The Scottish Health Survey (2023) highlighted that girls aged 13-15 years old are less likely to meet the recommended PA levels compared to boys, with a lower adherence rate of 43% compared to 67% for boys in this age group. <u>Existing research</u> Enjoyment in physical education (PE) is closely associated with participation in lessons (Navarro-Patón et al., 2019) and with intentions to remain active outside of school (Hagger and Chatzisarantis, 2016; Huhtiniemi et al., 2019; Ntououlis et al., 2015; Pérez-González et al., 2019). Teachers play a crucial role in fostering enjoyment, which children often link with fun and excitement (Cairney et al., 2012; Moore et al., 2009). However, ensuring enjoyable PE is challenging due to varied learner needs (Barić et al., 2014; Marron et al., 2021). Self-Determination Theory (SDT; Deci and Ryan, 2000) highlights that autonomously motivated children engage in PE out of interest and personal value, while those with low self-determination participate for external reasons. Autonomous motivation has been shown to be strongly linked to enjoyment (Huhtiniemi et al., 2019; Navarro-Patón et al., 2019; Pérez-González et al., 2019; Pulido et al., 2014). Environments that support competence, autonomy, and relatedness enhance both motivation and enjoyment (Chang et al., 2016; Chen and Hynar, 2015; Pérez-González et al., 2019; Sun et al., 2017; Van Aart et al., 2015). Engaging girls in physical activity (PA), PE, and sport presents a particular challenge, as motivation and confidence often decline with age. Research shows that less than 64% of girls report enjoying PE, with				

	barriers including body image concerns, discomfort with PE kits, and low confidence. Since positive PE experiences are important for long-term activity habits, addressing these declines is essential. Studies indicate that motivation, self-concept, social identity, and emotional responses can boost girls' participation. Strategies such as providing choice, variety, and co-constructing PE lessons enhance engagement. SDT-based interventions that nurture autonomy-supportive environments have been effective in improving motivation and outcomes. Teacher behaviours such as offering feedback and supporting choice, are key to meeting psychological needs. However, PE interventions often draw from diverse approaches. Developing consistent strategies, such as Teixeira et al.'s (2020) 21 techniques to support psychological needs, may strengthen future practice and research.
4	Research Question What is the impact of an SDT informed teaching strategy resource on primary pupils' motivation for PE?
5	Aims of Research Activity To determine if there is a change in pupils' motivation for PE after experiencing lessons informed by SDT teaching behaviours.
6	Objectives of Research Activity To assess the effectiveness of an SDT informed approach to increase pupils' motivation for PE. To explore teachers feelings around the implementation of the resource.
	Proposed methods (maximum 600 words) Provide a brief summary of all the methods that may be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed. You do not need to justify the methods here, but should instead describe how you intend to collect the data necessary for you to complete your project.
7	Teachers will receive training on the theory behind the resource and how to effectively implement the strategies in PE lessons (Appendix A). Videos will be taken of 2 sessions delivered by the teachers to ensure fidelity of implementation. A two group, pre and post-test design will be used. Participants in group A and group B (wait group) will be given a validated questionnaire which is an adapted version of the <i>The Motivation to Exercise and Diet Questionnaire—Adapted for Children</i>, with statements related to diet removed as they are not being researched. Eight items, five for motivation and three for needs satisfaction in relation to exercise are scaled with a five-point Likert scale. Teachers will be interviewed post implementation.
	Location of research activity Identify all locations where research activity will take place.
8	Killermont Primary School, 1 Aviemore Gardens, G61 2BL. Depending on weather, either outdoor Multi Use Games Area or gym hall.
	Research activity outside of the UK If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural and/or legal sensitivities or vulnerabilities of participants. If you live in the country where you will do the research then please state this.

9	<i>(this box should expand as you type)</i>
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10	Use of documentation not in the public domain: Are any documents NOT publicly available?	NO	☒
		YES	☐
11	If Yes, please provide details here of how you will gain access to specific documentation that is not in the public domain and that this is in accordance with the current data protection law of the country in question and that of England and Wales. <i>(this box should expand as you type)</i>		

Does your research relate to one or more of the seven aims of the Well-being of Future Generations (Wales) Act 2015?		YES	NO
12	A prosperous Wales	☐	☐
13	A resilient Wales	☐	☐
14	A healthier Wales	☐	☐
15	A more equal Wales	☐	☐
16	A Wales of cohesive communities	☐	☐
17	A Wales of vibrant culture and thriving Welsh language	☐	☐
18	A globally responsible Wales	☐	☐
19	If YES to any of the above, please give details:		
	<i>(this box should expand as you type)</i>		

SECTION F: Scope of Research Activity

Will the research activity include:		YES	NO
1	Use of a questionnaire or similar research instrument?	☒	☐
2	Use of interviews?	☒	☐
3	Use of focus groups?	☐	☒
4	Use of participant diaries?	☐	☒
5	Use of video or audio recording?	☒	☐
6	Use of computer-generated log files?	☐	☒
7	Participant observation with their knowledge?	☐	☒
8	Participant observation without their knowledge?	☐	☒
9	Access to personal or confidential information without the participants' specific consent?	☐	☒

10	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☒
11	Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☒
12	Investigation of participants involved in illegal activities?	☐	☒
13	Use of procedures that involve deception?	☐	☒
14	Administration of any substance, agent or placebo?	☐	☒
15	Working with live vertebrate animals?	☐	☒
16	Procedures that may have a negative impact on the environment?	☐	☒
17	Other primary data collection methods. Please indicate the type of data collection method(s) below.		
	Details of any other primary data collection method: (this box should expand as you type)	☐	☒

If NO to every question, then the research activity is (ethically) low risk and **may** be exempt from **some** of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

If there are no participants then do not complete this section, but go directly to section H.

Who are the intended participants:		YES	NO
1	Students or staff at the University?	☐	☒
2	Adults (over the age of 18 and competent to give consent)?	☒	☐
3	Vulnerable adults?	☐	☒
4	Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)	☒	☐
5	Prisoners?	☐	☒
6	Young offenders?	☐	☒
7	Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	☒
8	People engaged in illegal activities?	☐	☒
9	Others. Please indicate the participants below, and specifically any group who may be unable to give consent.		
	Details of any other participant groups: (this box should expand as you type)	☐	☒

Participant numbers and source Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?

10	How many participants are expected?	Group A – 70-100 children Group B - 70-100 children
11	Who will the participants be?	Pupils enrolled at Killermont Primary School and their class teachers.
12	How will you identify the participants?	Children are offered two hours of PE each week. Consent to participate in the research questionnaire will be sought from legal guardians.

	Information for participants:	YES	NO	N/A
13	Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
14	Will you tell participants that their participation is voluntary?	☒	☐	☐
15	Will you obtain written consent for participation?	☒	☐	☐
16	Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☒	☐	☐
17	If the research is observational, will you ask participants for their consent to being observed?	☐	☐	☒
18	Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
19	With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☒	☐	☐
20	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
21	Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☒	☐	☐
22	If NO to any of above questions, please give an explanation			
	<i>(this box should expand as you type)</i>			

	Information for participants:	YES	NO	N/A
24	Will participants be paid?	☐	☒	☐
25	Is specialist electrical or other equipment to be used with participants?	☐	☒	☐
26	Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
27	Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
28	If YES to any question, please provide full details			
	<i>(this box should expand as you type)</i>			

SECTION H: Anticipated Risks

Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them. If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.		
1	Full risk assessment completed and appended?	Yes ☐ No ☐
2	Risks to participants For example: sector-specific health & safety, emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information	
	Risk to participants: Falls or injuries typically associated with participation in PE. Some children may have existing conditions or allergies.	<i>How you will mitigate the risk to participants:</i> Check outdoor surfaces for risk of slipping. Check equipment is in good condition before use. Carry first aid kit. First aider is present in school building. Follow school protocol for any serious injuries – emergency services, informing legal guardians. Any existing conditions or allergies will be known to the researcher. A response plan will be provided for each case.
3	If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities	
	<i>(this box should expand as you type)</i>	
4	Risks to the investigator For example: personal health & safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest	
	Risk to the investigator: - Possible risk of injury when demonstrating techniques. - Professional misconduct - Accusations of improper behaviour	<i>How you will mitigate the risk to the investigator:</i> - Children at the school are aware of the procedure for emergencies and report to the office with an emergency card. - Adhere to the professional teaching standards and codes of conduct provided by General Teaching Council Scotland and East Dunbartonshire Council. - Always behave professionally. Ensure no lone working with participants. Working in groups.
5	University/institutional risks For example: adverse publicity, financial loss, data protection	
	Risk to the University: - Adverse publicity	<i>How you will mitigate the risk to the University:</i> - Adhere to the professional teaching standards and codes of conduct provided by General Teaching Council

	(	Scotland and East Dunbartonshire Council. - Adhere to BERA's research guidelines.
6	Environmental risks For example: accidental spillage of pollutants, damage to local ecosystems	
	Risk to the environment:	How you will mitigate the risk to environment:
	N/A	

Disclosure and Barring Service				
	If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	YES	NO	N/A
7	Does your research require you to hold a current DBS Certificate?	☒	☐	☐
8	If YES, please give the certificate number. If the certificate number is not available please write "Pending"; in this case any ethical approval will be subject to providing the appropriate certificate number.	Disclosure Scotland PVG – 1609 1235 2292 0395		

SECTION I: Feedback, Consent and Confidentiality

1	Feedback What de-briefing and feedback will be provided to participants, how will this be done and when? When data has been analysed, participants will have the opportunity to view the results.
2	Informed consent Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded in accordance with prevailing data protection legislation. A plain language statement (Appendix B) will be provided for legal guardians. The research arrangements will be explained, and the school phone number and email address will be provided for any questions. Legal guardians will then sign an informed consent form stating that all aspects of participation have been clearly explained and they consent freely to their child participating in the research. Teachers will be provided with a plain language statement for participation (Appendix C)
3	Confidentiality / Anonymity Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case. Participants will be allocated a number for identification. No names will be used in the data records.

SECTION J: Data Protection and Storage

	Does the research activity involve personal data (as defined by the General Data Protection Regulation 2016 "GDPR" and the Data Protection Act 2018 "DPA")?	YES	NO
1	"Personal data" means any information relating to an identified or identifiable natural person ("data subject"). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person. Any video or audio recordings of participants is considered to be personal data.	☒	☐

	If YES, provide a description of the data and explain why this data needs to be collected:		
2	Consent forms will contain full names of participants. This is necessary to ensure each individual participant has provided informed consent.		
	Does it involve special category data (as defined by the GDPR)?	YES	NO
3	"Special category data" means sensitive personal data consisting of information as to the data subjects' – (a) racial or ethnic origin, (b) political opinions, (c) religious beliefs or other beliefs of a similar nature, (d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992), (e) physical or mental health or condition, (f) sexual life, (g) genetics, (h) biometric data (as used for ID purposes),	☒	☐
	If YES, provide a description of the special category data and explain why this data needs to be collected:		
4	Any existing medical conditions will be known to the researcher to ensure the health and safety of participants. These will not be used in any data analysis or reports.		

	Will data from the research activity (collected data, drafts of the thesis, or materials for publication) be stored in any of the following ways?	YES	NO
5	Manual files (i.e. in paper form)?	☒	☐
6	University computers?	☐	☒
7	Private company computers?	☐	☒
8	Home or other personal computers?	☐	☒
9	Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☒	☐
10	"Cloud" storage or websites?	☒	☐
11	Other – specify:	☐	☒
12	For all stored data, explain the measures in place to ensure the security of the data collected, data confidentiality, including details of backup procedures, password protection, encryption, anonymisation and pseudonymisation:		
	All data will be kept in password protected cloud storage on the University Office 365 system which will not be shared. Any USB sticks used to store or transfer data will be password protected. All participants will be given a unique identifier to ensure confidentiality, and this list will be kept securely in the password protected folder.		

Data Protection			
	Will the research activity involve any of the following activities:	YES	NO
13	Electronic transfer of data in any form?	☒	☐
14	Sharing of data with others at the University outside of the immediate research team?	☐	☒
15	Sharing of data with other organisations?	☐	☒
16	Export of data outside the UK or importing of data from outside the UK?	☐	☒
17	Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☐	☒
18	Publication of data that might allow identification of individuals?	☐	☒

19	Use of data management system?	☐	☒
20	Data archiving?	☐	☒
21	If YES to any question, please provide full details, explaining how this will be conducted in accordance with the GDPR and Data Protection Act (2018) (and any international equivalents, where appropriate):		
	All data will be encrypted and kept in password protected cloud storage on the University Office 365 system which will not be shared. Any USB sticks used to store or transfer data will be password protected. All data transfers will be encrypted and password protected. All participants will be given a unique identifier to ensure confidentiality, and this list will be kept securely in the password protected folder. The data will be stored until the completion of the project and then deleted. In accordance with the DPA 2018, participants will have the right to ask to see what data is held relating to them, and this data will be deleted immediately if the participant requests this, in which case the data will not be used in the project.		
22	List all who will have access to the data generated by the research activity:		
	Principal researcher, supervisor, external examiner		
23	List who will have control of, and act as custodian(s) for, data generated by the research activity:		
	Principal researcher		
24	Give details of data storage arrangements, including security measures in place to protect the data, where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.		
	All data will be encrypted and kept in password protected cloud storage on the University Office 365/Sharepoint system which will not be shared. Any USB sticks used to store or transfer data will be password protected, and will be reformatted at the end of the project in order to destroy the data. The data will be stored until the completion of the project and then deleted.		
25	Please indicate if your data will be stored in the UWTSD Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. (<i>Most relevant to academic staff</i>)		
	No		
26	Confirm that you have read the UWTSD guidance on data management (see https://www.uwtsd.ac.uk/library/research-data-management/)	YES	☒
27	Confirm that you are aware that you need to keep all data until after your research has completed or the end of your funding	YES	☒

SECTION K: Declaration

The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants. In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice which is published on the website: https://www.uwtsd.ac.uk/research/research-ethics/			
1	Signature of applicant:	Cara O'Connell	Date: 04/09/25

For STUDENT Submissions:

2	Director of Studies/Supervisor:	Dr Nalda Wainwright	Date: 4/9/25
3	Signature:		

For STAFF Submissions:

4	Academic Director/ Assistant Dean:		Date:
5	Signature:		

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed ALL RELEVANT sections of the form in full.
☒	I confirm that the research activity has received approval in principle
☐	I have attached a copy of final/interim approval from external organisation (where appropriate)
☐	I have attached a full risk assessment (where appropriate) ONLY TICK IF YOU HAVE ATTACHED A FULL RISK ASSESSMENT
☒	I understand that it is my responsibility to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice.
☒	I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Academic Director.

RESEARCH STUDENTS ONLY

Once complete, submit this form via the **MyTSD Doctoral College Portal** at (<https://mytsd.uwtsd.ac.uk>).

RESEARCH STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk , with the title 'Ethical Approval' followed by your name.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

APPENDIX 4: PLAIN LANGUAGE CONSENT FORM FOR TEACHER

PARTICIPANTS

Dear Participant,

As part of my master's study with University of Wales Trinity Saint David (UWTSD), I am running a research project. Although the benefits of a physically active lifestyle are well documented, globally 81% of adolescents and 27.5% of adults currently do not meet WHO's recommended levels of physical activity. More specifically in the Scottish context, the Active Healthy Kids report card 2021 ranked Scotland last among 38 nations for physically active adolescents (Active Healthy Kids Report Card, 2021). While school PE aims to provide opportunities to be active during the school day and develop physical competences, it can also provide opportunities to develop the knowledge, skills, and motivation to be physically active outside of school and throughout life (Lonsdale et al., 2017). Positive PE experiences are important motivators for future engagement and contribute to positive attitudes towards physical activity in adulthood (Ladwig et al., 2018; Rhodes and Kates, 2015).

Aim of the study: To measure the impact of an intervention on pupils' motivation for PE/sport. The intervention is informed by self-determination theory, which seeks to support basic needs of feeling competent, feeling autonomous and feeling related to others. Previous studies have shown teaching which supports these needs can lead to increased motivation in classrooms.

Participation: You will receive training on the theory and use of the resource 'enhancing autonomous motivation in PE'. You will deliver PE lessons as per curriculum outcomes, using the teaching strategies from the resource. To ensure fidelity of implementation, two sessions will be videoed and reviewed. After delivering 12 sessions, you will be invited to interview to share your opinions on the resource and its implementation.

Data: Each interview will be anonymised so no identifiable information will be used in analysis or in results. The data will be available to me, my supervisor and the external examiner. It will be stored as a hard copy and on UWTSD encrypted, password protected cloud storage system. The anonymised data will be destroyed after completion of analysis. The videos will be used only for ensuring fidelity of implementation and will be deleted upon review.

Results: The results will be used to write a dissertation. Again, no personal information, photos or identifiable information will be displayed or discussed. The outcomes of the study can be shared with you after.

Consent: Participation is entirely voluntary. You may withdraw at any time. Participation or non-participation in the interview will have no impact on your professional status.

The project will be conducted in accordance with UWTSD Research Ethics & Integrity Code of Practice. It will also adhere to British Educational Research Association guidelines and UNCRC.

If you have any questions or would like clarification on anything, please contact me at coconnell@killermont.e-dunbarton.sch.uk. Thank you for taking the time to read the information. The consent form follows below.

Kind regards,

Cara O'Connell

Consent to take part in 'What is the impact of an SDT informed teaching intervention on motivation among primary school children?'

Purpose of Study: To measure pupils' motivation towards PE/sport

**Please tick
each box if
you agree
with the
statement**

I confirm that I have read and understand the information sheet for the above research. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

☐

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

☐

I understand who will have access to personal data provided, how the data will be stored and what will happen to the data at the end of the project.

☐

I understand that I will not be identifiable from any publications or presentations.

☐

I give consent to participate in the study.

☐

Name:

Signed:

Date:

APPENDIX 5: PLAIN LANGUAGE CONSENT FORM FOR PARENTS OF PUPIL PARTICIPANTS

Dear Parent/Guardian,

As part of my master's study with University of Wales Trinity Saint David (UWTSD), I am running a research project. Although the benefits of a physically active lifestyle are well documented, globally 81% of adolescents and 27.5% of adults currently do not meet WHO's recommended levels of physical activity. More specifically in the Scottish context, the Active Healthy Kids report card 2021 ranked Scotland last among 38 nations for physically active adolescents (Active Healthy Kids Report Card, 2021). While school PE aims to provide opportunities to be active during the school day and develop physical competences, it can also provide opportunities to develop the knowledge, skills, and motivation to be physically active outside of school and throughout life (Lonsdale et al., 2017). Positive PE experiences are important motivators for future engagement and contribute to positive attitudes towards physical activity in adulthood (Ladwig et al., 2018; Rhodes and Kates, 2015).

Aim of the study: To measure the impact of an intervention on pupils' motivation for PE/sport. The intervention is informed by self-determination theory, which seeks to support basic needs of feeling competent, feeling autonomous and feeling related to others. Previous studies have shown teaching which supports these needs can lead to increased motivation in classrooms.

Participation: The children would complete a paper questionnaire designed for children. They would rate five statements about their feelings towards physical activity. The questionnaire would be completed before the intervention begins and again after twelve sessions.

Data: Each questionnaire will be anonymised so no identifiable information will be used in analysis or in results. The data will be available to me, my supervisor and the external examiner. It will be stored as a hard copy and on UWTSD encrypted,

password protected cloud storage system. The anonymised data will be destroyed after completion of analysis.

Results: The results will be used to write a dissertation. Again, no personal information, photos or identifiable information will be displayed or discussed. The outcomes of the study can be shared with you and your children after.

Consent: Participation is entirely voluntary. As well as seeking your consent, the children will be informed about the project and asked if they would like to take part. You, or your child, may withdraw at any time. Participation or non-participation in the questionnaire will have no impact on experiences during PE or academic outcomes.

The project will be conducted in accordance with UWTSD Research Ethics & Integrity Code of Practice. It will also adhere to British Educational Research Association guidelines and UNCRC.

If you have any questions or would like clarification on anything, please contact me at coconnell@killermont.e-dunbarton.sch.uk. Thank you for taking the time to read the information. The consent form follows below.

Kind regards,

Cara O'Connell

Consent to take part in 'What is the impact of an SDT informed teaching intervention on motivation among primary school children?'

Purpose of Study: To measure pupils' motivation towards PE/sport

**Please tick
each box if
you agree
with the
statement**

I confirm that I have read and understand the information sheet for the above research. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

☐

I understand that my child's participation is voluntary and that I am free to withdraw consent at any point, without giving any reason.

☐

I understand who will have access to personal data provided, how the data will be stored and what will happen to the data at the end of the project.

☐

I understand that my child will not be identifiable from any publications or presentations.

☐

I give consent for my child to participate in the study.

☐

Child's name:

Parent/Guardian name:

Signed:

Date:

APPENDIX 6: ADAPTED QUESTIONNAIRE

Name:

Date:

Circle the number which suits your feeling.

1 = Never

5 = Always

a) I like to do sport.

1

2

3

4

5

b) It's important to me to do sport.

1

2

3

4

5

c) Playing sport makes me feel good.

1

2

3

4

5

d) People around me (friends and family) say I should do sport.

1

2

3

4

5

e) I don't care about doing sports

1 2 3 4 5

f) I can decide which sport to do

1 2 3 4 5

g) I think I'm good at sports

1 2 3 4 5

h) Playing sports makes me feel part of a team

1 2 3 4 5

Adapted from *Motivation to Exercise and Diet Questionnaire* (Pietrabissa *et al.*, 2020)

APPENDIX 7: TEACHERS' INTERVIEW GUIDE

Section 1: Background and Context

1. Can you briefly describe your teaching role and experience in delivering Physical Education?
2. How confident do you feel teaching PE in general, particularly when working with pupils who may be less motivated?

Section 2: Understanding and Use of the SDT-Informed Resource

3. Prior to this study, how familiar were you with Self-Determination Theory or its principles (autonomy, competence, relatedness)?
4. How clear and accessible did you find the SDT-informed teaching strategy resource?
5. Which aspects of the resource did you find most useful when planning or delivering PE lessons?
6. Were there any parts of the resource that you found unclear, challenging, or less relevant?

Section 3: Implementation in Practice

7. How did you incorporate the SDT-informed strategies into your PE lessons?
8. To what extent do you feel you were able to support:
 - pupils' autonomy (e.g. choice, voice)?
 - pupils' competence (e.g. feedback, appropriate challenge)?
 - pupils' relatedness (e.g. inclusion, relationships)?
9. What factors helped or hindered your ability to implement the strategies as intended?
10. Did you need to adapt the resource to suit your class or teaching style? If so, how?

Section 4: Perceived Impact on Pupils' Motivation

11. Did you notice any changes in pupils' motivation or engagement during PE lessons after using the resource?

12. Were there any differences in how pupils responded compared to previous PE lessons?
13. Did you observe any changes in pupils' confidence, enjoyment, or willingness to participate?

Section 5: Teacher Feelings and Reflections

15. How did you feel about delivering PE lessons using the SDT-informed approach?
16. Did using the resource influence your confidence or enjoyment as a PE teacher?
17. How did pupils' responses impact your own motivation to teach PE?

Section 6: Evaluation and Future Practice

18. Overall, how effective do you feel the SDT-informed resource was in supporting pupils' motivation for PE?
19. Would you consider continuing to use these strategies in future PE lessons? Why or why not?
20. What improvements or additions would you suggest for the resource?
21. Is there anything else you would like to share about your experience of using the SDT-informed teaching strategies?

APPENDIX 8: INTERVIEW WITH TEACHER 3 ON 23RD JANUARY 2026

Researcher: OK. Could you briefly describe your teaching role and your experience in delivering PE, how confident you feel teaching PE in general, particularly when you're working with pupils who might be less motivated?

Teacher 3: Well, I've only been a probation teacher for six months, but I was a sports coach before that for gymnastics, so I've had lots of experience delivering gymnastics, but obviously it was a little bit different because those children, or most of those children, wanted to come. So yeah, about six months experience delivering PE to the kids I teach just now.

Researcher: Do you feel confident teaching PE here in school?

Teacher 3: Yeah, I would say I feel confident in teaching PE whether what you get back from the kids is purposeful like, I think their attitude has a lot to do with what you're teaching and that's some of the struggle maybe with like, gymnastics, teaching gymnastics although I was confident in doing it before. When you come in and you've got 26 boys who don't want to take part in it, trying to get them to do something that they don't want to do can be a little bit tricky, whereas I didn't face that before coaching gymnastics. But I'd say I feel confident in the actual delivery and teaching PE. It's just sometimes trying to make it fun and engaging. That's the hard thing.

Researcher: Do you feel that there was a lot of focus on teaching PE in your teacher training course?

Teacher 3: No, I would say there was no focus on PE. Some of the placement schools actually I have been in had PE specialists. So I'd actually never taught PE until my last placement and then come here (for probation). So no, it doesn't prepare you at all.

Researcher: Prior to taking part in this study, how familiar were you with self-determination theory or the principles of autonomy, competence, and relatedness?

Teacher 3: A little bit. Not much. I would never have called it self-determination theory. I knew a little bit looking at motivation in maths and other subjects and maths with self efficacy of the pupils and stuff, but not very familiar at all.

Researcher: Did you find the resource clear and accessible?

Teacher 3: Yeah, it was really easy and it laid out exactly what you want to do. It was good to refer back to when needed.

Researcher: What aspects do you think you found most useful when you were planning or during delivery of the PE lessons? I would say your actual physical examples were great and actually thinking about it in a different way, and I think we had this discussion before about football is not just playing six weeks of football games, it's about actually taking a skill and how can you adapt that where they're still learning the skills but they maybe don't actually realise this is what we're doing. Like passes in netball, we've been playing loads of different games like Piggy in the middle that they love, but they're not actually realising that they're learning their fundamental skills for netball. So actually just taking it out of context almost so that it's not just we're gonna do six weeks of gymnastics whether you like it or not. So it was actually just looking at why children don't really feel motivated about it and seeing what we could do, I feel that really helped with that.

Researcher: Would you say that supported their autonomy?

Teacher 3: Yes, I would say looking at student choice. Because obviously there is a curriculum that we've got to follow, but it's about how can we do that in a way that the children actually think I want to come back and do that or that was really fun and they just enjoy it. So I would say, yeah, looking at the student choice aspect of it was really helpful.

Researcher: Were there any parts of the resource you found maybe unclear or challenging or less relevant?

Teacher 3: I would say no. I would say it was a lot to take in. Yes. Yeah. So maybe like a refresh after like a few lessons. I don't know something just to keep it fresh but it was it was really useful and I feel it was very useful and the way that it was laid out it was very simple. And you were available to answer any questions if we had any. Yeah. So next is kind of obviously that was more about your understanding.

Researcher: Next we're going to talk about how you implemented it in practice. So looking at the strategies here, how did you begin to incorporate those into your lessons? Thinking about the different strategies for autonomy, for competence and for relatedness, was there anything in particular you thought while you were planning how to incorporate that into different lessons?

Teacher 3: I would say again like taking aspects, looking at the key skills that they're required to learn for the block (of learning) and putting it into relatable games and also getting them to come up with ideas about how we can achieve that (those skills). This is what we need to achieve in the lesson and how we can achieve that so they were taking ownership for their learning and what they were doing. And yeah a lot of it was they were always doing something and any feedback that they were given it was like how could you make that harder? How could you make it easier if someone needed help with that? They were doing lots of that and I think it really helped with their motivation because you can never be wrong in PE. They weren't ever doing anything 'wrong'. For a lot of the kids in the classroom if they're not doing something well, it's very clear to see. But it was really good and I would say that when planning, yeah, I would take an aspect to focus on. Like one we've done, it was jumping and landing skills and we were playing with the ball almost like hungry hippos and they were doing that. But they actually didn't even realise that because it maybe wasn't anything to do with gymnastics. It didn't look like your stereotypical gymnastics lesson, but it was jumping and landing. It's almost like gamified. And yeah, games layered in. Yeah. And what they would like to do. Because it is hard when they come in and they've got an attitude or a face because they don't want to do it (stereotypical gymnastics lesson). Yeah, but actually when they realise that they can join in and have fun. So it was just about playing on their interests, I feel. Yeah. And applying the gamification was really good. And just applying it in ways so that is

not your stereotypical gymnastics lesson, you couldn't really go from a book like a resource pack or something for that, because they're all different. And I feel like, yeah, you had to meet them where they were.

Researcher: Do you feel you're able to support their competence in giving them a challenge appropriate to them and to differentiate within the PE lesson?

Teacher 3: I feel like it's always hard when you've got that child who maybe is more self-aware, they're starting to become, more self aware and they know that they're maybe not the best. But I think the thing was there was no ideal target there. So there was a skill that we were learning, but there was no 'this is what a good one looks like' because actually it doesn't matter what a good one looks like in PE, because we're all capable of different things. So there would be loads of different things (equipment) and there would be props so that they could change it themselves. So it wasn't like I need help for that because I can't do that one. They were given like the onus to try and modify it to suit them without having to ask for help. Yeah. And even ways I was like, right, OK. But if you can't do it that way, how could you? Do you think it would be easier for you? What is the bit that you're finding hard? Is it the jump into the higher platform to jump from? Do they need something bouncier to jump from? But the equipment was all out for them just to take and put in where they wanted. So it wasn't children saying 'I don't know how to do this. I need to put my hand up the whole time.'

Researcher: Did you find you're able to support their relatedness with each other and between yourself and them?

Teacher 3: And I would say I think. Well, my demonstrations aren't exactly great now and I think it is just we were all supporting that bit as well. For example, they can do a great cartwheel. Let's have a look at what they're doing. See if that could help us. But also I can't really do a cartwheel. Can you do a cartwheel? And well, how can we start with my cartwheel doesn't look like their cartwheel but what's different. The key skill was to take weight on your hands. Because it was so open, no one felt left out. There was no one saying 'But we're all learning how to do cartwheels today. If you

can't do one by the end of this lesson, you've been unsuccessful.' It was more just about stepping back to the skills and seeing if there was another way that they could almost like challenge themselves, like a problem solving challenge. But we can't do it that way. Can you think of another way that you can do it?

And I would say, yeah, tone of voice as well. It was a very because there is no right and wrong answer. There's 'you're coming in to give it your best shot and that's all we can ask of you.' So it was really informal and I think that's what helps if you come in and you're giving orders to these kids. And quite often I would take part. I love taking part in PE and it just shows that we're all learning. We're all at the same page. Just because they're younger doesn't mean that we're not all still doing the same thing and trying to get the same thing out of the lesson.

Researcher: So could you speak more about, that idea of you as a learner as well? Do you think that built a relationship?

Teacher 3: Yeah, I mean some people don't do PE after they've left school or they don't do exercise. They don't take part in exercise and actually understanding what it's like to be in those shoes. You get it. I know when I was doing PE, it was like running. And it was very easy for you to tell whether you're the fastest runner, you're the slow runner because it is measurable so obviously that's for assessment. But if I can see it as a teacher, they can see it as pupils probably more. And I would say actually through my uni course, we've done a lot of PE and it was maybe patronising at the time because you were doing like the lessons that the kids were doing. But it shows you how you feel and you're able to reflect on it when you're as an adult because it is. It's hard. I'm going in thinking I've never done a cartwheel, but I can't even touch my toes. So how am I going to do gymnastics? No wonder they hate it because, they're so unfamiliar with it, but actually we're all doing it. And yeah, I feel like if I give it a go, they give it a go. We're all learning at the same time you're showing that vulnerability, that actually it's OK to get things wrong. And again, that whole aspect that there is no perfect. Yeah, there's Olympic cartwheels and things like that, but actually if you can transfer your weight from one on your hands from one side to the other, then that's what we're looking for. And that's the key skill.

Researcher: When you spoke about kind of looking back at your, how you feel in PE, do you have any memories of your primary school PE or your high school PE and how that was for you?

Teacher 3: I'd say it was always easy to tell the ones who were good at PE and the ones who shouldn't, or in PE teachers shouldn't take part in PE or like, yeah, you're really good or you're bad. There was no learning. Yes, it wasn't. It wasn't a progressive process. You either went in that door and you were great or you went in that door and you were bad and that was it. But. I used to hate it and so many times you faked injuries or yeah said you had asthma because you couldn't. But actually it should be progress. Yeah. And that's the thing. And I think it's so important for these kids to see that. Even if you come in and you don't achieve all these set skills, it's not about that. It's about getting better than you were the last time and actually progressing with yourself. Whatever's an achievement for you. And that's why it's the one thing I don't like as much I'd never show with the great one because actually, yeah, we can show it's a good one, but that's not what yours should look like because yours might be different. We might not ever look like that, and all our bodies are different and made in different ways. Some people just can't take their weight on their hands. Some people don't have the stamina to run for all different reasons, and it shouldn't be about competing with each other. And I think it's really important that they're given the ownership to change it because you don't want to be that person. I can't do that. I remember in primary school it was the maps course. I don't. I don't know if it's the other thing. It was like an assault course and they had this wall and you had to try and run up the wall. And it was massive. And it was like everyone was standing watching you. And if you didn't make it, you had to go right to the back of the line and try again. And everyone else could progress on with the assault course. And I could never make the wall. And it was just one of those things. Then everyone was trying to like give you a lift up because it shouldn't be an embarrassing thing that you can't do something.

Researcher: Was there anything that helped you to implement the strategies or were there any barriers that you found?

Teacher 3: I think barriers would be again some of the children's attitudes towards learning, but again, it's maybe just because they've never been in a vulnerable position because like at home you don't go to the gymnastics club if you don't like gymnastics, you go to football club if you like football. So actually when you come into school and you get told that you've got to do all these different things. They are vulnerable and I would say yeah, they're vulnerable and they don't always want to try it. But actually I think it's about breaking down those barriers and then they will give it a try. They might still not like it after that, but they were all willing to give it a try. I would say things that worked well was just actually you just made me look at it in a different way. It's not just a curriculum that we're teaching and that the kids, I don't know, I've just never really thought about it in the way that I do now. It's such a big part if you go into PE and you feel like you can't do something that sets you off for the rest of the day and you go back to the classroom and you don't want to do it because you feel like you've been made to feel uncomfortable. And I think with maths, if you get a question wrong, you've something that you're struggling with there. Actually, when it's your physical body, you can't change that. Yeah, you can't change that. So then I think it makes you think, like, maths, you can go home and you can practise. And if it's something that you cannot change, then it sits with them longer. And I think it does have a big impact on the way they think.

Researcher: Do you feel like those kind of barriers and those attitudes persisted throughout this study or did the strategies help?

Teacher 3: I would say after the first lesson in gymnastics, I never had another moan because they weren't realising they were doing gymnastics and actually when they realised that, 'we get to jump', all the boys love jumping, they want to see how high they can jump. Can they do it in a different way?

Researcher: This is a section about your perceived impact on pupil's motivation. Did you notice any changes in the pupil's motivation or engagement after using the resource or when using the resource?

Teacher 3: Yeah, I would say they would come in each week and ask to do something that we'd already done again, because they enjoyed it and they would like to repeat it because they had so much fun. Yeah. And they all had smiling faces. And again, just that whole bit that they wouldn't moan when we had to go to PE. Yeah. And we were doing gymnastics. Whereas at the start, when I said that's what we were doing, they were very. 'Oh, not that! I don't want to join in' and then actually coming in, they were absolutely fine. So I would say yeah. And you could see when they wanted to join and they wanted to repeat things that we've already done.

Researcher: Did you observe any changes in their confidence, their enjoyment, or their willingness to participate?

Teacher 3: I would say even as well some of the boys in the class who aren't stereotypical gymnasts or what they would perceive as stereotypical gymnasts. They came in and they were a bit like shut off or I'll give it a go but I'm only doing this because I have to do it and that was very much what they were giving off. But actually when they were joining in, they were doing their cartwheels when we weren't all sitting and people weren't watching their reaction. It was almost like, well, actually, I can enjoy gymnastics. Gymnastics is a block where motivation is not always high. And even with girls. There's either you're getting to go to gymnastics and love it, or there's your girls who don't go to gymnastics and there's a reason why they don't go to gymnastics. So yeah, I would say you could definitely see, particularly in the boys, the difference from the start to the end.

Researcher: The next section is your feelings and your own personal reflections on it. How did you feel about delivering the lessons backed by this approach, implementing the strategies within your lessons? How does that make you feel?

Teacher 3: I would say it was much more, much easier to do when you had almost a purpose for why you're doing it, because you can see all these effects that this will have on these children. You're not just doing it because it's the curriculum. It's not just a ticky box. You're doing it because these kids enjoy it and because they're getting something from it, whereas before, they come in and they're like, oh, not again. And you think, right, this next six weeks is gonna be a drag, but we need to

get these things done. Yeah. But they're actually enjoying it. And they're getting so much from it, not just physically. But they're thinking 'OK, this is great'. My body can do things I didn't even know what could do. And they're positive attitudes towards it is, yeah, really good as well. So I would say, yeah, as a teacher it gave me, it gave me a backing for what I'm doing. And why I'm doing it because delivering it, it could be hard, but actually all of these positive effects that you'd shown that doing it this way is so good for all of the areas of the curriculum. Just for the child itself, it gave you backing for it because especially like gymnastics, there's no set way to do it. There's no like pack. Is that a good thing? Is that a bad thing? Because when you're given a prescriptive pack, it doesn't always give you the best things. It can be a bit dry, but it (the resource) gave me a purpose as to why I was doing it and it really helped me break it down into the skills like I said before.

Researcher: Did it influence your confidence or your enjoyment as a teacher?

Teacher 3: Yeah. Teaching PE, I would say I had so much fun. We were playing loads of games and it was it was just fun. The fun aspect of it, the enjoyment part of it, really it it overshadowed everything else that we were doing because I can see they're doing the skill, but they're also having fun while doing the skill. Yeah, I would say we had a lot of fun. I felt much more confident because you're also breaking it down into manageable chunks. So like, I don't know, say for example, rugby, it's not a sport I've been familiar with. I've never taught a PE lesson on rugby. But actually when you break down the skills, it's not just we're going straight into a rugby game and we're going to do six weeks of that. It's well, we're passing the ball, what other games do we pass balls in? what's different about the shape of the ball? you're breaking it down into manageable chunks. And again not always playing rugby. And I think it is that whole bit as well. PE: I've never really seen as transferable skills within but those skills that are under the gymnastics category aren't just about gymnastics, jumping and landing. It's about actually we're not learning to play rugby, we're not learning to be professional rugby players. We're learning about all these skills that you would use in a game of rugby. So yeah, help me break it down and actually I can pass the ball and maybe not be able to play a game of rugby, but I can pass the ball. Yeah, I know when to run with the ball. I can do things like that. So it's breaking it

down into those chunks.. And it's not all just with the end goal of being able to be rugby players. And it's about how can we use those skills even if you don't like rugby? Because again, looking at those other things, it's about transferable skills that they can use no matter what path they choose. They don't need to go and play rugby after school, and I think it was just, yeah, it was good giving them that relevance.

Researcher: The next section is just about the professional development. And you spoke a little bit about this earlier and professional learning communities. So to what extent do you think that the resource and the training session contributed to your professional learning as a PE teacher or even as a primary teacher?

Teacher 3: I would say a lot. Like I said, it totally built my confidence in actually delivering the lesson. But yeah, it gives you that purpose. And I would say it was something that everyone should do because, I think your experiences of PE definitely impact how you teach it. And for me, those negative experiences, I know I don't want any student to ever feel like that. You see the children who come in and they just don't want to be there. But and it's about making it that space, where everyone wants to be there. It's about how can we make it a way that while we're achieving all the experiences and outcomes (CfE) that you have to achieve, it's about how to do it in a way that the children actually are enjoying themselves. And that's the most important part, that they're they feel included and they don't leave feeling demotivated just because they can't do certain things.

Researcher: Brilliant. And throughout this, like, did you have opportunities or do you think we could have had more opportunities to discuss or reflect on the strategies with each other or with our colleagues more broadly?

Teacher 3: Yeah, I feel so like I know me and Teacher 1 had the conversation. We were both doing gymnastics at the same time. And obviously, the kids are similar ages. But, yeah, I think it would have been good. Maybe, like, meeting up and just having a little discussion about that because I think it's hard in all aspects of school to not feel like you're doing it on your own, especially like PE. Everyone's teaching PE as if no one's ever taught it before. You're coming up with all these things. But actually when speaking to you, you have loads of games to play for loads of different sports. And I think it's something not just to do with this study, but actually within the

whole school that we should get better, that if you've got something (a resource) that's good, write it down and put it in somewhere that everyone can access, particularly for PE, because it can be hard trying to think of things that is not just like going to do this or going to do the bleep text because it's pre made and I don't have to do anything. Whereas there's so many games that and again I feel like certain people maybe think that PE been teaching the children PE requires you to do a lot of teaching, but actually if you just set up and it's about being the facilitator for that. If you set up games and then take away from that teaching, but like the children do it, it takes away from the pressure on them, but they're still experimenting with what they're doing.

Researcher: Would being part of a professional learning community maybe within the school or the cluster (of schools) support the use of those motivational practices within PE?

Teacher 3: Yeah, 100%, I would say. And I think it would be good to have like secondary teachers and primary teachers talking about it because there are so many things and I think that one training session that we had totally flipped my way of thinking about it. And I think there's so many people who have maybe been teaching for years and maybe haven't flipped yet because they've never had to think about it that way. And all the professional learning sessions that I've done as a student in uni or as a probation teacher, none of them are on PE. Yeah, none of them are on PE and it's actually probably one of the areas where I would say I felt less confident and teachers would feel less confident because you're not given that training. And I would say even like when Active Schools come in, it's like they lead it or these taster sessions, they're for the kids. But actually, is there a way that it could be for the adults? Whether it's one Tuesday after school we're all like playing rugby or learning ideas or playing games? Because you learn through doing so if we're out and playing, you understand how the kids are feeling? And it's about that feeling, isn't it?

Researcher: Overall, how effective do you feel that the resource was in supporting pupils motivation for PE?

Teacher 3: Yeah, I feel it was great. I think it would be really useful to have it stuck on the wall in the gym hall. And yeah, I think it's something that should be delivered for all staff, not just whether you choose to or not because and it can have an impact on the rest of their learning. Especially we have PE on a Monday morning, so if that goes... if that child doesn't have a good day on that Monday morning, that's you for the rest of the day, at least. Never mind the week.

Researcher: Would you consider continuing to use the strategies and future lessons? Yeah, I would say for me, it was all stuff that I would like to have done anyway. It was just stuff that everyone is capable of. I didn't need to go and learn how to do that. It was such an easy change. And it was something that everyone is able to do. It's not just like we need to go and have all this training and I need to learn how to do that. It doesn't require that it just requires you to flip the way that you're thinking. And it was overwhelming that first day (of training), but actually that was all the background of it. And actually the strategies that you can follow were all there and simplified for you. 'Cause, when you go in and you're not in the mood for putting that smiley happy face on in front of those kids, but it's that easy. Yeah. And if you do and you provide that atmosphere, they do a lot of it on their own. Yeah. Rather than being grumpy and going in and being like, 'right, we're doing this. And we're doing that'. Actually, you're doing less, but the kids are getting more from it and I think how it was so easy to just pick up and it was just that switch in my head that it just flipped. And I think it's easy for everyone to do.

APPENDIX 9: TEACHER 1 INTERVIEW RAPID ANALYSIS SUMMARY

Interview: T1

School Context: Primary school, P4 class; mixed motivation; behavioural and timetabling challenges; PE delivered by class teacher and others

Teaching Experience: Over 20 years

Background and Confidence

- **Key points:** Long-serving primary teacher with low confidence in PE; negative personal PE experiences; historically teacher-directed, control-oriented practice; saw study as opportunity to improve confidence.
- **Notable quote:** “I’m not confident in PE... it’s been a bit of a learning curve, which is great.”

SDT Knowledge and Resource Usability

- **Key points:** No prior knowledge of SDT; researcher enthusiasm and clarity supported uptake; resources perceived as flexible and accessible.
- **Strengths of resource:** Comprehensive links; pick-up-and-go games; adaptable across blocks; games-based approaches highly engaging; supports autonomy.
- **Challenges / limitations:** Wanted modelling/observation of teaching progressions; required additional searching when moving content areas; needs clearer progression for skills.

Implementation of SDT Strategies

- **Autonomy:** Strongly implemented; teacher consciously stepped back; pupils given choice and voice; shift from directive to open questioning.
- **Competence:** Mixed success; attempts made but limited by teacher subject knowledge and safety concerns (gymnastics); peer demonstration used effectively.
- **Relatedness:** Initially high competitiveness; improved teamwork through game progression; peer support and idea sharing evident.

- **Adaptations:** Used skilled pupils as demonstrators; modified language to be less controlling; relied on games-based learning.
- **Barriers:** Teacher control habits; low subject knowledge; safety fears; disrupted PE timetable; behavioural incidents.
- **Facilitators:** Clear resources; enthusiastic researcher support; motivated pupils; peer learning; visible pupil enjoyment.

Perceived Impact on Pupils

- **Motivation:** Increased; pupils noticed shift in teaching style; greater willingness to participate.
- **Engagement:** High engagement, particularly with games-based activities; pupils “loved” the games.
- **Confidence / enjoyment:** Improved pupil confidence and enjoyment; success experiences (e.g. mastering forward roll).
- **Differential effects:** Beneficial for less confident pupils; skilled pupils empowered as leaders/demonstrators.

Teacher Feelings and Motivation

- **Emotional response:** Initially hesitant and unsure; gradually more confident and positive.
- **Impact on teaching confidence / enjoyment:** Marked increase in enjoyment; felt PE became more fun and rewarding; motivation to persist with approach.

Professional Learning

- **Learning gains:** New understanding of motivation and autonomy-supportive teaching; reframed PE pedagogy.
- **Shifts in thinking:** Recognised value beyond PE; intent to transfer SDT principles to other curriculum areas.

Learning Communities

- **Collaboration experiences:** Informal conversations with two colleagues; access to shared resources via staff chat.

- **Views on PLCs:** Strongly supportive; views collaboration as most valuable element; advocates whole-staff collegiate model to embed practice.

Overall Evaluation

- **Effectiveness:** Highly effective for motivation, enjoyment, and teacher confidence.
- **Sustainability:** High; teacher committed to continued use.
- **Suggested improvements:** Centralised, levelled resource bank; clearer skill progressions; modelling/observation opportunities.
- **Additional insights:** Approach reframed PE as inclusive and enjoyable; potential for school-wide cultural change if shared.

APPENDIX 10: TEACHER 2 INTERVIEW RAPID ANALYSIS SUMMARY

Interview: T2

School Context: Primary school; probation year; class with low initial motivation for gymnastics (especially boys)

Teaching Experience: First year of teaching; prior experience as gymnastics coach

Background and Confidence

- **Key points:** Probation teacher with strong subject confidence in gymnastics from coaching background; limited school PE experience; confident in delivery but challenged by pupil motivation and attitudes.
- **Notable quote:** “I feel confident in the actual delivery... it’s sometimes trying to make it fun and engaging that’s the hard thing.”

SDT Knowledge and Resource Usability

- **Key points:** Limited prior SDT knowledge; recognised links to motivation and self-efficacy from other subjects.
- **Strengths of resource:** Clear, simple, easy to revisit; strong physical examples; supported planning and reflection; researcher availability valued.
- **Challenges:** Large volume of information initially; suggested refreshers to maintain momentum.

Implementation of SDT Strategies

- **Autonomy:** Strongly embedded; pupil choice within curriculum constraints; pupils co-designed ways to achieve learning intentions; ownership of learning.
- **Competence:** Highly effective differentiation; no fixed ‘ideal’ performance; pupils self-modified tasks using equipment; focus on progress and transferable skills.
- **Relatedness:** Inclusive, non-judgemental climate; shared vulnerability; peer modelling; teacher participated as learner; strong relational tone.
- **Adaptations:** Gamification of skills; removal of sport labels (e.g. ‘gymnastics’); use of open equipment stations; skill-first planning.
- **Barriers:** Initial pupil resistance and vulnerability; negative prior PE experiences.

- **Facilitators:** Games-based learning; teacher modelling vulnerability; autonomy-supportive language; relevance to pupil interests.

Perceived Impact on Pupils

- **Motivation:** Marked increase; pupils requested repetition of activities; reduced resistance to PE.
- **Engagement:** High engagement sustained across lessons; pupils enthusiastic and smiling.
- **Confidence and enjoyment:** Improved confidence, particularly among boys and non-gymnasts; pupils willing to attempt skills privately and publicly.
- **Differential effects:** Notable shift in boys' attitudes to gymnastics; inclusive benefits across class; confidence levels.

Teacher Feelings and Motivation

- **Emotional response:** Felt lessons were easier, more purposeful, and rewarding.
- **Impact on teaching confidence and enjoyment:** Increased enjoyment and confidence; PE reframed as fun, meaningful, and less pressured.

Professional Learning

- **Learning gains:** Deeper understanding of motivation, vulnerability, and embodiment in learning; clearer rationale for PE pedagogy.
- **Shifts in thinking:** Moved from curriculum-driven to child-centred, skills-based approach; recognised PE's emotional impact on wider learning.

Learning Communities

- **Collaboration experiences:** Informal peer discussions; valued researcher support.
- **Views on PLCs:** Strong advocate; calls for shared resource banks, whole-school and cross-sector PLCs; emphasises learning through doing for staff.

Overall Evaluation

- **Effectiveness:** Very high; supported motivation, inclusion, and transferable skill development.
- **Sustainability:** High; strategies perceived as easy, realistic, and universally applicable.
- **Suggested improvements:** Centralised shared resource bank; regular collaborative reflection; staff experiential CPD.
- **Additional insights:** PE seen as emotionally powerful; autonomy-supportive PE can positively shape pupils' whole-day learning experience.

APPENDIX 11: TEACHER 3 INTERVIEW RAPID ANALYSIS SUMMARY

Interview: T3

School Context: Primary school; early years / play-based ethos; P2 class with ASN pupils and varied pupil confidence levels

Teaching Experience: 5 years

Background and Confidence

- **Key points:** Sporty teacher with positive personal PE experiences; high enjoyment and baseline confidence in teaching PE; study prompted reflective evaluation and refinement of practice.
- **Notable quote:** “I was happy with how I was teaching PE... but I realised there were things I could be doing to make it even more meaningful.”

SDT Knowledge and Resource Usability

- **Key points:** Prior surface-level exposure to SDT during PGDE study; increased confidence discussing SDT following training.
- **Strengths of resource:** One-page, concise, practical; clear headlines; QR codes for quick access; easy integration into planning.
- **Challenges:** No major issues identified.

Implementation of SDT Strategies

- **Autonomy:** Reduced queues; increased active participation; more pupil choice and simultaneous engagement; flexible grouping.
- **Competence:** Strong differentiation; multiple success pathways for same skill; task adaptation (e.g. distance, equipment); effective support for ASN and defeatist pupils.
- **Relatedness:** Increased collaboration; removal of fixed groups; pupils comfortable working with varied peers; shared participation culture.
- **Adaptations:** Lesson layout redesigned; skills practised in different spaces then reintegrated; game-based framing to reduce pressure.
- **Barriers:** None significant; previously fixed grouping and queuing practices identified as limiting factors.

- **Facilitators:** Practical games provided; clear planning framework; alignment with play-based pedagogy.

Perceived Impact on Pupils

- **Motivation:** Clear increase, particularly among previously avoidant pupils.
- **Engagement:** Higher sustained movement and participation; reduced withdrawal behaviours.
- **Confidence / enjoyment:** Improved confidence; pupils persisted with challenging skills; enjoyment evident.
- **Differential effects:** Strong impact on defeatist and low-confidence pupils; ASN pupils more willing to participate.

Teacher Feelings and Motivation

- **Emotional response:** Increased confidence and reassurance in lesson delivery.
- **Impact on teaching confidence and enjoyment:** Felt more secure due to evidence-based rationale; greater clarity in planning decisions.

Professional Learning

- **Learning gains:** Clear SDT-informed planning structure; deeper understanding of motivation in PE.
- **Shifts in thinking:** From intuition-led practice to evidence-backed pedagogy; transfer of SDT principles into play-based learning and wider curriculum.

Learning Communities

- **Collaboration experiences:** Limited but valued; recognised importance of shared reflection.
- **Views on PLCs:** Strong advocate for whole-school adoption and ongoing collaborative reflection.

Overall Evaluation

- **Effectiveness:** Highly effective in enhancing motivation, inclusion, and participation.
- **Sustainability:** Very high; resource embedded into daily planning practice.

- **Suggested improvements:** Optional extended reading; modelling or demonstrations.
- **Additional insights:** SDT principles strongly aligned with early years play-based pedagogy; relevance extends beyond PE to whole-curriculum motivation.

APPENDIX 12: CROSS CASE MATRIX ANALYSIS OF QUALITATIVE FINDINGS

Domain	T1	T2	T3	Cross-case convergence / contrast
Teaching background & PE confidence	Lower initial PE confidence; anxiety about delivery	High PE confidence; strong relational orientation	High PE confidence; sporty background	Contrast: SDT useful for both low- and high-confidence teachers
Prior SDT knowledge	Minimal; largely unfamiliar	Limited theoretical awareness	Surface-level exposure during PGDE	Convergence: SDT largely novel in PE context
Resource usability	Clear, confidence-building	Clear, practical, easy to adopt	Highly valued one-page format	Strong convergence: usability is key to facilitating use
Key SDT focus in practice	Autonomy as challenge	Relatedness as strength	Competence as driver	Contrast: teachers emphasise different SDT needs
Autonomy strategies	Choice, reduced control	Flexible grouping, pupil voice	Removal of queues, simultaneous activity by offering choices	Convergence: autonomy linked to participation
Competence strategies	Scaffolded success	Differentiated challenge	Multiple routes to success (ASN focus)	Strong convergence: feelings of competence led to persistence
Relatedness strategies	Building trust	Peer interaction	Mixed-group collaboration	Convergence with contextual variation
Barriers	Initial uncertainty	Time and habit	Desire for modelling	Contrast: barriers vary by experience and class
Facilitators	Clear structure	Values alignment	Practical examples & games	Convergence: practical support matters
Pupil motivation and engagement	Noticeable increase	Sustained high engagement	Marked improvement for disengaged pupils	Strong convergence: motivation improved
Differential effects	Benefits hesitant pupils	Broad class impact	Significant impact for defeatist/ASN pupils	Convergence with emphasis on vulnerable/reluctant learners
Teacher confidence & enjoyment	Increased confidence	Reinforced enjoyment	Increased confidence,	Convergence: SDT supports teacher motivation

Domain	T1	T2	T3	Cross-case convergence / contrast
			evidence-backed	
Professional learning	Shift in pedagogy	Refinement of practice	Transfer across curriculum	Convergence: conceptual shift beyond PE
Collaboration & PLCs	Desired	Valued	Strongly advocated	Convergence: desire for more collective learning with wider group
Overall evaluation	Effective and worthwhile	Effective and sustainable	Highly effective; embedded	Strong convergence: sustained use likely

APPENDIX 13: STATISTICAL ANALYSIS OF TREATMENT GROUP SCORES

T-Test

Notes

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	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
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Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE	32.1791	67	6.95859	.85013
	POST	34.8358	67	6.27066	.76608

Paired Samples Correlations

		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	PRE & POST	67	.805	<.001	<.001

Paired Samples Test

		Paired Differences						
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df
					Lower	Upper		
Pair 1	PRE - POST	-2.65672	4.17987	.51065	-3.67627	-1.63717	-5.203	66

Paired Samples Test

		Significance	
		One-Sided p	Two-Sided p
Pair 1	PRE - POST	<.001	<.001

Paired Samples Effect Sizes

					95% Confidence Interval		
				Standardizer ^a	Point Estimate	Lower	Upper
Pair 1	PRE - POST	Cohen's d	4.17987	-.636	-.896	-.371	
		Hedges' correction	4.22813	-.628	-.886	-.367	

a. The denominator used in estimating the effect sizes.

Cohen's d uses the sample standard deviation of the mean difference.

Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.

APPENDIX 14: STATISTICAL ANALYSIS OF CONTROL/WAIT GROUP SCORES

T-Test

Notes

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	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
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Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE	32.1791	67	6.95859	.85013
	POST	34.8358	67	6.27066	.76608

Paired Samples Correlations

		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	PRE & POST	67	.805	<.001	<.001

Paired Samples Test

		Paired Differences						
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df
					Lower	Upper		
Pair 1	PRE – POST	-2.65672	4.17987	.51065	-3.67627	-1.63717	-5.203	66

Paired Samples Test

		Significance	
		One-Sided p	Two-Sided p
Pair 1	PRE - POST	<.001	<.001

Paired Samples Effect Sizes

				Point Estimate	95% Confidence Interval	
			Standardizer ^a		Lower	Upper
Pair 1	PRE - POST	Cohen's d	4.17987	-.636	-.896	-.371
		Hedges' correction	4.22813	-.628	-.886	-.367

a. The denominator used in estimating the effect sizes.

Cohen's d uses the sample standard deviation of the mean difference.

Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.