Teachers’ Experiences of Implementing a Pedagogical Approach for Meaningful Physical Education

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DEDICATION

– For Grandpa –

Who started calling me Dr. Beni long before a PhD was on my mind

You’re always with me in my heart.
ABSTRACT

Dominant forms of physical education (PE) have been criticized for their inability to promote lifelong movement, with many scholars arguing in favour of an approach oriented toward meaningful experiences in PE. The Meaningful PE approach has been designed in response to this but has yet to be tested extensively in practice. The purpose of this dissertation has been to study teachers’ experiences of learning about and implementing the Meaningful PE approach. Five teachers based in Ireland and 12 teachers based in Canada participated in two separate studies lasting eight weeks and across two school years, respectively. Qualitative data were collected in the form of semi-structured interviews, non-participant observations, community of practice (CoP) meeting transcripts, and reflections. Results of this dissertation are presented in four articles. Article One highlights the experiences of Irish primary classroom teachers, demonstrating preliminary support for the approach from classroom teachers with little background in PE. Article Two focuses on Canadian elementary teachers’ experiences of implementing the Meaningful PE approach with their students and on the factors that influenced their implementation decisions. Primary factors influencing implementation included teachers’ prior experiences and beliefs, students’ responses to the implementation process, and external organizational pressures. Article Three focuses on Canadian teachers’ experiences of learning about Meaningful PE through a professional (PD) initiative designed around characteristics of effective PD outlined in the literature. Teachers were most supportive of the use of a CoP and modelling of the approach to foster their learning about Meaningful PE, while also highlighting several tensions between ideal and practical forms of PD, taking personal and organizational barriers into account. Article Four focuses on my experience of becoming a facilitator of teachers’ PD through facilitating a CoP for teachers. This article highlights the important role of
identity in the process of learning to become a facilitator and navigating the tensions associated with that process. Collectively, this dissertation makes a significant contribution to the literature by a) informing the refinement of the Meaningful PE approach, b) offering insights into educational implementation research, and c) adding to the literature on teachers’ professional learning when being introduced to innovations.
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Chapter IV: Article One – Published

Chapter V: Article Two – In Review
Beni, S., Fletcher, T., & Ní Chróinín, D., (in review). “It’s not a linear thing; there are a lot of intersecting circles”: Factors influencing teachers’ implementation of Meaningful Physical Education. *Teaching and Teacher Education*.

Chapter VI: Article Three – In Second Review
Beni, S., Fletcher, T., & Ní Chróinín, D. (in review). “It’s a really good delivery if you want something to stick”: Teachers’ engagement with professional development to support implementation of Meaningful Physical Education. *Journal of Teaching in Physical Education*.

Chapter VII: Article Four – Accepted
Beni, S. (in press). “It’s messy and it’s frustrating at times, but it’s worth it.” Facilitating the professional development of teachers implementing an innovation. *Studying Teacher Education*. 
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<table>
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<th>Abbreviation</th>
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<tr>
<td>CoP</td>
<td>community of practice</td>
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<tr>
<td>CoPs</td>
<td>communities of practice</td>
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<tr>
<td>DOI</td>
<td>diffusion of innovations</td>
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<tr>
<td>ELLs</td>
<td>English language learners</td>
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<td>IPPEA</td>
<td>Irish Primary Physical Education Association</td>
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<td>PE</td>
<td>physical education</td>
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<td>PD</td>
<td>professional development</td>
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<tr>
<td>PPCF</td>
<td>purpose-process curriculum framework</td>
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<td>RJ</td>
<td>researcher journal</td>
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<td>S-STEP</td>
<td>self-study of teacher education practice</td>
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CHAPTER I: INTRODUCTION

Students’ experiences in physical education (PE) can influence the extent to which they choose to participate in physical activity beyond school and across the lifespan (Engstrom, 2008). Indeed, childhood memories of PE have been found to be associated with attitudes and intentions toward physical activity and sedentary behaviour into adulthood (Ladwig et al., 2018). This makes PE a key intervention context for promoting lifelong physical activity (Moore & Fry, 2017). However, PE has been identified as both part of the problem and the solution for addressing children’s levels of physical activity (O’Sullivan, 2006). For instance, predominant forms of PE (i.e. those that are teacher-directed and focus on the acquisition of sports techniques) have been criticized for their inability to promote children’s continued participation in physical activity, thus contributing to sedentary behaviour and alarming obesity levels (Kirk, 2010; Armour & Harris, 2013). Both within Canada and beyond, these rates of physical inactivity among children and youth have reached levels that constitute a major public health concern (Roberts et al., 2012). While PE provides a context in which all Canadian students may learn in, about and through movement (Arnold, 1979), there is evidence to suggest that PE is not living up to its potential to provide these rich experiences. For example, few Canadian students are electing to continue their participation in PE when it is no longer mandatory in their mid-teenage years (Lodewyk & Pybus, 2012).

In an attempt to address this problem, PE programs and interventions have often been positioned as a means to various ends. For example, in some contexts, PE programs have tended to be equated with sport, partly due to the outsourcing of PE instruction to youth sport coaches, often resulting in the exclusion of movement forms that fall beyond the parameters of popular formal sporting activities (Jones & Green, 2017; Dyson et al., 2018). Others have attempted to
position PE as a public health endeavour, thus focusing on extrinsic motivational factors, such as weight loss and improved physical fitness. For example, Landi et al., (2016) highlight that health-based models of PE instruction have promoted a focus on activities such as pedometer tracking, measuring heart rates, logging activity in physical fitness logs, nutritional prescription, and having students describe how they would look having reached their optimal level of physical fitness. Some scholars have called for PE to be reconceived of as ‘play education’ (Hawkins, 2008). Ennis (2017) suggests that within such a recreation focused approach, pedagogical priorities become encouraging students to have fun, let off steam, and work nicely with their peers, arguably losing sight of the ‘E’ – the educational aspect – in ‘PE’ (Quennerstedt, 2018).

These varying views of PE have led some scholars to highlight what they perceive to be an ‘identity crisis’ within the field – a fight for the very soul of PE (Kirk, 2010; Hawkins, 2008). While each of these ‘identities’ may hold some inherent value, individuals are more likely to commit to physical activity based on intrinsic motivational factors, such as satisfaction, challenge, social interaction, or fun, rather than for extrinsic reasons, such as improving their physical fitness or achieving weight loss outcomes (Teixeira et al., 2012; McCaughtry & Rovegno, 2001; Strömmer et al., 2021). Similarly, Kretchmar (2008) has asserted that, while health-related benefits of physical activity are a positive outcome of PE, children are often less concerned with their health than with the enjoyment that may be derived from experiences that are meaningful. Students themselves have suggested that their PE experiences often lack personal meaning and are detached from their lived realities as a result of a misplaced emphasis on obesity reduction, fitness outcomes, and a limited range of sport techniques (Hastie, 2017; Kirk, 2010; Ntoumanis, 2005). Indeed, a lack of meaningfulness has been cited as a primary reason for children’s discontinued participation in PE (Beni et al., 2017). For these reasons,
many scholars argue in favour of an approach oriented toward meaningful experiences in PE (e.g. Arnold, 1979; Hawkins, 2008; Kretchmar, 2000; Metheny, 1968), which may “refresh, revive, (re)socialize, and (re)personalize PE” by promoting “democratic, autonomous, and supported PE” experiences for children, which can be transferred to their lives outside of school (Ennis, 2013, p. 115). Along with motivation and mindfulness, meaningfulness has been highlighted as one of three essential elements in offering transformative experiences to students in PE today (Ennis, 2017).

**Defining Meaning, Meaning Making, and Meaningfulness**

In order to understand the concept of meaningfulness, it is important to distinguish between the terms ‘meaning’, ‘meaning making’ and ‘meaningful’. Kretchmar (2007) defines meaning “in a broad, common sense way. It includes all emotions, perceptions, hopes, dreams, and other cognitions – in short, the full range of human experience” (p. 382). Meaning is distinguished from, yet influenced by, emotion and affect. Feelings and emotions “contribute to the constitution of meanings (i.e. ideas, cognition, and such)” (Andersson & Garrison, 2016, p. 211) and “are integral to our ability to grasp the meaning of a situation and to act appropriately in response to it” (Johnson, 2007, p. 68). Thus, the term meaning can be applied very broadly.

The term ‘meaning making’ can be defined as “an active process through which people revise or reappraise an event or series of events” and can take the form of benefit finding (looking for something good in a particular situation or thing) or sense making (ascribing attribution) (Baumeister & Vohs, 2002, p. 613). For the purposes of this research, I will use the term meaning making to refer more specifically to the latter. In other words, meaning making relates to the particular and specific meanings an individual attributes or ascribes to an experience or entity. Both language (Bruner, 1990; Wetherell et al., 2001; Quennerstedt, 2008)
and past experiences (Dewey, 1938/1997; Jarvis, 1987; Kretchmar, 2008; Quennerstedt et al., 2011) are considered key factors in this process. The role of an individual’s unique prior experiences highlights the highly subjective nature of the meaning making process (Polanyi, 1958; Brown & Payne, 2009), suggesting that an experience means to an individual “whatever it does mean to [them], and no other person can either agree or disagree with those meanings” (Metheny, 1968, p. 10). Some scholars suggest the personal nature of meaning making is best understood through a ‘transactional approach,’ where events and experiences are not considered to have fixed meanings; instead, the meaning that ‘emerges’ is a result of a transactional process (Garrison, 2001). Thus, “meaning making is understood as the way an individual responds to circumstances of an event” (Quennerstedt et al., 2011, p. 162) in transaction with the physical, social, political, and natural worlds (Maivorsdotter & Quennerstedt, 2012).

Importantly, there is a distinction between those experiences, ideas, and things that have meaning and those which might be thought of as meaningful (Kretchmar, 2007). Indeed, Kretchmar (2001) suggests that everything one does may have some meaning and yet not everything will be meaningful; “not all meanings, it could be said, are created equal, and we can tell the difference!” (p. 323). A meaningful experience may be conceived of as that which is “full of personal significance” (Kretchmar, 2007, p. 382). As Metheny (1968) asserts a “conception becomes meaningful as we seize upon it, take it into ourselves, and become involved with it. This feeling of involvement is a symptom of what the idea means to us, or how we find it meaningful or significant” (p. 5). From a positive psychology perspective, there is some agreement on a tripartite conceptualization of life-related meaningfulness including: (a) purpose – a motivational component, related to goals, aims and direction, (b) feelings of significance – an emotional component involving evaluation of life’s inherent value and worth, and (c) coherence
– a cognitive component related to understanding of one’s life making sense and being comprehensible (Leontiev 2013; Martela & Steger 2016).

Dewey (1938/1997, p. 44) suggests that value is attached to an experience (i.e. it is perceived as meaningful) as a result of “a transaction taking place” between an individual and aspects of the environment (i.e. the meaning-making process). Indeed, transactions and interpretations by which meaningfulness is ascribed are constructed in relation to culture (Bruner, 1990), where individuals make connections to “something that reaches beyond the actual experience, linking it to something else” (Leontiev, 2013, p. 462). Thus, the terms meaning, meaning making, and meaningfulness, while distinct, are highly related and interconnected. The primary focus of this research is meaningful experiences in PE, which are conceived of as those which are full of personal significance.

Importantly, this conception of meaningfulness does not suggest that all meaningful experiences will necessarily be associated with positive affect. Indeed, a negative experience, such as an unpleasant interaction in the learning environment, might be full of personal significance in its impact upon one’s life and yet be viewed as entirely negative. Thus, there is a need to focus on experiences that are both meaningful and educative. Dewey (1938/1997) suggests that, while education occurs through experience, there is a distinction between those experiences that are educative (leading participants to seek continuity of the experience) and miseducative (thwarting the growth of further experience). Thus, it is those types of experiences that are both meaningful (personally significant) and educative (promoting a desire to continue, rather than avoid, the experience) that are beneficial for student learning.

**Prioritizing Meaningfulness in Physical Education**

In a recent review of fifty empirical articles on meaningful experiences in PE and youth
sport, Beni et al. (2017) highlight a distinct gap in the literature; although there is agreement that there is a need to promote meaningful movement experiences for children, less is known about how this might be done in practice. Only a few articles in the review point to specific pedagogical strategies. For instance, as a result of her study of 19 elementary PE students participating in a unit of dance, Nilges (2004) suggested that teachers interested in helping students achieve meaningful, subjective learning must be open to exploring theories of knowledge and making use of strategies to help students access the meaning of their experiences, such as journaling, think-aloud exercises, and probing questions. Similarly, in advocating for a return to finding meaning in movement for the joy it brings, Rintala (2009) highlights several intrinsic elements that arise from play including, for example, creativity, self-expression, sense of wonder, friendship, fun, joy and empathy. These characteristics may provide some guidance in terms of the types of experiences that are likely to be found meaningful by students. In addition, Beni et al. (2017) acknowledge that other approaches to PE instruction may influence the meaningfulness of students’ experiences in PE. For instance, the use of the Sport Education model as well as game-centred approaches, such as Teaching Games for Understanding, have been found to contribute to the fun and value students find in PE. While these findings offer some insight into how to promote meaningfulness for students in movement, meaningfulness is often a by-product, rather than an explicit focus, of these approaches. Thus, there remains a need to focus on the development of pedagogies that explicitly prioritize meaningfulness.

Through their review, Beni et al. (2017) found support for five key features of meaningful experiences, highly related to those identified by Kretchmar (2006), which have offered some preliminary insight into how students experience meaningfulness in PE. These include:
- Social interaction: Students share positive interactions with others, including both peers and the teacher, and have opportunities to work/play in groups.

- Fun: Students find lessons to hold immediate enjoyment.

- Challenge: Students are enabled to participate in activities that are neither too easy nor too challenging through the modification of games/activities and allowing students to make choices.

- Motor competence: Students learn and develop physical skills necessary to engage in activities and perceive themselves to be competent.

- Personally relevant learning: Students understand what they are learning, why it matters, and how it relates to their lives beyond the PE classroom.

Kretchmar (2006) additionally argues for the role of delight as a factor that influences the meaningfulness of one’s movement experiences:

- Delight: Students engage in experiences in which they are caught up in the moment or achieve a sense of accomplishment, facilitated over time through engagement with personal playgrounds.

While these features offer preliminary insight and a provisional way to frame, understand and identify meaningfulness, there is a need for specific pedagogies by which teachers may prioritize meaningful experiences in their PE classrooms and enable students to experience these features in meaningful ways.

Since the time of this review, some authors have responded to calls in the literature for exploration of pedagogies for meaning in PE. For instance, O’Connor (2018) guided 44 seventh grade students through a five-step reflective sequence through the use of narrative in an attempt to reflect upon the meaning-making of their experiences. O’Connor suggests the process allows
students to draw meaningful connections and develop a language of meaning. Similarly, through their study with fourth and fifth grade students, Ní Chróinín et al. (2020) highlight the important role of photo-diaries to help students access and articulate the meaning of their experiences in PE. Further, Mikalsen and Lagestad (2020a, 2020b) show how the meaning-making of students with varying levels of physical activity is highly subjective yet rooted in and influenced by the wider context. It is important to note that these studies focus on meaning-making as opposed to meaningfulness, however, they may hold important implications for the latter. For example, Ní Chróinín et al. (2020) assert that approaches (in this case photo-diaries) that allow access to student’s meaning-making about their learning may be helpful in understanding and articulating what is meaningful about those experiences.

Others have focused more explicitly on meaningfulness. For example, Walseth et al. (2018) studied the potential role of the activist approach to promote meaningful experiences for 27 tenth grade students in co-educational PE. Using the features of meaningful experiences as a guide for promoting meaningfulness (Beni et al., 2017), the authors found that the activist approach helped students (particularly those who previously reported disliking PE) to experience meaningfulness through being involved in the curriculum-making process. Similarly, Vasily et al. (2021) used these features to guide students through an individual-pursuits unit in PE, prioritizing the personal relevance of students’ learning, the quality of their social interactions, and finding an appropriate level of challenge. These features have been used in similar ways in PE teacher education (Lynch & Sargent, 2020; Fletcher et al., 2020).

In follow-up to the aforementioned review, I conducted a self-study of my own teaching practice of using the six features to guide my planning and instructional decisions in one elementary PE classroom (Beni et al., 2018, 2019). In that research, I found value in using the
features to guide planning with a prioritized emphasis on meaningfulness and highlighted numerous pedagogical strategies for implementing such an approach including, for example, the use of autonomy-supportive strategies that allow students to be involved in decision-making processes and to make choices for themselves as well as committing to a prioritisation of meaningful experiences.

While these features and pedagogies have provided a valuable starting point, there remains a distinct absence of a coherent pedagogical approach to prioritising meaningfulness. In the past, some approaches to PE instruction have acknowledged the important role of meaning. For example, Jewett and Mullan’s (1977) Purpose-Process Curriculum Framework (PPCF) was designed to “provide for the selection of content in terms of its meaning to people” and was “postulated on the premise that each individual person may seek personal meaning through any combination of the shared movement goals” (p. 9). This emphasis on personal meaning is accounted for within the ‘purpose’ component of the framework, containing 22 (later 23) purpose elements, each of which “identifies a unique way of finding or extending personal meaning through movement activities” (Jewett & Mullan, 1977, p. 11). Subsequently, the Personal Meaning Model was developed upon the framework of the PPCF, acknowledging that “the primary concern of PE is the personal search for meaning by the individual moving in interaction with the environment” (Jewett et al, 1995, p. 274). However, in spite of its focus on individual, subjective meanings and providing some guiding principles to teachers, the Personal Meaning Model is quite broad in its scope. As a result, it arguably does little to answer the question of how teachers might promote meaningfulness for students in PE. Further, perhaps due to a strong focus on theoretical development over implementation (Bain and Jewett, 1987), neither the PPCF nor the Personal Meaning Model have been taken up extensively in practice. In
response to the need for a coherent approach that focuses on how teachers might prioritize meaningful experiences for students in PE, the Meaningful Physical Education approach has been developed with the needs, interests, and experiences of contemporary students and teachers of PE in mind.

**The Meaningful Physical Education Approach**

The Meaningful PE approach is built upon the understanding that meaning occurs in transaction – between the individual and their environment (including interactions with others, the physical environment, artifacts, etc.) (Dewey, 1938/1997; Quennerstedt et al., 2011). Thus, the meaning-making process is both cognitive and affective in nature, including relational, social, and cultural dimensions (Bruner, 1990). In order to promote transformative experiences (Ennis, 2017), the teaching and learning principles of the Meaningful PE approach can be linked to social constructivism. Within social constructivism, learning is thought to occur as students construct knowledge in relation to both their prior experiences and their interactions in the learning environment (e.g. with peers, teachers, artifacts) and community (Vygotsky, 1978). This is an active, interpretive, recursive, and non-linear building process (Fosnot, 2005, p. 34) which occurs within and is influenced by the social environment.

Given its early stage of development at the time of this research, as well as the subjective and transactional nature of meaningfulness, the Meaningful PE approach was designed to be a provisional and flexible set of ideas to help teachers’ pedagogical decision making in prioritizing a focus on meaningful experiences. It was designed to be used across content areas and in line with a range of curricular and policy objectives. In this way, Meaningful PE is a broad framework rather than a prescribed approach and thus intended to compliment, rather than compete with, other models and approaches to PE instruction. The key principles and strategies
Democratic Principles

Democratic principles involve teachers and students working together within the learning environment (Ennis, 2017). Thus, teachers provide students with opportunities for increased autonomy and agency. This involves allowing students to make choices for themselves and be involved in decision-making processes. On a large scale, this can include collaborating with students when planning and making decisions concerning the types of activities they will engage in (Enright & O’Sullivan, 2010). This can also involve providing students with opportunities to make choices concerning their individual level of challenge (Haras et al., 2006), the type of equipment they might use (Beni et al., 2018), or their partner/group selection (Koekoek & Knoppers, 2015). In addition, fostering autonomy-support requires careful consideration of the student-student and student-teacher social dynamic. Teachers can foster a stronger connection with students by, for example, calling students by name, making eye-contact, smiling, using humor, listening to and acknowledging students and their ideas, and offering praise (Mandigo & Holt, 2006). In aiming to foster these type of experiences, Kretchmar (2000) suggests the role of the teacher becomes that of an ‘activity broker’ – aiming to plan and provide meaningful experiences with students. This requires an understanding of students’ needs and interests as well as local opportunities for accessing physical activities to help students find personal relevance and overcome barriers to participation.

Importantly, while the use of democratic principles is advocated for as a key principle of Meaningful PE, this is not to suggest that teachers should take an ‘anything goes’ mentality toward providing students with opportunities to exercise autonomy. A degree of developmental appropriateness is required. Indeed, opportunities to engage in co-construction should a) be
introduced to students slowly and b) increase gradually in relation to students’ age and development (Beni et al., 2019).

**Reflective Principles**

Reflection is a meaning-making process (Standal, 2015) in that students attach meaning to an experience when reflecting upon it (Dewey, 1916/1951). Thus, when aiming to prioritize meaningful experiences, there is value for both teachers and students to engage in reflection in and on action (Schön, 1983). O’Connor (2019) has shown the value of engaging students in both silent and narrative reflection in attaching meaning to their PE experiences. One of the ways teachers may facilitate reflection is through providing students with opportunities to set and reflect upon goals. These goals may include both short- and long-term endeavours and may be both personal and collective (Beni et al., 2019). Additional reflective activities may include, for example, having students keep a PE journal (Ní Chróinín et al., 2018); promoting partner, group, and class discussion; and sharing a list of features (both those outlined previously and others identified by students) on a poster in the classroom. Using features of meaningfulness (in age-appropriate terminology) to create a shared language with students provides the opportunity for teachers and students to reflect upon and discuss the quality of their experiences in PE and how they can move toward more meaningful experiences.

While some of the ideas behind the Meaningful PE approach have been tested in practice, initial research on the Meaningful PE approach has been small-scale – primarily individual case studies of teachers who have used a preliminary version of the approach in typically a single unit of work (Beni et al., 2018, 2019; Ní Chróinín et al., 2018; Vasily et al., 2021). There is a need to test the implementation of the Meaningful PE approach on a broader scale – with a larger group of teachers, working in publicly funded schools over a more expansive period of time.
Purpose of the Study

The primary purpose of this research is to take the Meaningful PE approach into the field to be implemented and tested by a small sample of teachers in elementary schools in Ireland and Canada. The aim of the research is to highlight teachers’ experiences of learning about and implementing the approach in their classrooms. This will include seeking to access teachers’ perspectives regarding such things as: the Meaningful PE approach itself (e.g., its rationale and structure), the potential of the approach to influence students’ learning and experiences in PE, and teachers’ experiences both of learning to implement the approach (through professional development [PD] experiences) and of the implementation process itself. Results of the research may inform how the approach is refined for future implementation with other teachers and their students in diverse contexts.

Along with understanding teachers’ experiences relating to the approach itself, an additional purpose of the research is to understand the specific factors that influence teachers’ learning about and implementation of the approach. This may include factors that facilitate and/or inhibit learning and implementation. For example, the particular PD approach utilized throughout the research, the level of support and resources afforded participants from administration and within the school setting, and teachers’ individual characteristics and personalities may have served as factors that influenced teachers’ learning about and implementation of the Meaningful PE approach.

Research Questions

Given the purpose of the research, the overarching research questions are:

- What are teachers’ experiences of the Meaningful PE approach and of implementing it in their classrooms with elementary school students?
What factors influence teachers’ implementation of Meaningful PE and in what ways?

What are teachers’ experiences of a PD initiative designed to support their learning about and implementation of the Meaningful PE approach? What strategies are most effective for supporting teachers in implementing Meaningful PE over time?

What are my experiences of becoming a facilitator of PD? How do these experiences inform the enactment of my pedagogy of facilitation of teachers’ PD and shape my identity as a facilitator?

Significance of the Research

This research has the potential to make a significant contribution to the current body of literature in PE in several ways. First, there is a need to develop, share, and test pedagogies that facilitate personally meaningful experiences in elementary PE (Beni et al., 2017). The Meaningful PE approach is designed as an accessible and coherent approach to support teachers in prioritizing meaningful experiences for their students. This research will be the first to test the Meaningful PE approach with a group of teachers over a sustained period of time (across two school years). Second, in spite of PE teachers showing a willingness to change their practice, the implementation of innovative approaches in PE has rarely resulted in lasting change (Goodyear & Casey, 2015). This research focuses specifically on the implementation and teacher learning processes with an aim to understand the factors that facilitate and inhibit teachers’ ability to implement an innovation over the two-year period of the research. Third, while teachers’ PD in PE through communities of practice has become an increasingly common topic of research, less is known about the process of facilitating such a community, particularly with a focus on
becoming a facilitator of a community of practice (CoP) (Parker et al., 2021). Given the crucial role of the facilitator in introducing, guiding, and supporting teachers through their PD experiences (Gonçalves et al., 2020), particularly in relation to learning about pedagogical innovations (Goodyear & Casey, 2015), sharing and understanding the experiences of facilitators may lead to the development of general or specific principles that can guide facilitators’ practices. Through the use of Self-Study of Teacher Education Practice methodology, I aim to share my experience of that process through this research.

Definition of Central Terms

The following terms used extensively throughout the document are introduced and defined here.

**Actor Orientation**

Actor orientation implies an approach to implementation research that begins with an assumption that implementation is a non-linear process and that adaptations to innovations may be necessary to implement them within varying contexts (Lee & Choi, 2015). An actor orientation is aimed at describing the how and why of teachers’ implementation decisions, focusing on the ways teachers interpret various characteristics of an innovation and the consequences those interpretations hold for implementation (Century & Cassata, 2016). Thus, there is an intention to understand the teacher’s perspective from an interpretive, rather than judgemental, stance (Penuel et al., 2014).

**Communities of Practice**

The concept of communities of practice (CoPs) positions learning as social participation, where educational processes based on actual participation are viewed as more “epistemologically correct” as they effectively match knowledge and learning (Wenger, 1998, p. 102). Thus,
learning is viewed as a process that involves a) “mutual engagement” where one identifies as a member of the community; b) “joint enterprise” where goals are shared by members of the community; and c) “a shared repertoire” of subjects or materials that community members hold in common (Yoon & Armour, 2017). However, mutual engagement or collaboration alone does not necessarily result in a CoP (Wenger, 1998). CoPs are “meaningful, purposeful, and revolve around authentic tasks” (Parker et al., 2010, p. 338) and must be intentionally facilitated (Hadar & Brody, 2010). Referring specifically to CoPs amongst teachers, O’Sullivan (2007) suggests they are “places and spaces where [PE] teachers have the opportunity to engage in worthwhile conversations and actions about the nature and direction of their work with children and youth,” and, “structured gatherings that allow for informal and formal learning to take place” (p. 11).

**Elementary/Primary**

For the purposes of this research, the terms ‘elementary’ and ‘primary’ are used to refer to students ranging from Kindergarten through to Grade Eight (approximately four to fourteen years of age).

**PD Facilitator/Provider**

The terms ‘facilitator’ and ‘provider’ are often used to refer to individuals who are responsible for facilitating PD opportunities for in-service teachers. This role has traditionally been poorly defined in PD, in that it may encompass “a wide variety of practitioners, all focused on offering teachers learning opportunities to improve their professional practice” (Morel & Coburn, 2019, p. 248). These practitioners may come from within or beyond the school (e.g. universities, non-profit organizations, for-profit organizations) (Morel & Coburn, 2019). Parker et al., (2012) suggest that the role of the facilitator is to “guide rather than direct, question rather than show the way, and listen rather than tell…not to impose vision, but listen and hear, gently
push and pull” (p. 324). The term facilitator is used here in an effort to capture the importance of facilitating, rather than directing, teachers’ learning.

**Innovation**

Century and Cassata (2016) define innovations as “programs, interventions, technologies, processes, approaches, methods, strategies, or policies that involve a change (e.g., in behavior or practice) for the individuals (end users) enacting them” (p. 170). Importantly, an innovation must carry with it for the end user a perception of novelty, requiring some type of change (Rogers, 2003). An innovation may range from simple to complex and is often the focus of implementation research (Century & Cassata, 2016). In the context of this research, the Meaningful PE approach is considered to be a pedagogical innovation.

**Implementation Research**

I hold to Century and Cassata’s (2016) definition of implementation research as “systematic inquiry regarding innovations enacted in controlled settings or in ordinary practice, the factors that influence innovation enactment, and the relationships between innovations, influential factors, and outcomes” (p. 170). Importantly, implementation research, as distinct from ‘diffusion research’ is less about the process of reaching end users and more focused on the what, why, and how of the process of implementation once the innovation is in the end users’ hands (Dearing & Kee, 2012). Within the field of education, implementation research is focused on the role of interventions and theories to bring about lasting change and seeks to answer questions such as: “What are we doing? Is it working? For whom? Where? When? How? And, Why?” (Century & Cassata, 2016, p.169).

**Meaningful Experiences**

While every experience may have meaning, this is distinct from those experiences which
might be thought of as meaningful (Kretchmar, 2007). A meaningful experience may be conceived of as that which is “full of personal significance” (Kretchmar, 2007, p. 382). As Metheny (1968) asserts a “conception becomes meaningful as we seize upon it, take it into ourselves, and become involved with it. This feeling of involvement is a symptom of what the idea means to us, or how we find it meaningful or significant” (p. 5). Such value is attached to an experience as a result of “a transaction taking place” (Dewey, 1938/1997, p. 44) between an individual and aspects of the environment in relation to culture (Bruner, 1990), where individuals make connections to “something that reaches beyond the actual experience, linking it to something else” (Leontiev, 2013, p. 462).

*Physical Education*

Offering a definition of PE is not a straightforward task in that, while there has tended to be agreement over what PE is not, establishing specifically what it is and its intended outcomes has been much more contested (Kirk, 2010). Indeed, scholars in the field have expressed concerns over an inability to clearly articulate what PE is and why it matters (Lawson, 2007; Lorusso & Richardson, 2018). In recent years, there have been calls for a refocusing on the educational component of PE; from this perspective, PE can be conceived of as “education of the learner to understand, perform, and value physical activity” (Ennis, 2017, p. 2). Importantly, Quennerstedt (2018) asserts it is necessary to place an emphasis on both the ‘P’ and ‘E’ (i.e. the physical and educational components) of PE. From this perspective, PE involves a combination of theoretical knowledge (the ‘E’) and movement (the ‘P’). As Arnold (1979) asserts, PE provides opportunities for students to learn in, about and through movement.

*Teacher Professional Development*

I conceive of PD as including a variety of learning opportunities for teachers related to
and designed to improve the quality of their own teaching practice (Parker & Patton, 2016; Darling-Hammond & McLaughlin, 2011). This encompasses experiences in which teachers engage to deepen their understanding of and learn about both teaching and learning (their own and that of their students). These experiences may be either voluntary or mandated, formal or informal, and undertaken individually or as collaborative initiatives (Desimone, 2011; Patton et al., 2015). When PD is effective, it “results in changes to teacher knowledge and practices, and improvements in student learning outcomes” (Darling-Hammond et al., 2017, p. 2).

Organisation of the Document

In this chapter I highlight the importance of prioritising meaningfulness in PE and introduce the Meaningful PE approach as a potential means to this end. I outline how this relates to my research and situate my research questions within the topic. In Chapter II, I review the current body of literature on educational implementation research and teachers’ implementation of existing pedagogical innovations (approaches and models) for PE instruction. In addition, I review the literature on teachers’ PD in education in general and in PE more specifically, including current forms of PD, features of effective PD initiatives, and the use of CoPs to promote teacher learning. In Chapter III, I outline the conceptual framework by which the research was guided as well as the methodology and methods used to conduct the research. Chapters IV through VII contain the four empirical research articles that outline the findings of this research. Finally, Chapter VIII contains a discussion of the key findings from and implications of the study.

Chapter Summary

With PE constituting a primary intervention site for promoting lifelong participation in physical activity (Moore & Fry, 2017), numerous scholars have highlighted the need for an
approach to PE instruction that prioritizes an emphasis on meaningful experiences (Arnold, 1979; Kretchmar, 2000; Ennis, 2017). However, little is known about how teachers may go about this. Following preliminary work outlining features of meaningful experiences in PE and their potential role to guide planning and teaching decisions (Beni et al., 2017; Beni et al., 2018; Beni et al., 2019; Ní Chróinín et al., 2018), the Meaningful PE approach has been designed to offer teachers a framework to guide pedagogical decision-making when aiming to prioritize meaningful experiences. However, the use of this approach requires testing and refinement with numerous teachers in various contexts. In this chapter I have introduced the purpose of the research to help fill this gap. In the following chapter I will review theoretical and empirical research literature in order to situate the research in that conducted by others.
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Communities and Physical Education Professional Development: A Scoping Review.

Symposium presented at the *International Association for Physical Education in Higher Education International Conference*. Online. June 8-10, 2021.


**CHAPTER II: REVIEW OF LITERATURE**

As outlined in Chapter I, promoting meaningfulness has been identified as one of three essential elements that enable transformative and positive experiences for learners in twenty-first century physical education (PE) (Ennis, 2017). Consequently, there is a need for teachers to learn how to teach this way. The Meaningful PE approach provides a framework to help teachers make decisions about prioritising meaningfulness in an organized, systematic and accessible way.
In this chapter I aim to review two relevant bodies of literature that stem directly from the research purpose and questions. First, I review the literature on implementation research in education and teachers’ implementation of innovations in PE. Second, I review the current body of literature on teachers’ professional development (PD) in education broadly and in PE more specifically. In particular, I look at the potential of a community of practice (CoP) to help teachers implement innovative teaching approaches in their PE classrooms.

**Implementation Research**

Implementation research involves “systematic inquiry regarding innovations enacted in controlled settings or in ordinary practice, the factors that influence innovation enactment, and the relationships between innovations, influential factors, and outcomes” (Century & Cassata, 2016, p. 170). Implementation research is aimed at answering the questions: ‘What are we doing? Is it working? For whom? Where? When? How? And, Why?’ (Century & Cassata, 2016, p. 170). Implementation research is not a methodology or a set of methodologies or theoretical approaches; it is an area of inquiry including the study of implementation of innovations, conditions and contexts that affect implementation, and the resultant outcomes (Durlak, 2010). Century and Cassata (2016, p.174-176) highlight five primary reasons for conducting implementation research: it (1) asks questions that inform innovation design and development, (2) pursues questions about whether the innovation achieves its desired outcomes, (3) asks questions that examine why the innovation works, (4) stems from the desire to improve the innovation and thus the intended outcomes, and (5) informs theory development.

Within education, implementation research holds potential for the improvement of educational practice. However, traditional forms of implementation research have tended to be quite narrow in their focus. For instance, Century and Cassata (2016) suggest that much early
implementation research focused exclusively on fidelity of implementation, paying little
attention to contexts and conditions that may affect the implementation of innovations. Further, it
was not until the early 1970’s that there was an acknowledgement in the study of implementation
research that there was a need to test beyond an end user’s decision to adopt an innovation (i.e.
that deciding to adopt did not necessarily translate into adoption in practice) (Short, 1973).
Roger’s (2003) Diffusion of Innovations (DOI) model, for example, has been used extensively in
studies of innovation adoption and has been shown to help PE teachers “problem solve and think
through barriers or roadblocks to innovations in PE” (Stephenson et al., 2018, p. 9). However,
this model focuses primarily on the factors that influence end users’ decisions to adopt an
innovation rather than the process of translating that decision into practice. This highlights an
important distinction between ‘dissemination science’ which tends to focus on the decision to
adopt an innovation, and implementation research which also asks questions about the what,
how, and why of the process of adopting an innovation (Dearing and Kee, 2012).

Often, implementation research in PE, even in recent years, has tended to focus on
barriers and facilitators to the implementation process. For instance, studies have highlighted the
challenges and facilitators pre-service teachers face when learning to teach through an activist
approach (Luguetti & Oliver, 2020) and non-linear pedagogy in PE (Moy et al., 2019). While
these types of studies have led to significant contributions, there remains a need to consider a
broader range of factors that influence PE teachers’ use of innovations. Century & Cassata
(2016) suggest modern approaches to implementation research acknowledge a) the on-the-
ground enactment of an innovation, including the participation and role of the end user, b) the
conditions and contexts that affect implementation, and c) the aligned outcomes with the
innovation and its components. This type of implementation research begins with a willingness
to disrupt the traditional focus on fidelity of innovation enactment.

**Adaptation Versus Fidelity**

There are two primary perspectives from which implementation research is conducted – pro-fidelity and pro-adaptation views (Century & Cassata, 2016). The pro-fidelity view asserts that once an innovation has been shown to be beneficial, it should not be altered or varied in future implementations. In other words, implementation is viewed as a linear process within which there is little room for the teacher to deviate from that which has been recommended by the designers of the innovation (Snyder et al., 1992). Penuel et al. (2014) highlight the use of viewing fidelity as an ‘integrity’ approach to implementation research in education which focuses on teachers’ adherence to principles of an innovation and guidelines regarding its intended use. A pro-fidelity approach has often been advocated for in the implementation of innovations in PE through models-based practice, where models often include ‘non-negotiable features’ (Hastie & Casey, 2014) or ‘benchmarks’ (Metzler, 2011) that prescribe how a model should be implemented by teachers.

As an alternative to integrity approaches, advocates of the pro-adaptation approach assert that implementation is not a linear process and that adaptations are necessary in order to implement innovations within varying contexts (Lee & Choi, 2015). Indeed, Buxton et al. (2015) argue for the reframing of the notion of fidelity to the idea of ‘multiplicities of enactment.’ Penuel et al. (2014) contend that there is an ‘inevitable’ gap between how curriculum (or innovation) designers envision materials being implemented and the ways teachers make use of such tools in their classrooms. Indeed, adaptation is arguably a natural part of the implementation process and thus should be planned for (Dearing, 2009). Further, Kumpfer et al. (2002) warn against culturally insensitive implementation of interventions that may result from an over-
emphasis on fidelity and a lack of willingness to consider context within the implementation process. Pro-adaptation implementation researchers view adaptations as holding potential to add effective strategies, promote contextual relevance, and highlight which elements of an innovation are in fact vital (Century & Cassata, 2016). In contrast to the aforementioned ‘integrity’ approach, an ‘actor-oriented’ approach to implementation research views the process from an insider’s perspective – taking an ‘interpretive’ rather than ‘judgemental’ stance (Penuel et al., 2014). Within educational research, this type of analysis “begins with a premise that implementing new materials presents a situation that requires teachers to draw connections between previously encountered curricular goals and structures and the goals of new curriculum” (or innovations) (Penuel et al., 2014, p. 752). Within PE, some scholars have highlighted the need for a greater emphasis on pro-adaptation approaches to teachers’ implementation of innovations, suggesting an over-emphasis on fidelity has resulted in teachers being expected to reproduce benchmarks that were designed without any knowledge of the specific school, students, and context in which they would be used (Landi et al., 2016; Thorburn, 2021). For example, Harvey et al. (2020) suggest that teachers using Sport Education are often faced with contextual challenges that lead to a more pragmatic (and thus adapted) version of the model being implemented in practice.

The approach taken to implementation research – pro-fidelity or pro-adaptation – has serious implications for both the research process itself and for the design of the innovation. Researchers and innovation-designers who advocate for a pro-adaptation approach are resistant to the notion of developing innovations from an ‘outsider’s perspective’ (Penuel et al., 2014) and thus tend to engage in a process of co-creation – collaboratively designing innovations with the end user, allowing multiple stakeholders to be a part of the process of making productive
adaptations (DeBarger et al., 2013). Researchers taking a pro-fidelity approach begin with an existing, externally-created innovation and study the process of ‘knowledge uptake’ by end users (Century & Cassata, 2016). A ‘fidelity’ versus ‘adaptation’ perspective sets the stage for implementation research and how it will be conducted.

**Attributes of the Innovation**

Innovations may be defined as “programs, interventions, technologies, processes, approaches, methods, strategies, or policies that involve a change (e.g., in behaviour or practice) for the individuals (end users) enacting them” (Century & Cassata, 2016, p. 170). While an innovation may take a wide variety of forms, importantly, it brings with it a perception of novelty or change for the end user (Stephenson et al., 2018). The specific attributes of an innovation are influential in the ways it is implemented. These attributes can be categorized in several ways.

First, innovation attributes can be categorized as *actual* and *perceived*; actual attributes are considered ‘objective’ while perceived attributes are open to ‘subjective’ interpretation from the end user (Dearing, 2009). Objective attributes may include, for example, the number of components or cost of the innovation. Subjective judgements may include, for example, relative advantage, simplicity, and compatibility, but are likely to vary with different end users (Dearing, 2009). For instance, within Siedentop’s (1994) Sport Education model, the incorporation of seasons and affiliation (through teams) may be considered objective traits, while teachers’ perceptions of how this looks in practice have been shown to differ based on their subjective interpretations of the purposes and outcomes of the model (Harvey et al., 2020).

Second, Waltz et al. (1993) suggest that attributes of innovations should also be classified by researchers as either ‘unique’ or ‘necessary but not unique’. This requires the researcher to
identify areas of the innovation that are novel while also acknowledging inevitable overlap with other innovations or approaches. Making these distinctions allows end users to situate the innovation relative to that with which they are already familiar. For example, while ‘individual accountability’ is considered a critical element of the Cooperative Learning model (Dyson & Casey, 2016), it may be considered necessary but not unique in that Hellison’s (2011) Teaching Personal and Social Responsibility model also includes an emphasis on taking responsibility and being accountable for oneself and one’s actions.

Lastly, innovation attributes should be classified as either core or related components (Cassata & Century, 2016; Hall & Loucks, 1978). This allows end users to determine which components are considered to be foundational to allowing the innovation to function toward its intended end. Without clearly articulating the level of classification of attributes, it may be difficult for the end user to understand their purpose and necessity. For instance, the inclusion of seasons, affiliation, formal competition, festivity, culminating events, and records are acknowledged to be core elements of the Sport Education model (Casy & Kirk, 2020). However, some studies have shown that teachers’ perceptions of the necessity of these traits may vary. For instance, some teachers who suggest Sport Education is what they do in PE also acknowledge that they have never hosted a culminating event (Harvey et al., 2020). Thus, there is a need to ensure core components are clearly communicated to teachers as such to ensure their incorporation. While the innovation itself and its associated attributes are critical elements to consider in implementation research, equally important is the role of the end user.

**Attributes of the End User: The Teacher Change Process**

Attributes of end users may be classified in two main categories: those that are related to the innovation and those that exist independent of it (Century & Cassata, 2016). For example, the
implementation process may be influenced by a teacher’s current knowledge and skill relative to the innovation but also by their willingness to take risks more generally. A teacher’s previous experiences can be expected to play an influential role in the implementation process (Penuel et al., 2014).

Given teachers’ unique combinations of characteristics that are both related to and separate from the innovation itself, implementing innovations in one’s classroom often requires a conceptual shift on the part of the teacher (Casey, 2014). For example, in studying a PE teacher learning to use cooperative learning with four elementary classes in the U.S., Dyson (2002) found that the process pushed the teacher beyond her comfort zone as she entered ‘uncharted territory’. This necessitated a change in the way she thought about teaching and left her feeling the need for a great deal of support and guidance. Similarly, in follow-up to their study of forty-four PE teachers engaging in an online PD initiative, Healy et al. (2020) highlighted the need for PD initiatives to not only present an innovation to teachers but also to focus explicitly on attitude change toward the specific innovation being presented.

While it is understandable that a shift in mindset and/or attitude is likely to be necessary to implement a substantial change in one’s practice, it also seems critical to approach this task with an understanding of and sensitivity toward teachers’ needs and concerns regarding the difficult process of implementing innovative approaches. Knowles and Hord (1981) suggest teachers’ concerns regarding implementation are often three-fold: self-concerns (regarding their own ability to perform), task concerns (what the innovation will require) and impact concerns (how the change will influence student learning). Any PD initiative aimed at helping teachers change their attitude or mindset toward an approach should aim to help alleviate these types of concerns. Indeed, Zach and Inglis (2013) highlight that the ambiguous and uncertain nature of
change can make the process quite difficult for teachers. To mitigate some of this difficulty, they suggest the need for appropriate preparation for the change before it takes place. Their work with elementary and middle-school PE teachers has shown that teachers tend to display a positive attitude toward the change process when they perceive that implementation has a positive impact on student outcomes. Thus, clearly outlining the potential for student outcomes, and supporting teachers in reaching those goals, is critical in helping teachers navigate the change process when implementing innovative educational approaches (Guskey, 2002).

**Additional Factors that Influence Implementation**

In addition to the innovation as well as the characteristics of the end user, several other factors may influence the implementation process. Indeed, Zhu et al. (2011) contend that, while a positive attitude toward change is essential, it is insufficient to result in curricular innovation. For instance, the organisation and the external environment in which implementation occur influence the process as well (Durlak, 2010). At the organizational and environmental levels there may be barriers and/or facilitators of implementation related to people (i.e. the role that others play in the process) and those that are characteristic of the context and setting.

**The Role of Others.** There are several groups of people who may play a significant role in teachers’ willingness and ability to implement innovative educational strategies. First, teachers need support when implementing innovations: “there is consensus within the field [of implementation research] that deliberate, planned support for innovation users and their organisations is vital to change efforts” (Century & Cassata, 2016, p. 186). This support may come in several forms, for example, planning, provision of resources, PD and mentoring and may involve fellow teachers, researchers and school administration. The need for strong support from others has been documented through several studies with PE teachers implementing
innovative approaches (e.g. Lee & Choi, 2015; Zach & Inglis, 2013; & Zhu et al. 2011). For instance, Zach and Inglis (2013) highlight the critical role of administration, suggesting, “change is led by principals who have strong pedagogical leadership skills, a clear educational vision, complete commitment to the institution’s goals and values, and extensive involvement in the change and improvement processes” (p. 357).

Perhaps unsurprisingly, students also play a critical role in the implementation process. Given that students are the recipients of the changes teachers make to their teaching practice, their willingness to accept an innovation (or not) will have a significant impact upon the classroom environment. Ignoring the central role of students is likely to cause education reforms to fall short (Zhu et al., 2011). Further, students have been identified as key educational stakeholders whose views and perspectives matter (Ní Chróinín et al., 2020). In the same way that change can be uncomfortable for teachers, it may similarly push students beyond their comfort zones, or at the least, outside of the notion of ‘PE’ that they have been socialized into. For instance, a study of students whose teachers spent a year implementing the Teaching Personal and Social Responsibility model showed that students themselves were initially quite resistant to the approach, expressing discomfort over the change it required of them (Lee & Choi, 2015). Teachers in this study reported that support from fellow teachers was critical to helping them work through these difficulties with students. Thus, support (or lack thereof) from others involved in the implementation process is a critical factor to be considered in implementation research.

The Role of Context and Setting. In addition to the role of others, several factors within the context or setting in which the innovation is being implemented may play a role in the implementation process. One of the primary factors affecting implementation is time. When
beginning to implement something innovative, it should be anticipated that it will require an investment of teachers’ time and effort (Dyson, 2002). Teachers need time to prepare in advance and during the implementation process. In addition, in order to achieve proper outcome goals, teachers and students need adequate weekly instructional time (Lee and Choi, 2015; Zhu et al., 2011) as well as long-term support as they work toward lasting change, which may take upwards of two years (Dyson, 2002). Thus, time plays a significant role in several ways. For example, in a study involving three PE teachers, three school sport coaches, and 32 of their students/athletes at a Singaporean primary school, Koh et al. (2016) found that the most commonly cited barrier to implementation of a values training program was time. These teachers and youth sport coaches felt that the six-to-eight-week duration of the study was insufficient to generate positive results in terms of helping students effectively transfer values. Teachers and coaches also felt the need for more time to be devoted to the professional learning experience that prepared them to implement the approach with their students, in addition to the need for more planning and preparation time for lessons that would be taught using the unfamiliar approach. Students themselves also pointed to time as a constraint, suggesting that their teachers’ implementation of the new approach resulted in less movement time. They wanted time to reflect upon the role of values while still having plenty of time to be active in PE. In addition to time, other characteristics of the context/setting may influence the implementation process. This may include, for example, scheduling conflicts and limited space, adequate resources, and consideration of class sizes and teaching loads (Zhu et al., 2011).

Evidently there are several factors that have the potential to influence the implementation process including, the innovation itself, the characteristics of the end user, the role that others play in the process, along with several contextual factors within the setting in which the
innovation is being implemented. A researcher’s perspective on these factors, along with an orientation toward a fidelity versus pro-adaptation approach, will all play an influential role in the way implementation research is conducted.

**Implementation of Innovations in Physical Education**

In recent years, innovations in PE have largely taken the form of models, which are designed to serve as ‘blue-prints,’ providing a framework upon which teachers may organize content, sequence learning activities, and structure their practices (Hastie & Casey, 2014; Landi et al., 2016). Proposed benefits of using models in PE instruction include, for example, the provision of an overall plan to guide teaching and learning, clarification of learning domain priorities, and promotion of a technical language for teachers (Metzler, 2011). Given that models are designed to serve as a plan of action that leads to specific learning outcomes, there is some consensus that they should be implemented with a degree of adherence to their design, or what is often referred to as ‘model fidelity’ (Hastie & Casey, 2014). Thus, models generally include the outlining of ‘benchmarks’ (Metzler, 2011) or ‘nonnegotiable features’ (Hastie & Casey, 2014) that act as guides for how teachers should teach and how students should learn.

While a model has a fairly rigid set of required elements (sometimes referred to as benchmark or non-negotiable elements) both for its development and implementation, other innovative approaches to PE instruction may be thought of more broadly and without the same rigidity. For example, in their articulation of a radical revisioning of PE for girls, Oliver and Kirk (2015) favor the use of the term ‘activist approach’ rather than model, through which they articulate provisional key features intended to help guide teachers’ pedagogical decision making.

**Teachers’ Implementation of Innovations in Physical Education.** In spite of numerous models and approaches having been developed to address a variety of needs in PE, there remains
concern that these have not been taken up by teachers (Bechtel & O’Sullivan, 2007). While sustained pedagogical change through the implementation of models is possible for teachers, this requires a conceptual shift in their perceptions of PE (Casey, 2014), as demonstrated in relation to, for example, the Cooperative Learning model (Casey and Dyson, 2009; Dyson et al., 2010) and Teaching Games for Understanding (Barrett and Turner, 2000). Unfortunately, a conceptual shift of this nature can be difficult for teachers, some of whom, in spite of experiencing some level of success, subsequently return to their original approach to teaching (Casey, 2014). For example, McCaughtry et al. (2004) found that when teachers learning to use the Sport Education model struggled with tactical game play instruction, they often “retreated to the safety of” (p. 141) more traditional teaching approaches. Teachers in various studies have also reported a decrease in self-esteem as a result of errors, feelings of frustration and discomfort, and feeling like beginning teachers again. For instance, Dyson (2002) writes of one teacher learning to use the Cooperative Learning model who felt the process pushed her beyond her comfort zone leading to feelings of anxiety and a lack of control. Further, at times, even when tangible changes in students’ effort and behaviour are noticeable following implementation of a model, teachers are hesitant to attribute these changes to the use of the model (Walsh et al., 2010). Casey (2014) highlights that “practitioners need to see proof from other schools through practice undertaken by other teachers that show that [models] works” (p. 27). It seems then a first step in teachers’ adoption of innovations is to have them believe in the value of the approach and in their ability to implement it.

It is acknowledged that learning to implement innovations requires a substantial investment of time and effort on the part of teachers. For instance, in a study by Dyson (2002) a teacher participant needed over two years to feel comfortable utilising the Cooperative Learning
model in her PE practice. This highlights the need for PD programs to provide in-service teachers with ongoing support they need to make the conceptual shift from a traditional instructional approach to more innovative teaching practices. One of the ways this may be done is through collaboration between universities and teachers. Indeed, collaboration with universities has been shown to help dissolve demotivating factors that keep teachers from engaging with innovative teaching practices (Brooker et al., 2000). The need for teachers to be supported in implementing innovations highlights the need for well-designed and effective PD opportunities to introduce and stay with teachers who are using innovations, and in ways that pay attention to the many complex factors that influence implementation (Century & Cassata, 2016). However, this does not necessarily imply that more PD initiatives are the solution. On the contrary, Armour and Yelling (2007) contend that PD in PE is in dire need of change.

**Teachers’ Professional Development**

PD of teachers in general and in PE more specifically has grown as a topic of interest in the research community in recent years (Makopoulou & Armour, 2011a, 2011b; Bowes & Tinning, 2015, Bechtel & O’Sullivan, 2006). Increased attention on PD programs is largely attributable to the educational standards movement, professional organisations, and a push for research focused on teaching (Bechtel & O’Sullivan, 2006; Osmond-Johnson et al., 2019). Regardless of where this increased attention has originated from, Armour et al. (2010) contend for its importance suggesting that “teachers’ career-long professional learning matters. Why? Because over the course of a career, each individual teacher has the potential to make positive – or negative – impacts on thousands of pupils. It is a point worth emphasising” (p. 37). Indeed, research suggests improvements in teachers’ learning have the potential to influence the quality of their students’ learning (Fishman et al., 2003). Consequently, PD has come to be seen as a sort
of ‘panacea’ to solve a myriad of educational issues (Armour & Yelling, 2007). Thus, in many countries, there is a formal, professional expectation for teachers to engage in PD (Makopoulou & Armour, 2011b). Yet, Patton et al. (2015) contend that for teachers, PD is often “both an obligation and an opportunity, serving as a forum for change and for confirmation of current practice” (p. 26). However, many questions persist around whether current forms of PD move beyond mere obligation to become meaningful opportunities for teachers’ learning. An exploration of these questions must first begin with an understanding of what PD is.

**Defining Professional Development**

Establishing a conclusive definition of what PD may include can be a challenging task as there are many definitions from which to choose. What is generally agreed upon is that PD should be a continuous process over the duration of one’s career (Armour et al., 2017; Desimone, 2011; Parker & Patton, 2016). Indeed, Knight (2002) asserts “continuing professional development is needed because initial teacher education cannot contain all of the prepositional knowledge that is needed and certainly not that procedural ‘know how’ knowledge which grows in practice” (p. 230). Given that teachers practice for many years, the notion of *continuous* PD is critical (Armour & Yelling, 2007).

Darling-Hammond and McLaughlin (1996) suggest PD should focus on “deepening teachers’ understanding about the teaching/learning process and the students they teach” (p. 203). This process begins with teacher education and continues across the duration of a teacher’s career. PD should include a variety of learning opportunities for teachers related to and designed to improve the quality of their own practice (Parker & Patton, 2016; Darling-Hammond & McLaughlin, 2011). In other words, PD is conceived of here as those experiences in which teachers engage to deepen their understanding of and learn about both teaching and learning
(their own and that of their students). These experiences may be either voluntary or mandated by school administration, involving formal or informal development opportunities, and may be engaged in individually or as collaborative initiatives (Desimone, 2011; Patton et al., 2015).

**Professional Development in Physical Education**

In 1999, Ward and Doutis argued that little was known about the effectiveness of in-service PD initiatives in PE because of a lack of research on the topic. Yet, in more recent years, an extensive body of literature on PE-PD has emerged with studies examining a range from beginning to experienced teachers at both the primary and secondary levels (Brown, 2011). Indeed, studies in PE-PD have covered a wide range of topics including, for example, teachers’ efficacy in using technology in PE (Martin et al. 2008), the role of PD in teachers’ use of standards-based assessment and achievement-focused grading (Michael et al. 2016), the use of a CoP as a form of professional learning for PE teachers learning to implement an innovative teaching approach (Goodyear & Casey, 2015), and PE teachers’ attitudes toward inclusion and teaching students with disabilities following a PD workshop (Haegele et al., 2018).

According to Bechtel and O’Sullivan (2006), research on PE-PD has focused primarily on three aspects of the process of professional learning including: a) contextual factors, teacher support, and workplace conditions, b) impact of teachers’ dispositions and beliefs on curricular change, and c) the scope and effectiveness of PD. Many of these same themes have predominated the general education PD literature as well.

**Current Forms of Professional Development**

While there has been a surge of interest in the topic of PD in the literature, there has also been extensive criticism regarding its predominant forms (Bechtel & O’Sullivan, 2006). Though the purpose of PD is arguably teachers’ professional learning, Darling-Hammond et al. (2017)
suggest PD initiatives do not always meet this end, despite the best of intentions. Indeed, current forms of PD available to teachers have been described as “woefully inadequate” (Borko, 2004, p. 3). Given the previously outlined definitions of PD and the intention that these programs will help teachers make continual progress in their learning and teaching practice, Armour et al. (2012) suggest current forms of PD are not suited to this task. Many concerns about the current state-of-affairs in PD may be grouped within three general areas: decontextualized learning, teachers as passive learners, and insufficient focus on student learning.

**Decontextualized Learning.** Teachers’ PD initiatives have traditionally consisted of one-day, off-site courses aimed at helping teachers improve their teaching and student learning (Goodyear et al. 2013). However, these types of programs have often failed to produce results and have lacked relevance for teachers, in many cases resulting in their discontinued participation in PD (Goodyear et al., 2013; Makopoulou & Armour, 2011a). According to Brown (2011), research has shown these types of experiences often lack meaning for participants due to the decontextualized format in which they are conducted. Since teachers teach in classrooms, it makes little sense to hold off-site PD workshops in contexts that are “disconnected in several ways from the teacher’s world” (Brown, 2011, p. 24). Patton et al. (2015) suggest such programs that are removed from both schools and students and often focused on topics that do not relate to either teacher or student learning are unable “to result in either a change in teacher behaviour or an increase in student performance” (p. 27).

Ko et al. (2006) studied the experiences of five PE teachers who were introduced to the Sport Education teaching model through a one-day, off-site workshop and were then observed teaching a Sport Education unit to their students. These teachers struggled to implement the model and subsequently returned to a teacher-directed instructional style that was inconsistent
with the intended outcomes of the model. This study serves as one example of the need for contextualized PD for PE teachers.

**Teachers as Passive Learners.** Current forms of teacher PD have required little input from teachers and have been criticized as being passive (Parker & Patton, 2016). Bechtel and O’Sullivan (2006) argue that teachers are not interested in short PD initiatives designed by experts who invest little effort into understanding and connecting the information to the context of the teacher’s classroom. Consequently, PD is often viewed as working on rather than with teachers (Cooper et al., 2021). Armour et al. (2017) argue that “teachers have demonstrated time and again that they are able to resist and reject the learning outcomes that others plan for them” (p. 800). This calls into question the effectiveness of designing PD initiatives without the input of teachers. With the rising prevalence of and support for student-centred pedagogy in the classroom, Alfrey et al. (2017) contend that it is “inappropriate to expect teachers to listen and respond to student voice when they themselves often feel muted” (p. 109). While traditional, workshop-based approaches “sustain [PD] providers and fill teachers’ CVs”, they also “help to ensure that, in practice, very little changes and, importantly, that teachers remain passive and dependent” (Armour, 2010, p. 5).

In their study involving 67 PE teachers in Greece, Makopoulou and Armour (2011a) found that 10 of the teachers spoke critically of the ‘passivity’ of what they considered to be a top-down approach to PD, suggesting teachers are expected to sit and listen and are often given very few, if any, opportunities to be actively involved in the learning process. Some teachers expressed feeling victimized by a system that ‘promotes passivity’ and leaves no room for teachers to be creative or innovative, expressing interest instead in a dialogue-based approach affording a balance between knowledge-transmission and knowledge-generation. This study
serves as one example of the need to involve teachers as active learners in their own PD.

**Insufficient Focus on Student Learning.** In addition to concerns over teachers’ learning through PD, a lack of focus on resultant student learning has also been identified as a problem. Given that the ultimate aim of teachers’ PD is an improvement in student learning, it seems important that this be a prioritized objective of PD activities and initiatives. Yet Armour and Yelling (2007) argue that current forms of PD are structured around a long trail that relies upon external providers and activities to foster teacher learning that ideally translates into student learning. To make matters worse, the intended goal of these externally designed PD initiatives is often introducing teachers to a new practice with little focus on how it might impact students’ learning (Parker & Patton, 2016; Yoon & Armour, 2017). Failing to consider and communicate student learning objectives with teachers in PD remains a problem of the traditional approach.

Considering these overarching concerns regarding current forms of PD, changes are arguably required. Patton et al. (2015) contend that “currently, professional development most often does not meet the needs of teachers or learners. To continue in the same vein is much like Einstein’s notion of insanity— doing the same thing over and over again and expecting different results” (p. 39). While PD is evidently viewed by many as an important pursuit, finding a design that accomplishes the intended goals has proven difficult yet remains a priority (Armour et al., 2017). Consequently, much research in PD in recent years has focused on this elusive question of what constitutes ‘effective’ PD.

**Effective Professional Development**

Identifying core features of effective PD can be a challenging task given that the effectiveness of PD initiatives can be influenced by factors at both the school and system levels including, for example, available resources and policies (Darling-Hammond et al., 2017), the
specific outcomes being measured (Penuel et al., 2007), and the stage of a teacher’s career (Guskey, 1995). Parker and Patton (2016) contend that viewpoints on effectiveness of PD vary based on the purpose, context, and school culture within which the PD will take place. While some advocate for a focus on teachers’ practice, others on teacher engagement, and others still on student learning, Parker and Patton (2016) argue effective PD can be centred around all three of these factors simultaneously. Darling-Hammond et al. (2017) define effective PD as “structured professional learning that results in changes to teacher knowledge and practices, and improvements in student learning outcomes” (p. 2). In other words, effective PD can be simply defined as that which accomplishes what it is set out to – cause changes in teachers’ practice that result in student learning.

In an effort to understand how to design and deliver effective PD initiatives for teachers, in recent years there has been an emphasis on identifying characteristics of effective PD, based on the literature around what has and has not worked to promote teachers’ professional learning and corresponding student learning outcomes. Some consensus has been established regarding the characteristics of effective, high-quality PD for teachers (Darling-Hammond et al., 2017). Several of these characteristics (drawn from Desimone, 2009; Darling-Hammond et al., 2017; Parker & Patton, 2016; and Hunziker, 2011) are outlined in Table 2.1.

Table 2.1

Features of Effective Professional Development

<table>
<thead>
<tr>
<th>Effective PD…</th>
<th>Description</th>
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<tbody>
<tr>
<td>“focuses on teachers’ content knowledge and pedagogical skills.”</td>
<td>discipline-specific; focuses on teachers’ everyday work</td>
</tr>
<tr>
<td>“is based on teachers’ needs and interests.”</td>
<td>considers context and teachers’ prior learning and experience</td>
</tr>
<tr>
<td>“acknowledges teachers as active learners in a social environment.”</td>
<td>focuses on inquiry and reflection; promotes discussion; allows teachers to engage in types of learning experiences they will facilitate for students</td>
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...supports collaboration. provides opportunities to work with others one-on-one, in small groups, and/or at the school-level in a format that is job-embedded and specific to teachers’ context

...is ongoing and sustained. provides teachers with time to learn, implement, reflect, and make changes in practice

...provides support. includes time and support from other teachers, key stakeholders, and experts

...uses models and modelling of effective practice. includes curricular/instructional models and modelling of instruction

...offers feedback and reflection. provides teachers opportunities to reflect on practice, receive feedback from an expert, and make changes

...is facilitated with care. a supportive (not domineering) provider facilitates teacher-centred learning experiences

...is focused on improving student learning outcomes. teachers’ engagement results in sustained impact on student learning gains

...includes opportunities for collaboration within learning communities. teachers learn with/from one another in learning communities

**Challenges of Effective PD.** While listing features of effective PD can be helpful, this is not to negate that providing effective PD for teachers is a difficult process given the fragmented and voluntary nature of teachers’ learning (Bechtel & O’Sullivan, 2006). For example, Makopoulou and Armour (2011b) suggest that, while contextual and systemic factors play a role in teachers’ professional learning, teachers in their study also cited personal factors in their willingness to continue to learn and develop their teaching practice. While some teachers expressed a drive to pursue personal PD opportunities, others felt their personal lives constrained them from being able to pursue anything beyond state-initiated PD. Additional challenges may include facilitating dialogue amongst teachers, creating a context in which teachers are willing to share their own short-comings, helping teachers’ and students’ find shared value in teaching and learning, comparing what teachers say and do in practice (Bechtel & O’Sullivan, 2006), and the difficulty of linking teacher learning to student learning outcomes (Armour & Yelling, 2007).

These challenges have highlighted the need to position teachers as active learners and agents in their own PD experience. This acknowledgement has led to a move away from forms
of PD that position teachers as passive learners (Patton & Parker, 2016; Avalos, 2011).

Understanding of the characteristics of effective PD has provided some ideas to improve the
quality of teachers’ PD. One of the primary ways this has been done in PE-PD is through the use
of communities of practice (CoPs).

**Communities of Practice**

CoPs are positioned within Lave and Wenger’s (1991) work on situated learning which
“assumes that knowledge is inseparable from the contexts and activities in which it develops”
(Parker et al., 2010, p. 338). Wenger (1998) suggests CoPs is a social theory of learning. Other
terms such as ‘professional community’, teacher networks’, ‘discourse communities’ or,
‘professional learning communities’ have also been used. While the concept remains generally
the same, it is their grounding in social learning theory that distinguishes CoPs from other types
of learning communities, which may be based upon learning organization theory (Blankenship &
Ruona, 2007).

Within situated learning theory, learning is situated through what Lave and Wenger
(1991) refer to as ‘legitimate peripheral participation’. Originating from studies of
apprenticeship, this theory suggests learning is embedded within activities of a community (Kirk
& Kinchin, 2003). It is *legitimate* in that participants’ work matters to the community’s success,
*peripheral* in that apprentices are novices who are not yet fully participating in the community,
and *participatory* in that the acquisition of knowledge often occurs through interaction with
is pivotal to Lave and Wenger’s (1991) version of situated learning” (p. 223).

Wenger’s (1998) concept of CoPs is built upon the notion of learning as social
participation, suggesting common conceptions of learning need to be challenged. While current
educational practice seems to suggest that teaching and learning are linked, Wenger (1998) suggests this is not necessarily the case and argues that educational processes that are based on actual participation are more ‘epistemologically correct’ as they effectively match knowledge and learning (p. 102). From this perspective, learning is about more than individuals acquiring knowledge but is a process that involves: a) ‘mutual engagement’ where one identifies as a member of the community; b) ‘a joint enterprise’ where goals are shared by members of the community; and c) ‘a shared repertoire’ of subjects or materials that community members hold in common (Yoon & Armour, 2017). McLaughlin and Zarrow (2001) argue that “the knowledge generated by the community is more than the sum of individuals’ learning. Communities of practice generate knowledge and understanding that are different in kind from that produced by individuals alone” (p. 99).

When learning occurs within a community, the transformation may potentially go both ways (i.e. the individual shapes the community and the community shapes the individual) (Wenger, 1998). However, Wenger (1998) delineates that simple mutual engagement does not necessarily result in a CoP. In other words, just because individuals work collaboratively does not necessarily mean they are engaged in a CoP. Lave and Wenger (1991) highlight the difference between talking about practice and talking within practice, suggesting, “The purpose is not to learn from talk as a substitute for legitimate peripheral participation; it is to learn to talk as a key to legitimate peripheral participation” (109). Thus, working collaboratively in a CoP is about more than just talking to others about one’s practice. Indeed, Parker et al., (2010) contend that “CoPs are not haphazard groups working to accomplish a task. Rather, they are meaningful, purposeful, and revolve around authentic tasks” (p. 338). They go on to explain that members of a CoP experience evolution in their practice over time as a result of their sustained engagement
within the community. Referring specifically to CoPs amongst teachers, O’Sullivan (2007) suggests they are “places and spaces where [PE] teachers have the opportunity to engage in worthwhile conversations and actions about the nature and direction of their work with children and youth,” and, “structured gatherings that allow for informal and formal learning to take place” (p. 11).

Parker et al. (2012) suggest CoPs used in PD may range from “collections of teachers, to well-established groups, to authentic CoPs” yet, “while in the form of a continuum, it is not meant to suggest moving from bad to better. Instead, it reflects a progression of the potential for teacher growth and development” (p. 323). Wenger (1998) similarly delineates mutual engagement from CoPs; however, he also contends that mutual engagement is likely to translate into a CoP given that it is sustained across time. While collections and groups of teachers may have some merit of their own in facilitating collaboration for teacher learning, these are distinguished from CoPs, whose value in PD has become a recent focus of much research.

**Communities of Practice for Professional Development.** In recent years, there has been a call in the literature for the use of CoPs to facilitate teachers’ PD (Armour & Yelling, 2007). Scholars have argued for the need to embed PD within learning communities at the school level and beyond (Hayes et al. 2006; Bowes & Tinning, 2015; Coulter & Woods, 2012). The value of CoPs for teachers’ PD is acknowledged across subjects. For example, the National Writing Project is an ongoing initiative begun in 1973 to establish local teacher networks through school-university partnerships across the USA to help build teachers’ confidence in a context-specific learning environment. For instance, one avenue of this project, the College-Ready Writers Program, conducted in schools in high-poverty districts, was found to promote teacher learning and students’ writing ability in three attributes after teachers were provided with two
years of PD in which collaboration was central to the learning process (Darling-Hammond et al., 2017; Gallagher et al., 2017).

CoPs have been also been used for teachers’ PD in PE. For example, Oliver et al. (2017) demonstrated their use of what they refer to as an ‘intentional CoP’ to help 12 pre-service PE teachers learn to teach with an activist approach. This involved gathering for a 90-minute meeting each week for five months in which teachers would discuss challenges they had faced and make plans for their future teaching. The authors reported that one of the greatest challenges for participants was moving beyond a conceptual understanding of student-centred pedagogy to actually implementing the approach in their teaching practice. Ultimately Oliver et al. (2017) concluded that the CoP helped pre-service teachers “see, name, challenge, transform, and/or act” (p. 13) within the framework that was the focus of this particular study and to facilitate the “development of their own and others’ pedagogy” (p. 13).

Similarly, Goodyear and Casey (2015) were interested in investigating the role CoPs can play in bringing about pedagogical innovation in PE. They offered six secondary PE teachers from one school in the UK three months of PD on utilising Cooperative Learning – a pedagogical approach with which none of the teachers were familiar. The first author served as a ‘boundary spanner,’ facilitating group discussions and supporting teachers’ learning. Each teacher then taught four to six units of instruction to students using Cooperative Learning. The authors found that the CoP took approximately six months to emerge and was dependent upon the boundary spanner, whose support was initially drawn upon quite heavily by teachers. Over time, the researchers noted there was buy-in from teachers as they began to see evidence that the use of the model was positively influencing students’ learning and became more comfortable discussing their practice with their colleagues and identifying as members of the community.
They began to conceptualize Cooperative Learning as a part of their practice. By the end of the fourth unit, the CoP was functioning with minimal support from the boundary spanner. Positively, Goodyear and Casey (2015) concluded that the use of CoPs can increase the likelihood of pedagogical innovation with change in PE when intentionally initiated and sustained.

Tannehill and MacPhail (2017) followed 18 PE teachers working in 16 disadvantaged inner-city schools in Ireland over a period of four years as they made the transition from a learning community to a CoP. While initially hesitant given their previous experiences with PE-PD (which were viewed negatively by all participants), teachers felt their professional learning needs were met through the CoP. The teachers felt “invigorated to try new and innovative practices” (Tannehill & MacPhail, 2017, p. 348) and felt strongly that the community was beneficial to themselves and their students. Teachers in this study took the initiative to not only continue on with their CoP beyond the completion of the study, but also to develop two new CoPs to support other teachers. In conclusion, Tannehill and MacPhail (2017) argue that the success of their study “is overwhelmingly supportive of the learning community/CoP model as central to the provision of effective PD” (p. 349).

Similarly, Deglau and O’Sullivan’s (2006) study of six PE teachers engaging in a federally-funded PD program that required involvement in a CoP revealed that teachers’ beliefs and practices changed as a result of their involvement therein. However, they also caution that while many teachers developed a sense of belonging as part of the group, there were teachers who were less invested in the community whose vision and practice were varied to a lesser degree. This suggests the extent to which teachers see themselves as members of the community and are willing to fully participate therein is an important factor in the amount of change in
teachers’ practice and vision that can be expected. Similarly, while Parker et al.’s (2012) study of 33 primary and post primary PE teachers involved in Irish CoPs showed that teachers felt their involvement in these communities resulted in gaining new ideas, a sense of empowerment, and student learning, they also identified a number of roadblocks to teachers’ involvement including: time, previous negative experiences with PD, policy and other contextual factors, perceptions of the status of PE as ‘marginalized’, and feelings of isolation in their teaching environment. Thus, while the promotion of CoPs as an effective form of PD is acknowledged in these studies, so too are the many challenges that can accompany such a task.

**Design Considerations and Challenges of Communities of Practice.** There are several factors to be considered when nurturing and maintaining CoPs. Some of these align with the recommended features of PD more broadly. For example, Oliver et al. (2017) recommend that CoPs should be context specific, foster collaboration, and focus on student-centred goals. However, other recommendations are more specific to CoPs. For example, O’Sullivan (2007) suggests the following four elements must be nurtured within CoPs: 1) legitimate participation: there is support and encouragement from administrators, teachers, parents, etc. for involvement in the group; 2) negotiating strategic context: making use of and recognising teachers’ expertise; 3) fine tuning the organization: principals reward participation in the community, and 4) providing support: through resources and guidance. Interestingly, of these four recommendations, at least two are somewhat external to the PD facilitator as they relate to the type of support teachers receive from school administration. Indeed, the need for school-level support to provide a framework to initiate and support a CoP is echoed throughout the literature (O’Sullivan, 2007; Parker et al., 2012; Tannehill & MacPhail, 2017).

In addition, there is support in the literature for a focus on promoting trust and respect
among CoP members (Whitcomb et al., 2009; Parker et al., 2010; Oliver et al., 2017). Whitcomb et al. (2009) suggest this leads to the creation of an environment in which teachers are “likely to take risks and engage in challenging discussions that push them to deepen understanding and attempt new practices that will reach more learners” (p. 210). Atencio et al. (2012) highlight the importance of attending to recommendations for effectively nurturing CoPs, suggesting that without doing so, communities may “fail to achieve agreed-upon goals” (p. 451).

Even with guidelines around their effective facilitation, the development and maintenance of CoPs is rarely easy (Parker and Patton, 2016). For instance, if a sense of community is absent from a CoP, teachers may be left feeling marginalized and isolated in spite of their involvement in the group (Atencio et al., 2012). Further, developing CoPs with teachers from different schools can be challenging in that their perspectives are often grounded in the context in which they teach (Yoon and Armour, 2017). However, given that many PE teachers work alone in their respective schools, in some cases, multi-school CoPs may be the only option for PE teachers to engage in collaborative professional learning. Wenger (1998) suggests that in the process of learning within a CoP, there will be tensions and conflicts as participants’ opposing beliefs and ideas collide. While cautioning that CoPs should be viewed as neither “intrinsically beneficial [n]or harmful,” Wenger (1998) highlights that “[CoPs] hold the key to real transformation – the kind that has real effects on people’s lives” (p. 85). While there are challenges associated with nurturing CoPs, there is evidently also much potential for gain.

The New Role of Professional Development Providers

Given the extensive concern over current forms of PD and the potential of CoPs to offer teachers a more meaningful PD experience, the current role of PD providers who have traditionally run workshops is challenged. However, this is not to say PD providers are no longer
needed. Armour and Yelling (2007) contend that CoPs need continued support and input from PD providers. However, they also caution that a balance is needed; while they will need to be leaders in facilitating collaboration and sharing their expertise, they will simultaneously need to be followers who are sensitive to the needs of the members of the group. Indeed, “it may be helpful for PD providers to find new ways of working with PE teachers in order to support and grow their tentative [CoPs]” (Armour & Yelling, 2007, p. 196). Parker et al., (2012) similarly recommend that the role of a facilitator is to “guide rather than direct, question rather than show the way, and listen rather than tell…not to impose vision, but listen and hear, gently push and pull” (p. 324). There is a need for PD providers who will facilitate learning experiences in this way.

Poekert (2011) suggests that teacher educators wanting to facilitate these types of PD experiences for teachers must move beyond the question of “what skills and content to transfer to teachers and consider how to facilitate teachers who are learning content for themselves” (p. 19), shifting the focus to a ‘pedagogy of facilitation’. The ‘developing the developers’ program acknowledges the needs for PD opportunities for PD facilitators and offers a model for providing facilitators with opportunities for collaborative reflection to improve their pedagogy and practice of facilitation (Perry & Boylan, 2018). Further, several studies outline specific pedagogical strategies for facilitation. For example, Molle (2013) highlights several strategies a lead facilitator uses when supporting teachers working with English language learners (ELLs) including, for example, building common ground in divergent opinions, increasing teachers’ capacity to become advocates for ELLs, and promoting coexistence of divergent views. Within PE, Patton et al. (2013) highlight four pedagogical skills facilitators use to guide rather than direct teachers’ PD, including providing social and active learning opportunities, monitoring
discussion and interjecting at opportune times, using thoughtful and critical questioning to prompt reflection, and guiding and redirecting.

In addition to effective pedagogical strategies for facilitation, in recent years there has been a focus on understanding facilitators’ perspectives of teachers’ PD and of becoming facilitators of such experiences. If the role of the facilitator is going to be reimagined, there is a need to consider facilitators’ beliefs about teachers’ PD (Patton et al., 2012) and for facilitators to make explicit and critically discuss their beliefs about teaching teachers (Vanassche & Kelchtermans, 2016), considering the extent to which these align with characteristics of effective PD. In studying their role as PD facilitators, Lange and Meaney (2013) have highlighted the importance of reflecting upon their practice as facilitators to understand the tensions between their aims and the contextual factors that influence their enactment. Within PE, recent research by Hunuk (2017) has highlighted the use of constructivist pedagogical strategies (e.g. modelling, reflective journaling) to help a beginning facilitator develop facilitation skills in a CoP. Research by others has demonstrated the extent to which facilitators’ perceptions of effective PD align with their practices (Makopoulou, 2018), the development of a facilitator’s pedagogy (Luguetti et al., 2021), and how this influences teachers’ empowerment (Gonçalves et al., 2020).

Chapter Summary

In this chapter I have reviewed two bodies of literature. First, implementation research was identified as an effective avenue for the study of teachers’ implementation of innovative approaches in their classrooms. Implementation research takes into account the innovation itself, the characteristics of the end user, and other contextual factors. This type of research can take a ‘fidelity’ of ‘pro-adaptation’ approach. In PE, innovations often take the form of models and approaches. Learning to use a model or approach requires a significant amount of time and effort
on the part of teachers. This is often best-supported through university-school partnerships and highlights the need for effective PD initiatives.

Second, the current body of literature on teachers’ PD shows that traditional forms of PD have proven inadequate. More *effective* PD will place the teacher at the centre of the learning experience as an active participant learning within the context of their own teaching environment. One emerging means by which to facilitate this type of learning experience involves the facilitation of a CoP where teachers work collaboratively to discuss, reflect upon, and make changes to their practice.

In conclusion, this review of literature supports a) the use of implementation research to study teachers’ use of innovations and b) the use of CoPs to help teachers learn to teach with novel models and approaches. In aiming to promote transformative PE experiences for students through a prioritisation on meaningfulness via the Meaningful PE approach, it is my aim to assist teachers in learning to use this approach through the intentional facilitation of a CoP and to study this process through the lens of implementation research. In the next chapter I will outline and offer justification for the proposed methodology and methods by which to complete this task.
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CHAPTER III: METHODOLOGY AND METHODS

In this chapter I outline and justify the methodology and methods that were used to conduct the research. I first outline the specific aim and questions that have guided the research. Next, I outline a theoretical framework and research approach embedded within the interpretive paradigm using a social constructivist lens and qualitative research methods to conduct implementation research. I also consider my role as a researcher in conducting the research. In the following section I detail the context in which the study was conducted and the participants. I next explain the design of the intervention outlining how and when teachers implemented the Meaningful PE approach in their classrooms. In the following two sections, I outline the methods of data collection and data analysis. Finally, I turn to ethical considerations for conducting the research.

Research Aim and Questions

With an understanding that fostering meaningful experiences in physical education (PE) has the potential to enhance students’ long-term engagement in physical activity (Kretchmar, 2008; Beni et al., 2017) and to offer transformative PE experiences (Ennis, 2017), the primary aim of this research has been to highlight teachers’ experiences of learning about and implementing the Meaningful PE approach in their classrooms. This included seeking to access teachers’ perspectives regarding such things as: the Meaningful PE approach itself (e.g., its rationale and structure), the potential of the approach to influence students’ learning and experiences in PE, and teachers’ experiences both of learning to implement the approach (through professional development [PD] experiences) and of the implementation process itself. Along with understanding teachers’ experiences relating to the approach, an additional purpose of this research has been to understand the specific factors that influenced teachers’ learning
about and implementation of the Meaningful PE approach, such as factors that facilitated and/or inhibited learning and implementation (e.g. the particular PD approach utilized throughout the research, the level of support and resources afforded participants from administration and within the school setting, and teachers’ individual characteristics and personalities).

As outlined in Chapter I, the following question and sub-questions have guided this research:

- What are teachers’ experiences of the Meaningful PE approach and of implementing it in their classrooms with elementary school students?
  - What factors influence teachers’ implementation of Meaningful PE and in what ways?
  - What are teachers’ experiences of a PD initiative designed to support their learning about and implementation of the Meaningful PE approach? What strategies are most effective for supporting teachers in implementing Meaningful PE over time?
  - What are my experiences of becoming a facilitator of PD? How do these experiences inform the enactment of my pedagogy of facilitation of teachers’ PD and shape my identity as a facilitator?

Theoretical and Philosophical Positioning

This research was conducted through the broad lens of social constructivism using qualitative methods with a focus on implementation research and social learning theories. In my work with teacher participants, I aimed to promote the types of learning experiences that the literature suggests are effective for teachers’ PD through fostering a community of practice (CoP) (see Chapter II) and acknowledging teachers’ active role in the learning process. This
learner-centred approach is consistent with the theoretical underpinnings of social constructivism and the approach teachers are being asked to implement in their classrooms with their students and with my own viewpoint and philosophy as a teacher and researcher.

**Philosophical Assumptions**

The research process is built upon three assumptions (Denzin & Lincoln, 2013; Punch, 2009), which Guba and Lincoln (1994) suggest become apparent in a researcher’s answering of three questions that are “interconnected in such a way that the answer given to any one question, taken in any order, constrains how the others may be answered” (p. 108). First, the *ontological question* asks, “What is the form and nature of reality and, therefore, what is there that can be known about it?” Second, the *epistemological question* asks, “What is the nature of the relationship between the knower or would-be knower and what can be known?” Finally, the *methodological question*: “How can the inquirer (would-be knower) go about finding out whatever he or she believes can be known?” In other words, a researcher’s philosophical assumptions are rooted in their views concerning reality and knowledge and how what the researcher is wanting to know from their inquiry can be known.

This set of assumptions determines the inquiry paradigm within which the research is conducted (Denzin & Lincoln, 2013; Punch, 2009; Guba, 1990), serving to “define what [the research] is concerned with and what falls within and outside the limits of legitimate inquiry” (Punch, 2009, p. 16). Qualitative research is often associated with the ‘interpretive’ paradigm which centres on the meanings people ascribe to behaviour and situations and by which they understand the world (O’Donoghue, 2007). In the section that follows, I briefly outline the philosophical assumptions I bring to conducting this research and show how these have guided me toward the interpretive paradigm, making use of qualitative research methods.
Ontological Assumption. The ontological assumption relates to the nature of reality (Punch, 2009). I have come to this research with the intention of both embracing the idea of and reporting on multiple realities (Creswell & Poth, 2018). From this perspective, I have not viewed the reality of participants’ experiences as fixed and objective. Rather I have assumed that individual experiences are highly subjective, which is coherent with the nature of meaningfulness in general, with the theoretical underpinnings of the Meaningful PE approach, and with the approaches to effective PD that are supported in the literature. This view of the nature of reality influences the relationship between the knower (research participant) and what can be known by me as the researcher and is highly related to the epistemological assumption.

Epistemological Assumption. Views regarding epistemology define how knowledge is viewed and question the relationship between the researcher and what can be known (Punch, 2009). I have approached this research with the assumption that the knowledge I am seeking to know is “partial and contestable” and thus “is not intended to culminate into pronouncements of stable truths” (Tilley, 2016, p. 7). I acknowledge, as Tilley (2016) suggests, that this involves a recognition of knowledge as contextual and influenced by the various parties involved, including not only the researched but also myself as researcher and the contexts in which the research has taken place. Thus, “a neutral, objective researcher, interviewer/observer does not exist except in the imagination” (Tilley, 2016, p. 7). Both the reality of participants’ experiences and my interpretation of those experiences I consider to be subjective and partial. As a result of conceiving of knowledge in this way, it has been my aim to get as close to the research participants as possible by conducting research in the field and aiming for depth of understanding rather than breadth (Creswell & Poth, 2018). In line with recommendations from Guba and Lincoln (1998), through this research I have aimed to reduce the “objective separateness” of me
as researcher and my research participants (p. 94). From this perspective, “knowledge is known through the subjective experiences of people” (Creswell & Poth, 2018, p. 21). Consequently, I understand that the results of my research are particular to the time and contexts in which the research has taken place. Thus, while findings may have some application in similar contexts, the aim of this research has not been to offer ‘generalizable’ findings that can be applied liberally in other settings or serve to guide predictable outcomes, but to understand a particular phenomenon: the experiences of participating teachers learning to use the Meaningful PE approach.

**Methodological Assumption.** Methodological assumptions relate to the procedures of the research process (Creswell & Poth, 2018). This assumption involves questioning how one gains knowledge of the world in relation to views regarding the nature of reality (ontology) and what can be known (epistemology). Within qualitative research, methodologies are generally “characterised as inductive, emerging, and shaped by the researcher’s experience” (Creswell & Poth, 2018, p. 21). The particular methods used to conduct the research are distinct from, yet emerge out of, the chosen methodology (Creswell & Poth, 2018). In the following section I outline how the paradigm within which the research was conducted aligns with these three philosophical assumptions.

**Paradigmatic Lens**

In order to align with the philosophical assumptions I hold, this research was conducted within the interpretive paradigm. From this perspective, reality is viewed as constructed and thus context specific (Brustad, 1997). This means that as a researcher, I aimed to “understand the meanings people give to reality, not to determine how reality works apart from these interpretations” (Schutt, 2009, p. 75). Brustad (1997) contends that, within movement studies, this necessitates a consideration of the cultures and contexts in which movement occurs. More
specifically, within the interpretive paradigm, this research has been conducted through the lens of social constructivism. Within constructivism, reality is viewed as relative – constructed by the individual (Guba & Lincoln, 2000). As the name implies, the concept of social constructivism acknowledges the role of the social in the construction of knowledge; in this view, knowledge is constructed in transaction with others (Richardson, 1997). In addition to being influenced by the social environment, knowledge construction is also conceptualized and interpreted through the lens of the continuity of experiences (Dewey, 1938/1997). Thus, I view knowledge construction as a social process, grounded in active inquiry and exploration, with individuals making sense of knowledge through reconciling present and future experiences with those from the past and in interaction with the social environment (Vygotsky, 1978) in an active, interpretive, recursive, and non-linear building process (Fosnot, 2005).

In coherence with the paradigm and my own philosophical assumptions, this research has been conducted using a qualitative approach, where there is an aim to provide rich description and interpretation (Punch, 2009) and “involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them” (Denzin & Lincoln, 2011, p. 3). It has been my objective to study teachers’ learning about and implementation of the Meaningful PE approach within their natural setting – in their classrooms with their students. A qualitative lens aligns well with each of the assumptions upon which this research is built. Further, using a CoP approach to facilitating teachers’ PD involves the fostering of a social environment in which it is assumed that teacher participants can learn from and with one another about the Meaningful PE approach. It was my intention to facilitate, rather than direct, teachers’ learning, positioning myself as fellow learner rather than ‘expert’ who ‘holds’
and thus must ‘transmit’ knowledge to teacher participants. Instead, I have aimed to share ideas and thoughts with teachers who can work collectively to make sense of and apply concepts in unique and subjective ways, thus aiming to work with rather than on teachers (Cooper et al., 2021).

**Conceptual Framework**

Within the overarching theoretical positioning of social constructivism, I have taken a pragmatic/eclectic approach (Miles et al., 2014) through the use of various theories and concepts that align with my research aims and questions in each of the articles, summarized in Figure 3.1 and outlined in greater detail in the sections that follow. Given my focus on working with teachers, I have conducted this implementation research through a ‘pro-adaptation’ lens. It has not been my intention to measure the ‘fidelity’ or ‘integrity’ of teachers’ implementation of the approach for three primary reasons (see Chapter II for an extended discussion on fidelity and integrity-oriented approaches to implementation). First, the Meaningful PE approach was presented to teachers as allowing for a flexible implementation; thus, it is not expected that teachers will apply it in a rigid way in their classrooms. Designers of the innovation acknowledge that context and culture, amongst other factors, will necessitate some flexibility in the ways the approach is implemented (Fletcher et al., 2021). Given the highly subjective and transactional nature of meaningfulness, this is particularly appropriate in approaches aimed at prioritizing personally meaningful experiences (Thorburn, 2021). Second, in line with my philosophical assumptions, I acknowledge that teachers’ unique perspectives and ideas about the approach are not only needed in applying it to their own classrooms but may also add value to the approach in general and be applicable in other situations that have not previously been thought of. Third, the Meaningful PE approach is considered to be in the preliminary stages of
development and implementation (Fletcher et al., 2021; Vasily et al., 2021). It is not ‘tested’ in such a way as to call for fidelity. For this reason, my main focus has been on taking an actor-oriented perspective, thus taking an interpretive rather than judgemental stance on implementation and allowing for and encouraging adaptations (Penuel et al., 2014). Figure 3.1 provides an outline of the conceptual framework which is explained in more detail in the sections that follow.

Figure 3.1

Overview of Conceptual Framework

Factors Influencing Innovation Implementation

My focus within the framework of implementation research has been on the experiences of the end users, namely teacher participants, and the factors that have influenced the process of implementation for them. Conceptually, this implementation research has been guided by Century and Cassata’s (2016) factors that influence implementation of innovations, including characteristics of individual end users, organizational and environmental factors, attributes of the
innovation, implementation support strategies, and implementation over time.

**Characteristics of Individual End Users.** The characteristics of the individual end user, teachers in the case of educational innovations, can play a significant role in the implementation process. Characteristics may include those that relate to the innovation itself (e.g. understanding of the innovation; the role of previous experience, values, beliefs) as well as those that are independent of the innovation (e.g. views about teaching and learning; willingness to try new things). This acknowledges that implementation is not merely dependent upon a teachers’ ‘skillfulness’ and involves an element of risk and openness to change. Rather than being passive ‘recipients’, teachers actively filter the innovation through their dispositions, prior experiences, and beliefs.

**Organizational and Environmental Factors.** Organizational and environmental factors acknowledge the contexts of implementation. While it can be challenging to draw clear lines between the two, organizational factors are generally those that exist *within* the organization, while environmental factors are those which fall with a broader context. For example, organizational factors may relate to the setting (e.g. class size, resources, physical environment, scheduling) as well as administrative decision-making and organizational culture. Environmental factors may include, for example, government agencies, economic conditions, and geographical context.

**Attributes of the Innovation.** Attributes of the innovation itself also play a role in the implementation process and may include both *actual* (‘objective’) attributes and those which are *perceived* by the end user (‘subjective’). Actual attributes may include, for example, the number of components involved in the innovation, evidence of its effectiveness, and cost. In relation to the Meaningful PE approach, these may include, for instance, the features of Meaningful PE.
Examples of perceived attributes may include attractiveness of the materials, how easy the innovation is to use, and its perceived relevance. Whether attributes are considered to be objective or subjective may relate to the way the innovation is presented (i.e. affording more or less room for ambiguity and adaptation of the innovation to the local context).

**Implementation Support Strategies.** Implementation support strategies include ongoing, intentional efforts to support end-users, including, for example, planning support, mentoring, and PD. Implementation support strategies may be offered by the innovation developer, the enacting organization (e.g., a school or school board/district), or an intermediary. Considering *how* end users are supported in learning to implement the innovation is a key component in implementation research. In the context of this research, the characteristics of effective PD outlined in Chapter II, most prominently the development of a CoP, have been used to guide the development of the implementation support strategies offered to teacher participants. These strategies are outlined in greater detail below.

**Implementation Over Time.** Studying implementation over time, unsurprisingly, requires a longitudinal look at the implementation process. This involves consideration of stages of implementation that occur from the point of initial adoption to when its use becomes routine. Different factors may play differential roles during different phases of implementation or adoption. As Goodyear and Casey (2015) suggest, innovations often fail to be taken on beyond ‘the honeymoon period’, so it is important to understand the reasons for ongoing uptake or rejection across time.

**Communities of Practice**

In studying teachers’ experiences of the PD initiative with which they engaged, I have focused specifically on the role of the CoP and its influence on the process of teachers learning
to implement a novel approach to PE instruction, guided by Wenger’s (1998) concept of CoPs. As outlined in Chapter II, CoPs are positioned within Lave and Wenger’s (1991) work on situated learning which “assumes that knowledge is inseparable from the contexts and activities in which it develops” (Parker et al., 2010, p. 338), and thus aligns well with social constructivist learning theories. Learning is situated through what Lave and Wenger (1991) refer to as legitimate peripheral participation, embedded within activities of a community (Kirk & Macdonald, 1998; Kirk & Kinchin, 2003). Learning is legitimate in that participants’ work matters to the community’s success, peripheral in that apprentices are novices who are not yet full participants in the community, and participatory in that knowledge acquisition often occurs through interaction with others (Kirk & Kinchin, 2003).

The notion of CoPs positions learning as social participation, suggesting that educational processes based on actual participation are more “epistemologically correct” as they effectively match knowledge and learning (Wenger, 1998, p. 102). Thus, learning is a process that involves a) “mutual engagement” where one identifies as a member of the community; b) “joint enterprise” where goals are shared by members of the community; and c) “a shared repertoire” of subjects or materials that community members hold in common (Yoon & Armour, 2017). Importantly, mutual engagement or collaboration does not necessarily result in a CoP (Wenger, 1998). CoPs are “meaningful, purposeful, and revolve around authentic tasks” (Parker et al., 2010, p. 338) and must be intentionally facilitated (Hadar & Brody, 2010). While collectives and groups of teachers may have some merit in facilitating collaboration for teacher learning, these are distinguished from CoPs in that the level of mutual engagement within a CoP holds greater potential for teacher growth and development (Parker et al., 2012). While I recognize that not every collaborative group constitutes a CoP, I make use of this terminology because it best
represents the theoretical perspective upon which the PD initiative was designed (i.e. social learning theory), particularly when compared with other types of learning communities based upon learning organization theory (Blankenship & Ruona, 2007).

**Identity and Positioning Theories**

Finally, in studying my own experience of becoming a facilitator of teachers’ PD, a social constructivist perspective of identity and positioning theories has offered a helpful lens in making sense of my experiences. Identity is both a complex and contested concept (Jenkins, 2008), with its multifaceted nature making it difficult to define. Identity is often viewed as a dynamic process rather than a stable entity (Beijaard et al. 2004) given that individuals tend to have distinct identities within different contexts and roles (Stryker & Burke, 2000).

Despite identity having clear links to one’s concept of self, identity theorists have long acknowledged the social dimension of the process of identification and the formation of self-concept suggesting that identification occurs at the intersection of internal and external perspectives; for example, Cooley’s (1902/1964) concept of the looking-glass self suggests an individual’s perception of self is dependent upon the image they imagine they portray to others; Mead’s (1934) notion of self suggests a conglomeration of me (attitudes of others) and I (response to the attitudes of others); and Goffman’s (1959) dramaturgical metaphor suggests identification is a process involving a self-as-actor performing for an audience. In line with these theories that position identity as a social phenomenon, Jenkins (2008) contends, “that we can’t see ourselves at all without also seeing ourselves as other people see us” (p. 41). In addition, perceptions of self are further influenced socially through the process of differentiation; identifying as ‘me’ or ‘us’ requires a recognition of what makes ‘me’ different from ‘them’ (Benhabib, 1996).
Given that identification is strongly influenced by interactions with others, language plays a key role. Positioning theory pays particular attention to the role and language of others in identity formation and suggests that individuals are positioned and positioning through their discourses with others, often in relation to rights and duties (Harré & Moghaddam, 2014). Within a conversation, each participant (either consciously or subconsciously) positions both themselves and the other (Van Langenhove & Harré, 1998). Positions ascribed through discourse can serve to outline, for example, who is dominant and who is subservient in the given context, and in this way have the potential to influence one’s sense of self. These positions need not necessarily be accepted; an individual may reject a position by repositioning themselves in response (for example, asserting dominance where previously positioned as subservient). This holds similarities to the sociological concept of ‘labelling,’ by which both negative (stigmatising) and positive (valorising) identities may be imposed and either accepted or resisted through discourse and interactions with others (Jenkins, 2008). The notion of positioning provides a more dynamic alternative to the conception of ‘roles’ (Van Langenhove & Harré, 1998). Given the highly relational nature of this process, identification thus becomes:

the human capacity – rooted in language – to know “who’s who” (and hence “what’s what”). This involves knowing who we are, knowing who others are, them knowing who we are, us knowing who they think we are, and so on: a multi-dimensional classification or mapping of the human world and our places in it, as individuals and as members of collectivities. (Jenkins, 2008, p. 5)

As a teacher or teacher educator, one’s identity or sense of self holds important implications for practice. Examination of self and identity within the context of practice allows teacher educators the opportunity to make sense of their decision-making processes and find
meaning in their work (Bullough, 1997). Thus, this portion of the research has been conducted using self-study of teacher education practice (S-STEP) research methodology. S-STEP methodology incorporates “the study of one’s self, one’s actions, one’s ideas, as well as the ‘not self’. It is autobiographical, historical, cultural, and political” (Hamilton et al., 2008, p. 20). The aim of S-STEP research is “to provoke, challenge and illuminate rather than confirm and settle” (Bullough & Pinnegar, 2001, p. 20). S-STEP methodology has been used to conduct research into the processes and outcomes of facilitating CoPs for teacher educators (e.g., Kitchen et al., 2008; Vanassche & Kelchtermans, 2016); however, there are few examples of its use to study the experiences of facilitators of PD for teachers. LaBoskey’s (2004) characteristics of S-STEP have been used to guide the research design in that it:

a) was self-initiated

b) was improvement-oriented

c) was interactive

d) made use of multiple qualitative methods, and

e) was shared with the S-STEP community to establish resonance and trustworthiness.

**Researcher Positioning**

Within a qualitative approach, the researcher makes their values known in the study by ‘positioning themselves’ within the research (Creswell & Poth, 2018). Indeed, the “biographically situated researcher” stands behind and within each phase or underlying assumption of the research process (Denzin & Lincoln, 2013, p. 22). Wolcott (2010) challenges researchers with the following:

Our readers have the right to know about us. And they do not want to know whether we played in the high school band. They want to know what prompts our interests in the
topics we investigate, to whom we are reporting, and what we personally stand to gain from our study. (p. 36)

My Role as a Researcher

In conducting and sharing this research, I acknowledge the importance of positioning myself as a researcher in relation to the topic of my research, including considering my own beliefs and intentions and how they may have potentially influenced my research. Throughout my childhood, adolescence, and into adulthood, there has never been a time in my life when engagement in some form of organized physical activity has not been possible for me – at times recreational and competitive activities with a fee, and at other times through school sports and other free programs. Across every season of my life, I have been regularly active and have always enjoyed various forms of physical activity. I acknowledge that my perspectives related to lifelong engagement with physical activity broadly (of which PE forms one part) have been influenced by these experiences and that access to various physical activity programs has been a privilege. I recognize that many barriers to physical activity participation do still exist for various populations, sadly representing a form of inequality (Donnelly, 2013; Mutz & Müller, 2021).

While my experiences in sport and physical activity programs led me to develop a deep love for movement, my experiences in PE were often questionable. There were good years and bad years, related at times to the teacher, the class composition, and even the teaching methods and content. It is from these experiences, both as a young athlete and simultaneously a student of PE, that my interest in the topic of meaningful experiences in PE becomes personally significant and important to me.

My reading on the topic of meaningfulness has led me to question my previous experiences, the features that influenced the meaningfulness or meaninglessness of those
experiences, and how they have influenced my perspectives as an instructor of PE. As a result of these experiences, along with the voices of young people expressed through the literature, my aim as a researcher has been to help teachers facilitate more meaningful experiences for their students in PE. My hope is that these experiences will draw young people back to their personal playgrounds (Kretchmar, 2006) where they may regularly and independently find joy in physical activity and movement.

In line with the ontological assumptions of the interpretive paradigm, I hold to the belief that individual experiences of PE, and the meaning attached to those experiences, are highly subjective. However, acknowledging the subjective nature of such experiences is not to negate that patterns may arise and exist in ways or conditions under which students find experiences to be meaningful. Thus, I believe it is possible to identify and intentionally plan for a set of provisional but consistent themes or features by which PE teachers may explicitly prioritize meaningful experiences in their classrooms. While it is these more objective or overarching elements that shape the pedagogical framework of the Meaningful PE approach, it is the subjective experiences of teachers utilising this framework that I have aimed to explore and share. Further, the unique contexts, schools, and experiences of teachers participating in the study necessitated some adjustment with regards to the particular pedagogical strategies and data collection methods used. What worked with some teachers with their students did not necessarily transfer to other teachers in other schools. The subjectivity of participants’ experiences was given consideration in the design of the study and in the specific role I have played as a researcher.

Importantly, I acknowledge that I came to this study with some belief in the potential effectiveness of the Meaningful PE approach to help teachers foster meaningful experiences for
their students in PE. While this was largely rooted in a vast body of literature, it was also based upon my experience of utilising (and helping to develop and refine) this approach in my own classroom (Beni et al., 2018, 2019). I recognize the effectiveness of this approach had not been widely tested in other classrooms with other teachers at the time of this research and have attempted to curtail this bias in conducting the research, and particularly in facilitating (rather than directing) PD for teacher participants. In addition, coming into the research, I recognized that my perspective of the approach was both narrow and limited in that it was largely based on my own teaching practice and experiences with my own students. Lastly, more broadly, I recognize that my individual characteristics (e.g. as a white, middle-class female) colour the way I view the world and my role in it. Having recognized these various factors, I aimed to stay open to having my own conceptions of meaningfulness and what makes for meaningful PE experiences for students challenged through the process of conducting this research.

**Research Design**

This project consists of two distinct studies. First, a pilot study involving primary classroom teachers in Ireland was conducted. The purpose of this study was to understand teachers’ perceptions and experiences of the Meaningful PE approach and their experiences of learning about and implementing it in their classrooms. This study was conducted with five teachers over a period of eight weeks. The results of this study informed the design and enactment of the main study – designed with the same aim but scaled-up to involve twelve teachers in Canada over a period of two school years. The data from both studies are presented here.

Importantly, I was not responsible for designing or collecting the data for the pilot study. My involvement included initially helping to prepare online resources that would be used to
introduce the teachers to the Meaningful PE approach and subsequently analyzing the data and writing the report. The purpose of my engagement with the data in this way was to allow the findings from that research to inform the development of the main research project (for which I led the design, data collection, analysis, and write-up), which has been conducted with teachers in Canada over two years and is presented here. In each of the following sections, I include a brief description of the methods, participants, etc. from the pilot study to provide context. However, the primary focus in these sections is on the main research project conducted with Canadian teachers.

**Design of the Professional Development Initiative**

In the pilot study, teachers were given access to an online learning platform with several videos outlining the approach and how other teachers have used it in their classrooms, as well as a variety of print resources (e.g. blog posts, scholarly papers, visuals for use in the classroom) designed to help them learn about preliminary ideas of Meaningful PE and how to implement it in their classrooms. They were asked to visit this site and complete all of the learning activities before implementation would begin in their classrooms, at their discretion following Easter holidays. They were also given the opportunity to ask questions before and during the implementation period. Teachers were then asked to teach their regular PE lessons (content of their choice) using Meaningful PE over a period of eight weeks. The processes and outcomes of this arm of the research are described in detail in Article I of the Results.

Coming into the study with Canadian teachers, it was my intention to offer a greater amount of support than was offered in the pilot study, based largely upon my reading of the PD literature and the potential value of continuous PD. This led me to decide that I would facilitate PD in a way that would be effective for teachers’ professional learning, grounded in my
understanding of the characteristics of effective PD (see Chapter II, Table 2.1). Italicized phrases in the following passages indicate how I aimed to integrate the characteristics of effective PD into my approach.

Teachers were introduced to the Meaningful PE approach through online resources (many of which previously created in collaboration with other members of the research team for use with teachers in the pilot study) that were shared via a password-protected page on the Learning About Meaningful Physical Education research website. This included: short videos outlining main ideas of the approach and providing suggestions from teachers who had previously used it in their classrooms (myself included), blog posts, relevant journal articles (e.g. Beni et al., 2017), and several suggested materials for use in teachers’ classrooms (e.g. student reflection templates, posters outlining the features of meaningfulness). My intention in beginning with an online platform was to allow teachers to work through the material at their own pace. Teachers were given several weeks to engage with the online resources and were provided with a suggested timeline for how to do so. This occurred in January for teachers who began their participation in Year One of the study and in July/August for teachers who joined in Year Two of the study.

After this introductory period, my approach to the PD initiative centred largely around fostering a CoP to support collaboration amongst teacher participants and members of the research team. During the first meeting in both school years, I introduced the approach to teachers through a slideshow presentation (much of which overlapped with the content of the website). This was followed by me or another member of the research team modelling the approach for teachers in a mock lesson in the gymnasium. In Year One, this occurred at the university where teachers were invited to observe my teaching in a course with pre-service
teachers where I modelled my use of the approach. In Year Two, this occurred at an elementary school in the teacher participants’ school district. In this case, the approach was modelled by another member of the research team, and teachers acted as students who were engaging in the lesson. Initially, the intent in modelling was to establish trust by making myself vulnerable by putting my teaching on display before visiting teachers’ classrooms to watch them teach.

Modelling of the approach focused primarily on pedagogies (e.g. strategies to facilitate student choice or promote positive social interactions), while also guiding reflections on the meaningfulness of teachers’ experiences in the lesson. For example, when a member of the research team modelled a guided reflection following a folkdance lesson, one teacher described the cultural connections of the dance as meaningful while another expressed feeling uncomfortable dancing in front of colleagues. Thus, in this case they were seeing the pedagogy of reflection being modelled while also reflecting upon meaningfulness as their students would. I also set aside time to facilitate discussion after the lesson, giving teachers the opportunity to ask questions and engage in conversation with fellow members of the group to begin to create a sense of community.

Although teachers elected to participate and thus came to the study with an interest in learning about Meaningful PE, the literature recommends CoP meetings centre around teachers’ needs and interests; thus, I was intentional about allowing teachers to play a pivotal role in guiding the conversation. I did this by inviting them to contribute topics for discussion via email before each meeting and by allowing the meetings to be guided by teachers’ voices rather than a rigid and imposed schedule. For example, one of the first items in each meeting was to have each teacher provide an update of their experiences of implementing Meaningful PE. Quite often the discussions that ensued took up all of the meeting time that was allocated. Although I prepared
activities and discussion topics for each meeting, these were secondary to supporting teachers’ needs and interests, and thus I did not feel things were lost when they were not incorporated. I was also intentional about positioning myself as a peer in the group as opposed to an ‘expert,’ by openly challenging my own assumptions, sharing my own failures and uncertainties, and asking questions rather than directing conversation. This helped create an environment where we were all positioned as active learners and to facilitate PD with care.

In Year One, CoP meetings occurred once before and once after implementation. While it was my intention to facilitate more regular meetings, it was challenging to schedule this with all teachers. However, some teachers did initiate interactions with one another outside of official CoP meetings to support their learning about Meaningful PE. For example, some of the less experienced teachers went to observe a more experienced colleague use the approach in her classroom. In response to these scheduling challenges and Year One teachers’ suggestions, during Year Two I took a more systematic approach, pre-scheduling and facilitating CoP meetings once every six weeks early in the year and then every eight weeks as teachers became more comfortable using the approach in their classrooms.

In addition to CoP meetings, I stayed in regular contact with teachers, following up via email every few weeks, and making myself available through email, text messaging, and in-person meetings at teachers’ request to offer support by, for example, answering questions and sharing resources. I (and/or other members of the research team) also visited teachers’ classrooms to observe their teaching; however, I was careful to position these observations as an opportunity to provide feedback and promote reflection rather than to evaluate their teaching. While I was not permitted to have direct contact with students due to school board ethics guidelines, and thus was unable to measure student learning outcomes, through facilitating
reflection, I helped teachers draw connections between changes they were implementing in their practice and the ways they perceived these changes were impacting their students. Finally, all of these support strategies were continued across a period of two school years, providing an ongoing, sustained PD experience for teacher participants. Unfortunately, my efforts in Year Two (including three scheduled CoP meetings) were cut short by a series of work-to-rule sanctions and province-wide labour negotiations that included restrictions in the types of PD teachers were allowed to engage with and covid-19-related mandated school closures.

**Context & Participants**

The pilot study was conducted with five classroom teachers at five primary schools in Ireland. Teachers were invited to participate through an online advertisement shared through Twitter and email by the Irish Primary Physical Education Association. Each participant was responsible for teaching PE to their own class. None of the participants had an educational background or specialism in PE, though they all had a particular interest in the subject. Four of the five teachers were involved in coaching school sport teams and/or participating in competitive sport themselves. The following is a list of the pilot project participants (using pseudonyms), the grades they were teaching, and the number of students in each of their classes at the time of the research:

- Sophie – fifth grade – 24 students
- Hannah – fourth grade – 33 students
- Liam – fifth grade – 28 students
- Eva – fifth grade – 23 students
- Cara – fourth/fifth grade – 21 students

The main research project was conducted with a total of twelve elementary (K-8) PE
teachers in one school board in Canada across two school years. Teachers were invited to participate in the study via an email sent out from the school board’s PE instructional leader. Five teachers who showed interest and had a range of experience levels (1-27 years) were invited to participate in Year One. Three of these teachers elected to continue their participation into Year Two, with the other two being reallocated to non-PE teaching roles. The remaining teachers who showed interest but were not invited in Year One were invited to participate in Year Two, along with several others who had shown an interest in the project since then, often as a result of their connection to teachers who participated in Year One (e.g. teaching partners, friends). This resulted in an additional seven teachers participating in Year Two, for a total of 10 participants in the second year. Many participants had pre-existing relationships with one another as a result of having worked and/or participated in PD initiatives together in the past and being located in neighbouring schools to one another. However, I had no prior connection to any of the teachers.

Table 3.1 provides background information on teachers’ years of experience (teaching in general and in PE more specifically), their teaching responsibilities at the time of the research, opinions of the purpose of PE at the outset of the study, grade(s) they used the approach with and general context of the school, and the duration of their participation in the study.

Table 3.1

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Years of Experience Teaching (&amp; in PE)</th>
<th>Teaching Responsibilities</th>
<th>Summarized Opinion on the Purpose of PE at outset of research</th>
<th>Grade and School Context</th>
<th>Participation in the Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunter</td>
<td>9 (6)</td>
<td>PE specialist</td>
<td>Something everyone can succeed and have fun in</td>
<td>Primarily Grade 7; large student body within a small space; supportive administration</td>
<td>Years 1 &amp; 2</td>
</tr>
<tr>
<td>Greg</td>
<td>8 (6)</td>
<td>PE specialist; classroom teaching Year 2</td>
<td>Not provided</td>
<td>Co-taught with Hunter in Year 1 and Tracy in Year 2 of the research</td>
<td>Years 1 &amp; 2</td>
</tr>
<tr>
<td>Pseudonym</td>
<td>Years of Experience Teaching (&amp; in PE)</td>
<td>Teaching Responsibilities</td>
<td>Summarized Opinion on the Purpose of PE at outset of research</td>
<td>Grade and School Context</td>
<td>Participation in the Research</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------------------------------</td>
<td>---------------------------</td>
<td>---------------------------------------------------------------</td>
<td>--------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Tracy</td>
<td>27 (27)</td>
<td>PE specialist</td>
<td>Important for teaching physical, cognitive, and life skills; should prioritize movement</td>
<td>Grade 1-8; large, highly ethnically diverse school with many newcomer immigrants</td>
<td>Years 1 &amp; 2</td>
</tr>
<tr>
<td>Molly</td>
<td>1 (1)</td>
<td>PE specialist</td>
<td>Should prioritize fun and movement</td>
<td>Grades 6-7; school where PE program was previously sport-centred</td>
<td>Year 1</td>
</tr>
<tr>
<td>Mia</td>
<td>1 (1)</td>
<td>PE specialist</td>
<td>Should prioritize fun and movement</td>
<td>Co-taught with Molly</td>
<td>Year 1</td>
</tr>
<tr>
<td>Emily</td>
<td>5 (0)</td>
<td>Classroom teacher</td>
<td>Important for cooperation and social interaction</td>
<td>Grade 3 classroom teacher who has to teach PE; small student body with significant behaviour management challenges</td>
<td>Year 2</td>
</tr>
<tr>
<td>Camille</td>
<td>14 (14)</td>
<td>PE specialist</td>
<td>Should prioritize keeping students active and having fun</td>
<td>Grade 5-6; taught at the same school as Emily</td>
<td>Year 2</td>
</tr>
<tr>
<td>Miranda</td>
<td>19 (8)</td>
<td>PE specialist</td>
<td>Important for life skills, fun, challenge and risk-taking</td>
<td>Primarily Grades 4-5; well-established PE program and supportive administration</td>
<td>Year 2</td>
</tr>
<tr>
<td>Melissa</td>
<td>20 (8)</td>
<td>PE specialist</td>
<td>Should focus on variety and health-related benefits of activity</td>
<td>Primarily Grades 4-5; large PE class sizes; number of PE classes/week reduced this year</td>
<td>Year 2</td>
</tr>
<tr>
<td>Liam</td>
<td>11 (2)</td>
<td>PE specialist</td>
<td>A place where everyone can have fun and be active</td>
<td>Co-taught with Tracy</td>
<td>Year 2</td>
</tr>
<tr>
<td>Felix</td>
<td>8 (0)</td>
<td>Former classroom teacher; first year teaching PE only</td>
<td>An outlet that prepares students to learn better in other courses</td>
<td>Teaches with Hunter</td>
<td>Year 2</td>
</tr>
<tr>
<td>Sharron</td>
<td>1 (0)</td>
<td>PE specialist</td>
<td>Not provided</td>
<td>Grades 5-8 gifted students with behaviour management challenges; PE program previously very sport-centred</td>
<td>Year 2</td>
</tr>
</tbody>
</table>

**Data Collection Methods**

Multiple forms of qualitative data were gathered and analyzed across the study, allowing
for triangulation and to provide a deep understanding of participants’ experiences of implementing the Meaningful PE approach. Tables 3.2 and 3.3 outline the data collection methods for the pilot and main studies, respectively. Appendix C provides a timeline of events that occurred in relation to the PD initiative and implementation period with teachers in Canada across both school years.

Table 3.2

*Data Collection with Irish Teachers*

<table>
<thead>
<tr>
<th>Teacher Reflections</th>
<th>Sophie</th>
<th>Hannah</th>
<th>Liam</th>
<th>Eva</th>
<th>Cara</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflections</td>
<td>9 entries</td>
<td>8 entries</td>
<td>7 entries</td>
<td>9 entries</td>
<td>8 entries</td>
</tr>
<tr>
<td>Interview</td>
<td>21 minutes</td>
<td>34 minutes</td>
<td>32 minutes</td>
<td>42 minutes</td>
<td>18 minutes</td>
</tr>
<tr>
<td>Observations</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 3.3

*Data Collection with Canadian Teachers*

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Year One</th>
<th>Year Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective Journal</td>
<td>8 entries; about 4,000 words</td>
<td>14 entries; about 7,100 words</td>
</tr>
<tr>
<td>Interview 1</td>
<td>3 interviews; 5 teachers</td>
<td>5 interviews; 6 teachers</td>
</tr>
<tr>
<td>Interview 2</td>
<td>1 interview; 1 teacher</td>
<td>7 interviews; 9 teachers</td>
</tr>
<tr>
<td>Interview 3</td>
<td>3 interviews; 5 teachers</td>
<td>cancelled due to covid-19</td>
</tr>
<tr>
<td>Observations</td>
<td>2 observations; 3 teachers</td>
<td>4 observations; 6 teachers</td>
</tr>
<tr>
<td>CoP 1</td>
<td>5 teachers</td>
<td>9 teachers</td>
</tr>
<tr>
<td>CoP 2</td>
<td>3 teachers</td>
<td>9 teachers</td>
</tr>
<tr>
<td>CoP 3</td>
<td>n/a</td>
<td>9 teachers</td>
</tr>
<tr>
<td>CoP 4</td>
<td>n/a</td>
<td>10 teachers</td>
</tr>
<tr>
<td>CoP 4</td>
<td>n/a</td>
<td>cancelled due to sanctions</td>
</tr>
<tr>
<td>CoP 6</td>
<td>n/a</td>
<td>cancelled due to covid-19</td>
</tr>
<tr>
<td>CoP 7</td>
<td>n/a</td>
<td>cancelled due to covid-19</td>
</tr>
</tbody>
</table>

**Reflective Journals.** At the outset of both the Irish and Canadian arms of the research, teachers were asked to record a reflective journal entry once each week, reflecting upon their use of the approach in their classrooms. Teachers were provided with a reflective template to help
guide their reflection but were permitted to record their reflections in their preferred format. For example, teachers were encouraged to consider the following:

- Identify some specific moments, strategies, incidents directly related to your implementation of the Meaningful PE approach.
- How were your assumptions about the Meaningful PE approach challenged?
- In what ways did you find using the Meaningful PE approach useful?
- At which points in the lesson did you feel uncertain about or have difficulty utilising the Meaningful PE approach? How did you handle this?
- What are your perceptions of students’ experiences of the Meaningful PE approach? What did they seem to engage with most/least?
- What questions about using the Meaningful PE approach do you still have?

The purpose of these reflections was to provide insights on teachers’ experiences of testing the Meaningful PE approach across the duration of the study and to provide talking points for CoP meetings for teachers in Canada who would be asked to discuss their experiences with their colleagues. All teachers in the pilot project completed weekly reflections. In Year One of the Canadian study, only one teacher participant completed any reflections. This tended to be viewed by teacher participants as a laborious, time-consuming task. In Year Two, I was intentional about clarifying that reflective journal entries would be appreciated but could be kept very short. None of the teachers submitted reflective journals from the second year. For this reason, this data source was not included in the analysis of the main study as was originally planned.

However, across the duration of the two years, I kept a reflective journal to document my experiences, thoughts, feelings, ideas, frustrations, etc. in learning to become a facilitator of teachers’ PD. Following interactions with teacher participants, I wrote detailed reflections of my
experiences as a facilitator of their PD. My doctoral supervisor acted as a critical friend throughout this process, helping me question my decisions and actions and work through the process of learning to facilitate PD opportunities for teachers. We met frequently to discuss the challenges I was facing as I reflected upon my role in the process. He was also present for all of the PD sessions with teachers and helped with data collection. Across the time frame of the study, I wrote 22 journal entries, totaling approximately 11,100 words. This data was used exclusively within the S-STEP portion of the project (see Article IV).

**Interviews.** In the pilot study, teachers participated in a single one-on-one semi-structured interview at the end of the eight-week implementation period. The interviews were conducted with a research assistant. Questions centred around, for example, their experiences of implementing the approach, specific features/elements that did/did not work well, and recommendations to other teachers who might use the approach in the future. Interviews varied in length and lasted between 18 and 42 minutes.

In the Canadian study, semi-structured interviews were conducted with teachers before, during, and after their implementation of the Meaningful PE approach. Conducting numerous interviews has allowed me to analyze teachers’ experiences over time, and to enable specific moments of change and/or understanding to be identified. While it was originally my intention to conduct these interviews one-on-one, teachers who had a teaching partner who was also participating in the research often expressed a preference to be interviewed together. This was accommodated at teachers’ requests. The purpose of the first and third interviews each year was to seek to access teachers’ perspectives of the Meaningful PE approach before they began using it in their practice and again once they had implemented it across one or more units of work. Questions were designed to help uncover teachers’ thoughts, feelings, apprehensions, and
expectations leading up to the experience and how these feelings and perspectives may have been challenged or reinforced across the duration of the study. For example, Interview One questions included:

- What are your thoughts/expectations regarding implementing the Meaningful PE approach now?
- Are there specific things you are looking forward to?
- Are there specific things you feel will be challenging?

Interview One questions also provided general background on teachers’ experiences and perceptions of PE. For example:

- What are your general beliefs about PE? What do you think its main role is for students?

Interview Three questions provided follow-up on teachers’ responses in the preliminary interview including, for example:

- What was your overall experience of using the Meaningful PE approach in your classroom? (e.g. Was it positive, negative, neutral? And why?)
- How have your perspectives of the Meaningful PE approach changed as a result of your use of the approach in your classroom?

In addition, in Interview Three I was interested in understanding teachers’ experiences of the implementation process and PD initiatives. For example:

- Are there any factors that have been either a facilitator or a barrier to your ability to use the approach in your classroom?
- What types of things have made learning about and using the approach in your classroom easier? More challenging?

Further, at least one interview was completed with each teacher during their implementation of
the approach. Originally, the intention was to complete these interviews at the conclusion of a lesson that I had observed. However, given that teachers were generally teaching several classes back-to-back and unable to break for an interview, this was often not the case. Interview Two was generally scheduled on a separate day from the observation, during each teachers’ prep period or before/after school. When these interviews coincided with observations of teachers’ practice, some questions centred around what was observed. For example:

- Let’s talk about that moment in the class when… Can you go back to that moment and explain what you were thinking for me?
- If you were to teach this lesson over again, what things might you change? What would stay the same?

Other questions centred around teachers’ experiences of learning about and using the approach so far. For example:

- Since our last interview, what things have helped you learn about implementing the Meaningful PE approach? What things have made learning to implement the Meaningful PE approach difficult?

Because there were challenges with scheduling interviews and observations in relation to teachers’ schedules in Year One and sanctions and covid-19 in Year Two, many of the teachers participated in only two interviews in each year (generally Interviews One and Three in Year One and Interviews One and Two in Year Two).

All interviews were audio-recorded and transcribed for analysis. I did the majority of the transcription myself. In the case that a transcript was completed by a research assistant (i.e. 6/23 transcripts), I checked the transcript against the recording for accuracy (Braun & Clarke, 2006). Recordings were transcribed verbatim with the exception of words or phrases that were masked.
for confidentiality (e.g. the names of colleagues, students, or schools) (Braun & Clarke, 2012). Interviews ranged from 14 minutes to one hour in duration. Interview guides can be found in Appendix A.

**Community of Practice Meeting Transcripts.** In addition to one-on-one interviews with teachers, collaborative meetings of CoP members were also audio-recorded and transcribed as an additional data source. The purpose of the CoP meetings was to offer teachers ongoing support across the implementation period. Topics of conversation within the CoP were guided by teachers’ needs and requests and typically focused on discussion of very practical aspects of implementing the approach within their varying contexts, such as time management and the development of resources for use in the classroom. There were six CoP meetings in total (two in Year One; four in Year Two). To give teachers an opportunity to become comfortable sharing within the group, the first CoP meeting each year was not recorded; however, I did take some reflective notes afterward. The four recorded CoP meetings (one from Year One, three from Year Two) ranged from 76 to 103 minutes. As previously outlined, the final three scheduled CoP meetings in Year Two were cancelled due to sanctions and covid-19-related school closures. No CoP meetings were conducted in the pilot study.

**Observations.** Non-participant observations were conducted in teachers’ classrooms once each year for teachers in Canada and twice across the implementation period for teachers in the pilot study (conducted by a research assistant). In Canada, these were conditional to parental consent. The purpose of the observations was to allow me to see how teachers were using the approach in their classrooms, to offer supportive feedback and suggestions, and to compare other forms of data to what I observed. In line with school board ethics guidelines which allowed for parental objections to having their children observed, I (or another member of the research team)
was only able to visit seven of the 12 teachers’ classrooms. When observations were conducted, these were negotiated with each teacher according to their schedules. To facilitate ease in conducting observations, I used an observation sheet with a number of predetermined categories to guide my observations. For example, I looked for ways in which the implementation of the Meaningful PE approach was evident in the introduction, main body, and conclusion of each lesson. I also recorded anonymized student responses at various points throughout the lesson and looked for examples in which features of meaningful experiences and other key pedagogies of the Meaningful PE approach were explicitly planned for and utilized in each lesson. The observation template can be found in Appendix B. The same template was used for observations of teachers in Ireland, all of whom participated in two observations.

**Data Analysis**

A thematic analysis of the data has been conducted, guided by Braun and Clarke’s (2012) approach. Thematic analysis “involves the searching across a data set…to find repeated patterns of meaning” (Braun & Clarke, 2006, p. 86) which can be used to report “experiences, meanings, and the reality of participants” (Braun & Clarke, 2006, p. 81). The analysis was primarily inductive, meaning that themes were generated directly from the data as opposed to being mapped on to a pre-existing framework or theory. However, in some cases a secondary deductive analysis was conducted. This is indicated in the sections that follow. Braun and Clarke’s (2012) six phases guided the analysis.

**Six Phases of Analysis**

**Phase One: Familiarization with the Data.** As previously mentioned, I transcribed the majority of the data myself. I engaged in repeated active reading, visiting each data source several times, while recording initial thoughts/ideas. I used memo-ing in the margins to jot
preliminary ideas and kept more detailed analytic notes about my thoughts and the analysis process in a journal (Van den Hoonard, 2012).

**Phase Two: Generating Initial Codes.** This phase involves producing initial codes to identify features of data and organising data into meaningful groups. Before I began applying any codes to the data, I first colour coded large segments of the data based on my perception of their applicability to the research questions (e.g. related to implementation, related to teachers’ PD, or related to both). As part of this process, I also intentionally left some sections of the data uncoloured. This generally occurred in transcripts of CoP meetings where teachers tended to ‘rabbit trail’ on to topics of conversation that were unrelated to the project. Importantly, all of these comments were given consideration in the analysis process. However, some of them were excluded at this stage in that I perceived that they did not help to answer any of the research questions. I subsequently applied In Vivo/verbatim codes to all of the colour-coded data (Miles et al., 2014), meaning a word/phrase from the participant’s words was used for each code (e.g. “let your guard down”, “normal with a twist”) in an effort to prioritize teachers’ voices.

**Phase Three: Searching for Themes.** Phase Three involves sorting and combining codes into potential themes. In order to begin grouping codes together, in this phase I recoded each coded section with a descriptive code (Miles et al., 2014) that helped to group several In Vivo codes together. Wherever possible, I used a single In Vivo code to become a descriptive code that was applied to other sections with similar meanings. For example, in relation to teachers’ PD, In Vivo codes “grab and go”, “it needs to be simple”, and “simple, quick reference” were recoded as “simple/fast” and, and in relation to the implementation process, In Vivo codes “intentional,” “being purposeful,” and “being more mindful” were recoded as “intentional”. As a result of this grouping and regrouping, initial themes were generated. For
example, in relation to teachers’ PD the preliminary theme “face-to-face versus online context” was generated from the codes “not normally a ‘techy’ person” and “face-to-face.” In relation to teachers’ experiences of the implementation process, the initial theme “relating Meaningful PE to current practice/perceptions” was generated from codes such as “familiar” and “previous conceptions.”

**Phase Four: Reviewing Themes.** This phase involves eliminating, collapsing, and breaking-down themes as well as comparing themes across both coded data and the entire data set. In Phase Four, themes were reviewed against each other and the data set. As a result, some themes were relabelled as codes. Other themes were renamed as subthemes and grouped together under other themes. For example, initial themes of “self-direction and accountability” and “support over time” in relation to teachers’ PD were renamed as subthemes and grouped together under a single theme. This process tended to vary slightly in relation to each of the research questions and corresponding articles. In relation to Article III, focused on teachers’ experiences of the PD initiative, at this stage, a secondary deductive analysis was conducted, comparing coded data with the characteristics of effective PD I aimed to foster.

**Phase Five: Defining and Naming Themes.** This phase includes further definition and refinement of themes to be presented and analysis of data within each. During Phase Five, I copied all of the coded data (and surrounding text to provide context) for each theme into a separate document, thus grouping all data from a given theme together (Van den Hoonard, 2012). This allowed me to analyze the data within the preliminary themes and more clearly define and name themes and subthemes.

- In Article I, analyzing Irish primary classroom teachers’ experiences of Meaningful PE and of implementing it in their classrooms, two primary themes were named,
including: “Teachers’ implementation of Meaningful PE: a focus on What? and How? (five sub-themes) and “Teachers’ implementation of Meaningful PE: a focus on Why?” (two sub-themes).

- In Article II, analyzing Canadian teachers’ experiences of implementing the Meaningful PE approach and the factors that influenced their implementation and in what ways, three themes were named, including: “teachers’ prior experiences and beliefs”, “students’ responses to the implementation process”, and “external organizational pressures.”

- In Article III, analyzing Canadian teachers’ experiences of a PD initiative designed to support their learning about and implementation of the Meaningful PE approach and the strategies that are most effective for supporting teachers in implementing Meaningful PE over time, two primary themes were named, including: “It’s apples and oranges,” (three subthemes) and “utopia versus reality” (five subthemes).

- In Article IV, analyzing my experiences of becoming a facilitator of PD and how those experiences have informed the enactment of my pedagogy of facilitation and shaped my identity as a facilitator of PD, three themes were named, including: “developing an identity as a facilitator of professional development”, “aligning a personal pedagogical philosophy with the practice of facilitation”, and “navigating the unexpected”.

**Phase Six: Producing the Report.** Phase Six involves producing a coherent and logical report that tells the story of the data across all themes. This is presented in Chapters IV through VII which comprise the four articles that have been produced from the data.

My analysis of the data was iterative, meaning that it was an ongoing process occurring
in collaboration with data collection and thus knowledge gained from preliminary analysis guided subsequent portions of the study. Most prominently, findings from the pilot study with teachers in Ireland were used to inform the design of the PD initiative teachers in Canada would participate in as well as data collection methods. Importantly, while the analysis is presented here in six distinct phases, this was not a linear process. Often I would return briefly to a previous phase by, for example, revisiting and recoding a portion of the data in relation to something that occurred in a subsequent step. Thus, the use of Braun and Clarke’s (2012) multi-phase approach acted as a helpful guide rather that a rigid or prescriptive process (Braun & Clarke, 2019).

**Trustworthiness**

In order to promote trustworthiness of the thematic analysis, Braun and Clarke’s (2006) recommendations for a ‘good’ thematic analysis were used to help guide the analysis process. This was accomplished by:

- Transcribing with detail and checking transcripts against recordings for accuracy
- Giving each data item equal attention in the coding process
- Using a thorough, inclusive, comprehensive coding process, generating themes from across the data set rather than from a few examples
- Collating all relevant extracts for each theme
- Checking themes against each other and the original data set
- Looking for internal coherence and distinctiveness in themes
- Analyzing (rather than paraphrasing) data
- Using data to illustrate analytic claims
- Using the data and analysis to tell a story about the topic
- Balancing narrative and extracts in the write-up
• Investing time in the analysis process
• Clarifying assumptions and clearly explaining the analysis process
• Demonstrating fit between outlined analytic approach and what is presented in the analysis
• Using language consistent with my epistemological position, and
• Positioning myself as active in the analysis process (e.g. themes were generated rather than ‘emerged’).

Several of these suggestions (e.g. using verbatim transcripts, re-reading data sets, providing clear descriptions of the analysis process, using the language of participants) align with Lincoln and Guba’s (1985) suggestions for adhering to the criteria for trustworthiness in qualitative research, including credibility, transferability, dependability, and confirmability. In addition to using these guidelines to promote trustworthiness of the analysis, the use of multiple data sources has allowed for triangulation to confirm/disconfirm themes from various sources (Wodak & Meyer, 2009).

Given that trustworthiness is a key aspect of quality S-STEP research, it is worth discussing the ways I attended to trustworthiness in that portion of the research. In order to promote trustworthiness, teacher-generated data were compared and contrasted with my written reflections and interpretations of the process of facilitating teachers’ PD (Craig, 2009), offering a source of interactivity by providing an alternative perspective, thus allowing me the opportunity to “challenge [my] assumptions and biases, reveal [my] inconsistencies, expand [my] potential interpretations, and triangulate [my] findings (LaBoskey, 2004, p. 849). Further, I have intentionally situated myself socially and contextually within the research and implicated my identity in relation to the teachers and as a facilitator of teachers’ PD (See Article IV) (Craig,
Further, in line with LaBoskey’s (2004) characteristics of S-STEP research, this research has been shared with the S-STEP community (through a peer-reviewed conference presentation and peer-reviewed publication, in review) to establish trustworthiness.

**Ethical Considerations**

Teachers who showed an interest in participating in the study were provided with a letter of invitation and an informed consent form prior to our first meeting, outlining explicitly what would be required of them as participants in the study and their right to withdraw their consent at any time. Participants were also given the opportunity to ask questions of me regarding the research and their potential role therein before signing the consent form or beginning their participation. Teachers were given the opportunity to consent to select forms of data collection. Written consent was gathered from each teacher choosing to participate before the study began.

All teacher-generated data sources have been anonymized through the use of pseudonyms to avoid making schools, school boards, and teachers identifiable. In addition, any references to institutions or individuals made by participants in the study were also anonymized. Audio files from recorded interviews and conversations were transferred directly from the recording device to a password-protected computer where they, along with their type-written transcripts, have been stored.

In addition to teachers’ consent, before beginning any work in any of the teachers’ schools, each school principal was contacted, provided with information outlining the nature of the study and what involvement in the study entailed, and given the opportunity to object to our presence in their school. In addition, in an effort to protect students’ rights, and in line with the school board ethics requirements, parents of students in this study were given the opportunity to
object to having their children observed. In the event that any parent objected, no observation was conducted in their child’s classroom.

This research was approved by the Mary Immaculate College Research Ethics Committee (pilot study) and by the Brock University research ethics board (File:18-073-FLETCHER) and the school board in which the research in Canada was conducted. The letter of invitation and teacher informed consent forms for teachers in Canada are included in Appendices D and E, respectively. The research ethics board approval and renewal forms are included in Appendices F and G, respectively.

Overview of Articles

The results of this research are presented in an integrated-article format, consisting of four manuscripts found in Chapter IV through VII. Each of the four manuscripts are outlined briefly below and with more particular detail in Table 3.4.

- Article One: A pilot project with primary classroom teachers in Ireland analysed through a general qualitative approach, focused on informing the remainder of the study in terms of teachers’ PD and the implementation process as well as the refining of the approach itself. This article has been published in the journal European Physical Education Review.

- Article Two: Presentation of the research findings from the main study with teachers in Canada, with a particular focus on teachers’ experiences of the approach and the implementation process, as well as factors that influenced the implementation process. At the time of submission of my dissertation, this article is under review in the journal Teaching and Teacher Education.

- Article Three: Presentation of the research findings from the main study with teachers
in Canada, with a particular focus on teacher participants’ experiences of the PD initiative and the most effective ways to support teachers learning to use the Meaningful PE approach. At the time of submission of my dissertation, this article is under review in the *Journal of Teaching in Physical Education*.

- Article Four: A self-study focused on *my* experience of learning to become a facilitator of teachers’ PD and how this experience influenced the development of my personal pedagogy of facilitation of PD and my identity as a facilitator. At the time of submission of my dissertation, this article has been revised and is under review for the second time (i.e. a decision of “major revisions” was made on the original submission) in the journal *Studying Teacher Education*. 
Table 3.4

Overview of Articles

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<td>Twelve elementary PE teachers in Canada</td>
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Chapter Summary

In this chapter I have detailed the methodology and methods used to conduct the research through a qualitative, interpretive design. Context has been given to the research and participants along with a description of the design of the study and ongoing PD initiative. Specific data collections methods include reflections, teacher interviews, transcripts of CoP meetings, and non-participant observations in participants’ classrooms. The iterative thematic analysis of the data has been outlined along with ethical considerations.
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CHAPTER IV: ARTICLE ONE

‘It’s how PE should be!’: Classroom teachers’ experiences of implementing Meaningful Physical Education

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Abstract
Meaningful Physical Education (PE) is a pedagogical approach to PE instruction designed with the aim of helping teachers explicitly prioritise meaningful experiences for students. The purpose of the current study was to conduct a small-scale implementation of a preliminary version of Meaningful PE with a sample of five primary classroom teachers in Ireland to receive their feedback on the approach and their experiences of implementing it in their classrooms. Qualitative data were collected across an eight-week implementation period. An actor-oriented analysis was used to focus specifically on teachers’ decisions concerning both what and how to implement the approach, as well as the reasons why they implemented Meaningful PE the way they did. Results show teachers were generally supportive of Meaningful PE as they attempted to implement several components of the approach in their classrooms. Teachers’ implementation was highly related to their positive interpretations of the approach, in relation to both their perceptions of beneficial student outcomes and in drawing connections between the approach and prior experiences of and beliefs about teaching. This study adds further support to prior small-scale studies where implementation of Meaningful PE has been assessed and provides insight into how the approach might be introduced to and implemented more broadly by teachers in the future.

Keywords
Pedagogy, elementary, primary, innovation, actor-oriented

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Introduction

Due to its focus on the prioritisation of personal significance of movement experiences, the promotion of meaningfulness in Physical Education (PE) has the potential to strengthen pedagogy and encourage a lifelong pursuit of physical activity (Kretchmar, 2006). This perspective comes at a time when many students cite current versions of PE as lacking relevance to their lived experiences (Ladwig et al., 2018). An experience that is ‘meaningful’ may be described as that which holds personal significance or value to the participant (Kretchmar, 2007; Metheny, 1968). Beni et al.’s (2017) review of literature has shown that, while there has been a significant body of research in PE to understand what students do and do not find meaningful in PE, less has been done to understand how PE teachers might promote these types of experiences for students (Beni et al., 2017). Questions about how to specifically design tasks, lessons, units of work, and assessment tools that prioritise the meaningfulness of students’ experiences in PE have been asked consistently throughout the last several decades, while at the same time, the development of coherent approaches, models, or frameworks has remained somewhat elusive.

Since the time of this review, some authors have responded to calls in the literature for exploration of pedagogies for meaning. For instance, both O’Connor (2019) and Ní Chrónín et al. (2020) highlight the potential value of reflective activities in helping students navigate the meaning-making process. Importantly, while these studies outline approaches that allow access to students’ meaning-making about their learning, this is distinct from pedagogies designed with the explicit prioritisation of meaningfulness in mind. In addition, Walseth et al. (2018) have found support for the use of the activist approach to help promote meaningfulness for students through their involvement in curriculum-making processes. Indeed, several pedagogical models – for example, Sport Education (Tsangaridou and Lefteratos, 2013) and games-centred approaches (Fry et al., 2010) – have been shown to foster meaningful experiences for some students in PE, along with teaching approaches informed by social constructivist (e.g. Azzarito and Ennis, 2003) and participatory (Enright and O’Sullivan, 2010) frameworks. However, in these models and approaches, meaningfulness tends to be positioned as a convenient outcome or by-product rather than explicit priority (Beni et al., 2017). Additionally, in teacher education, Fletcher et al. (in press) have focused on pre-service teachers’ experiences of learning about Meaningful PE. While all of these studies have the potential to offer insight into the meaningfulness of PE experiences, what is missing in current approaches and/or models is a coherent set of guidelines to help teachers make sense of how children tend to experience meaningfulness in PE, and to select tasks, approaches, and/or models – either new or existing – based on their ability to provide the types of experiences that students find meaningful and where meaningfulness is positioned as the main priority of both the intervention and the teacher’s decision-making.

So what do students find meaningful in PE? In a major review of literature, Beni et al. (2017) found evidence of several provisional features of meaningful experiences. We describe these features as provisional because we believe they provide a starting rather than end point for discussions with children about the qualitative nature of their experiences in PE. These features include: social interaction, fun, challenge, motor competence, personally relevant learning, and delight. For example, students in Dyson’s (1995) study explained that positive social interactions, fun, feeling appropriately challenged, and the development of motor competence were factors that enhanced the meaningfulness of their PE experiences. Beni et al. (2018, 2019) and Ní Chrónín et al. (2018) studied how two beginning elementary PE specialists used the features as an explicit guide for their pedagogical decision-making processes. Children in those classes often described...
an experience as meaningful (using descriptors such as fun, challenging, etc.) when the teachers used strategies that supported children’s autonomy, reflection, and goal-setting. These central pedagogical principles often supported teachers’ decisions to use several existing models, such as Teaching Games for Understanding, to facilitate the meaningfulness children experienced and the ways teachers could prioritise meaningful experiences. Elsewhere, O’Connor (2019) and Ha et al. (2003) also describe the ways reflective and autonomy-supportive approaches have supported children in accessing meaningful experiences in PE. It is these central aspects of autonomy-supportive strategies (student-centred pedagogies that prioritise student voice and choice), reflective processes, and goal-setting that may form a strong platform to enable meaningful experiences, and which can inform the development of an outline of a coherent approach that prioritises meaningful PE experiences. The purpose of the current study was to test a preliminary version of Meaningful PE – a pedagogical approach to PE instruction designed to explicitly prioritise meaningful experiences – with a small group of teachers to receive their feedback on the approach itself and their experiences of learning to implement it in their classrooms.

**Meaningful PE**

Meaningful PE is designed to help students value their experiences in PE and understand the ways that participation enhances the quality of their lives. Thus, the approach is geared toward helping teachers make decisions that explicitly prioritise meaningful experiences for and with students in PE. Because of the highly subjective (Metheny, 1968) or transactional (Garrison, 2001; Quennerstedt et al., 2011) nature of meaningfulness, Meaningful PE is designed to be flexible, meaning that teachers are able to adapt the approach and how it is implemented in their classrooms to suit the interests and needs of individual learners and the context in which it is being employed. We recognise that this holds important implications for the notion of ‘fidelity’ or ‘integrity’ of implementation of the approach. It is our suggestion that teachers implement all or most of the key principles of the approach, though this may be done to varying extents or in different ways in different lessons and/or contexts. For instance, while we argue for the importance of regular reflection, this may vary between verbal and written reflection and in terms of its depth.

The approach is centred around six features of meaningful experiences (Beni et al., 2017; Kretchmar, 2006):

- Social interaction: promoting positive relationships and providing opportunities for students to work together in groups, partners, and alone at times;
- Fun: promoting immediate enjoyment in lessons;
- Challenge: aiming for an optimal level of challenge for each student through offering modifications and providing choice;
- Motor competence: ensuring students are learning and developing both skills needed to participate in activities and a perception of competence in their ability to do so;
- Personally relevant learning: helping students understand what they are learning, why it matters, and how it relates to broader aspects of their lives; and
- Delight: As explained in Beni et al. (2017), delight is a difficult concept for both children and adults to understand and explain. For this reason, and given the short duration of the current study, teachers were not introduced to the concept of delight. Readers are referred to Kretchmar (2005) for a detailed discussion of delight.
Teachers can use the features as a starting point for developing a shared language for meaningfulness, which can help both teachers and students better understand and become aware of what makes an experience meaningful. This allows students to reflect upon the meaningfulness or meaninglessness of their experiences and be a part of the discussion on how to improve the quality of those experiences. Teachers can then begin to filter their pedagogical decision-making processes based on students’ responses, while also making these decisions explicit to students. To reiterate the flexibility of the approach, teachers might aim to plan for a variety of experiences that enable learners to access all of the features of meaningfulness (e.g. social interaction, fun, challenge, etc.) across time, while others might emphasise one or two features (e.g. challenge, personal relevance) to be focused on and explored in depth.

In addition to using the features to filter pedagogical decision-making and promote a shared language, Meaningful PE is centred around the use of autonomy-supportive strategies within a student-centred approach (‘student voice and choice’) and engaging students in opportunities for short-term and long-term goal-setting through written and oral reflection. When autonomy and reflection on prior experiences are considered as central organising concepts of Meaningful PE, there is a close alignment with several major principles of social constructivist theories of learning. Through social constructivism, it is proposed that learners construct knowledge through interrogating their prior experiences and the ways these experiences have been shaped by interaction with peers, their teachers, objects, apparatus, and the social environment (Vygotsky, 1978). Importantly, we see the features presented here as qualitative aspects of meaningful learning experiences while the pedagogies act as potential facilitators of those experiences. For a more detailed theoretical consideration of Meaningful PE, readers are referred to Fletcher et al. (in press).

Because our understanding of pedagogies that support meaningful experiences has been based on the experiences of two individual teachers in very different contexts (Beni et al., 2018, 2019; Ní Chróinín et al., 2018), the purpose of the current study was to expand its implementation and test a preliminary version of Meaningful PE with a small group of teachers to receive their feedback on both the approach and their experiences of learning to implement it in their classrooms. The aim was to use findings from this study to further refine the approach. The following research question was used to guide the study: what are classroom teachers’ experiences of Meaningful PE and of implementing it in their classrooms?

**Theoretical framework: an actor-oriented perspective of implementation**

For analysing teachers’ implementation of innovations, Penuel et al. (2014) highlight the potential value of both integrity and actor-oriented perspectives. Integrity perspectives are aimed at understanding the degree to which teachers’ implementation of an innovation is coherent with its goals and principles (Penuel et al., 2014). Implementation is thus viewed as a relatively linear process with little room for teachers to deviate from the ideas that have been recommended by the innovation designer (Century and Cassata, 2016). An integrity perspective carries assumptions and principles consistent with fidelity, which is a term often used to analyse teachers’ implementation of pedagogical models in PE (Hastie and Casey, 2014). Integrity perspectives are deemed particularly valuable when analysing approaches or models that have already been developed, validated, and tested; in other words, approaches or models that are established rather than new (Century and Cassata, 2016).
A second type of implementation research is focused less on whether the innovation was implemented as intended by its designers and more on describing how the innovation was implemented, the extent of the implementation, and why teachers made their decisions about implementation (Century and Cassata, 2016). An actor-oriented perspective shifts the focus to teachers’ interpretations of the characteristics of an innovation and the consequences of those interpretations for implementation. Thus, an actor-oriented approach to implementation research is aimed at understanding the insider’s perspective – taking an interpretive rather than judgemental stance (Penuel et al., 2014). This type of analysis ‘begins with a premise that implementing new materials presents a situation that requires teachers to draw connections between previously encountered curricular goals and structures and the goals of new curriculum’ (or innovations) (Penuel et al., 2014: 752). Given that Meaningful PE has yet to be tested extensively and is based on a premise of flexible implementation, we take an actor-oriented perspective to analysing teachers’ implementation of Meaningful PE to help us further refine the approach for future dissemination and implementation with other teachers.

Actor-oriented analysis was originally conceptualised as a tool for studying students’ transfer of learning in mathematics (Lobato, 2003), placing a strong emphasis on the learner’s prior activities and experiences, and their influence on novel situations (Lobato, 2012). From this perspective, what qualifies as ‘transfer’ of learning is not predetermined; rather, the goal is to understand the learner’s perspective and process of drawing connections and similarities between current and past experiences (Lobato, 2003). Actor-oriented analyses have since been applied to the study of teachers’ implementation of curricular innovations in science (Penuel et al., 2014) and reading (Troyer, 2017). While integrity-based approaches involve comparing implementation of an innovation to a set of standards or benchmarks, actor-oriented analyses consider the pedagogical frames of reference within which implementation occurs. The aim is to draw connections between the decisions teachers make about implementation and how these decisions are reflective of what they view as salient features of the innovation and are influenced by both prior experience and local context (Penuel et al., 2014). An actor-oriented analysis is focused specifically on teachers’ decisions concerning both what and how to implement and/or adapt as well as the reasons why they implement innovations the way they do (Penuel et al., 2014). These responses can then be used by developers of innovations to make refinements and adjustments based on the teachers’ experiences of implementation through identification of the challenges, successes, and contextual factors deemed important to the specific innovation. We concur with Penuel et al. (2014: 756) that ‘keep[ing] teachers’ beliefs, prior experiences and classroom realities at the fore’ through an actor-oriented analysis, ‘provides a means for identifying the how and why of implementation challenges that design teams must address’.

**Methodology**

This research was conducted using a qualitative approach through a social constructivist lens. Specifically, we view knowledge construction as a social process grounded in active inquiry and exploration, with participants (in this case, teachers) making sense of knowledge through reconciling present and future experiences with those from the past and in interaction with the social environment (Vygotsky, 1978). Given the subjective nature of meaningfulness and the student-centred philosophy underpinning the approach itself, we took the perspective that the individual and subjective experiences of participating teachers were worth understanding and sharing. We
agree with Alfrey et al. (2017: 109) that it is ‘inappropriate to expect teachers to listen and respond to student voice when they themselves often feel muted’. In particular, we are interested in listening to teachers to help us think about how to refine Meaningful PE and understand the most helpful ways to introduce it to other teachers in the future.

**Context and participants**

This study was conducted with five classroom teachers at five primary schools in Ireland. Teachers were invited to participate through an online advertisement shared through Twitter and email by the Irish Primary Physical Education Association (IPPEA). Each participant was responsible for teaching PE to their own class. None of the participants had an educational background or specialism in PE, though they all had a particular interest in the subject. Four of the five teachers were involved in coaching school sport teams and/or participating in competitive sport themselves. Thus, the participants represented a particular type of generalist teacher, with an interest in sport, experience of coaching, and an active involvement in wider primary PE networks in Ireland through following the IPPEA Twitter account. The following is a list of the participants, the grades they teach, and the number of students in each of their classes:

- Sophie – fifth class – 24 students
- Hannah – fourth class – 33 students
- Liam – fifth class – 28 students
- Eva – fifth class – 23 students
- Cara – fourth/fifth class\(^1\) – 21 students

In the interest of protecting participants’ anonymity, pseudonyms have been used in place of teachers’ names. This research was approved by Mary Immaculate College Research Ethics Committee.

**Research design**

Teacher participants were given access to an online learning platform with several videos and print resources (e.g. blog posts, scholarly papers, visuals for use in the classroom) designed to help them learn about preliminary ideas of Meaningful PE and how to implement it in their classrooms. They were asked to visit this site and complete all of the learning activities before implementation would begin in their classrooms, at their discretion following Easter holidays. They were also given the opportunity to ask questions before and during the implementation period. Teachers were asked to teach their regular PE lessons using Meaningful PE over eight weeks. This consisted of one, one-hour PE lesson each week. Teachers chose the content of their lessons and were supported in using the approach for whatever content they had planned to teach. Following each lesson, teachers completed written reflections on their experiences of Meaningful PE.

**Data collection and analysis**

Three qualitative data sources were used. First, each teacher was provided with a teaching ‘diary’ template outlining a short, written reflection prompt that they were asked to complete at the conclusion of each lesson taught across the eight-week unit and an additional culminating written reflection to be completed at the end of the unit. The reflective prompts asked teachers to consider,
for example, pedagogies from the approach that worked well, those which did not, and how they might adapt their approach for the next lesson. Each weekly reflection template contained six questions; teachers generally responded with one or two sentences for each.

Second, during the implementation period, a member of the research team conducted two non-participant observations in each teacher’s classroom, observing for key elements of Meaningful PE and how they were/were not being implemented in the lesson. Observations were conducted using a template asking the observer to detail the activity, what could be seen/heard in the classroom, and connection to the features of Meaningful PE in each of the warm-up, development, and cool-down sections of the lesson. The template also included a section for other comments/actions from both the students and the teacher. The purpose of the observations was to confirm/disconfirm teachers’ perspectives from other data sources.

Third, each teacher participated in a one-on-one semi-structured interview after the eight-week implementation period. Questions centred around, for example, their experiences of implementing the approach, specific features/elements that did/did not work well, and recommendations to other teachers who might use the approach in the future. Interviews varied in length and lasted between 18 and 42 minutes.

Data were analysed using Braun and Clarke’s (2006) step-by-step approach. Interview data were transcribed, and all data sources were read and reread for familiarisation. Initial descriptive codes (Miles et al., 2014) were generated and grouped into preliminary themes by the first author and shared with the second and third authors for feedback. For example, data related to a specific aspect of the approach were coded accordingly (e.g. ‘challenge’, ‘goal-setting’); teachers’ descriptions of the implementation process included several codes (e.g. ‘barriers’, ‘positive change’). Data were coded three times by the first author. The resulting themes were shared with the second and third authors and are presented in the section that follows. Data analysis was conducted inductively; however, the actor-oriented perspective has been applied afterward to help us structure and make sense of the What?, How?, and Why? of teachers’ implementation decisions.

Results

Teachers’ implementation of Meaningful PE: a focus on What? and How?

In this section, we highlight the What? and How? of teachers’ implementation of Meaningful PE by focusing on teachers’ use of the pedagogical principles that were recommended for use in their classrooms to support students’ experiences. Importantly, the data we share here were collected post-implementation. Consequently, any suggestions of ‘change’ in teachers’ perspectives and/or practice are a reflection of their own perceptions of change. Since we were not familiar with the teachers’ practice beforehand, it is not our intention to speak to the quantity or quality of change in their practice but rather to share their experiences and perspectives of the process.

Implementing features of Meaningful PE. At the outset of the study, we positioned Meaningful PE as an approach that was designed to have a flexible implementation; that is, we wanted teachers to implement it in their classrooms in a way that made sense for them and suited the needs of their students. One of the primary ways teachers did this was by placing emphasis on different features of meaningfulness at different times. For some teachers, this meant one feature was consistently prioritised above others. For instance, Sophie nearly always reflected on the feature of challenge in her journaling; observations of her teaching confirmed that this was a prioritisation. Reflecting on
In her interview, she suggested ‘I would have never said before: “You decide what challenge you want to set.” So they loved that. And they applied themselves more to the game then... because they set their own challenge.’ Similarly, Hannah chose to emphasise social interaction because she was concerned about the social dynamics in her classroom due to a group of students who were previously two separate classes having recently been combined into one:

I think this project helped them define their roles in the group, and to find their friends and to realise that we’ve got to get on with each other in the class... You have to [emphasise social interaction] with a big class! (Interview)

For some teachers, applying the approach to suit the needs of their students meant that different features were highlighted in different lessons as the need arose. Liam suggested: ‘I don’t think I set out to prioritise one over another, but [fun and motor competence] were the two at the forefront’ (Interview). For others who intended to prioritise one feature, they quickly realised that the features functioned symbiotically. Hannah shared: ‘It all evolved, and one led to another. You’d think, “I’ll focus on one today in isolation,” but in actual fact they all merged into one’ (Interview). Similarly, Eva suggested: ‘The other features of Meaningful PE feed into each other; if you focus on social interaction, you’re going to have more fun’ (Interview).

In spite of recognising a connection between the features, there was also acknowledgement that some were more difficult to work toward than others. For instance, while Hannah found great value in promoting personally relevant learning, she suggested: ‘I think that takes further development; over time they’ll start making the connections themselves, incidentally, and they won’t even realise it’ (Interview). Eva found that offering students a ‘just right’ level of challenge was a difficult task: ‘The differentiation is difficult within the lessons. I gave them choice... and trying to tweak it to suit everyone, but you do have different skill levels and frustration if someone was constantly finding it difficult’ (Interview). Thus, while this variable prioritisation of the features of meaningful experiences may have been an intentional decision to highlight one over another in some cases, and thus reflects a flexible implementation, at times these decisions also seemed to be guided by what felt comfortable or doable to teachers. This is perhaps unsurprising given the short duration of the study.

Facilitation of a shared language. Sharing the features of Meaningful PE in student-friendly language allowed students and teachers to discuss the meaningfulness or meaninglessness of those experiences more explicitly. Hannah suggested, ‘I’d say those words every day to them, and then they’d say, “This is fun. This is meaningful.” Those words were floating around their heads the whole time’ (Interview). Similarly, Liam felt that the best way to start was to display the features ‘so the kids can look at them when you’re explaining things’ (Interview). Liam used this language with students in the gym, asking them to rate the meaningfulness of their experience on a number line and explain their choice using the features. Students were able to articulate, for example, that the activity was less meaningful because it was not challenging enough given their previous experience with the activity (Liam, Observation 2). While some teachers used and saw the benefits of this shared language, others felt they should have made better use of the language of the features. For example, Eva reflected, ‘You have to keep bringing it back to the features and MPE framework... I should have referred more to that to give them the language and ideas’ (Interview). Thus, while all of the teachers reported having used the features to guide their practice to some
extent, some of them were, at times, less confident in their ability to make those decisions explicit to students in order to facilitate a shared language.

**Providing autonomy support.** Teachers quickly came to the conclusion that autonomy was very important to their students. Liam highlighted that: ‘[Students] enjoyed that there was thought being put into the lessons and that they could give feedback to me, and all their voices were being heard. The sense that their opinion was valued was important to them’ (Interview). However, teachers also felt that learning to implement more autonomy-supportive strategies in their pedagogical approach was not a simple task. For instance, Eva reflected that ‘giving more choice within the lesson’ was an aspect she needed to ‘get used to’ (Diary, Wk6). Similarly, Cara felt that giving students more say within lessons was daunting but ultimately profitable:

> The children are directing the lessons more. It feels a little less ‘controlled’... as children give input and relate what works best for them. This, however, has created more energetic and regulated classes as all children seem happy to be involved. (Diary, Wk2)

In spite of students enjoying increased autonomy, learning to work within this type of environment proved to be an adjustment for students as well as teachers. Eva commented:

> I don’t think they are used to autonomy in lessons... so I think they found that difficult because the teacher is always there to tell them what to do next, and they don’t have that creative aspect anymore because they don’t have to use it. (Interview)

Similarly, Hannah felt that students initially struggled with opportunities to exercise autonomy ‘[needing] a lot of guidance’ (Diary, Wk1). Over time, she worked with students to help them ‘take ownership for their own learning’ (Interview).

While apprehensions and challenges were common early in the study, teachers seemed to become more comfortable implementing autonomy-supportive strategies for students once they had some ‘boundaries’ in place. For instance, speaking of offering students free time to work on something themselves, Liam commented:

> Once you make the boundaries clear, I think it’s brilliant... They could have chosen anything but in general I saw them bouncing the ball, trying to hand pass, or toe tap... There’s an element of thinking for themselves and taking responsibility. (Interview)

Similarly, Cara, who initially struggled with releasing control to students, was able to identify several benefits for students as she allowed them to play a more significant role in the decision-making process:

> I think as teachers we only feel we have control over the lesson if we’ve planned it ourselves, whereas when I stepped back and gave the kids more control over planning, it became obvious that they were more involved in the whole lesson... Every child was participating and doing their best. I was just delighted that we did it, and it’s something I’ll continue for every PE lesson. (Interview)

While implementing autonomy-supportive strategies proved to be more difficult than prioritising and articulating a language using the features, teacher participants thought it was valuable to work through the apprehension and attempt to prioritise student voice and choice to a greater
extent. We do not interpret these results to mean that greater autonomy support was necessary in every aspect of every lesson, but rather in relation to teachers’ previous practice. In other words, they were interested in offering more autonomy support in their programmes in general than they had previously.

**Reflection.** For many participants, the incorporation of student reflection activities (particularly written reflections) was new. For instance, Sophie reflected that she was initially apprehensive as she had ‘not used reflections as part of PE lessons before’ (Diary, Wk1). Because this process was new for teachers, some found its implementation required an intentional ‘focus’ (Eva, Diary, Wk4), and, at times, the process proved to be quite challenging. Cara felt that, even though she was explicit with students about learning outcomes and the types of goals they might set, ‘some of that was lost on them, and I’m not sure why’ (Interview). Similarly, Liam felt that written reflections were helpful for the first few weeks; however, they quickly lost their novelty and became monotonous and time consuming. Some of this he attributed to a) using a reflection template that was the same for every class and b) timetable issues; with PE as the final class of the day, students’ reflections were left to the next morning. In spite of these challenges, Liam felt that for him ‘it definitely was helpful’ but that the process needed modifying, perhaps relying more heavily on shorter written or strictly verbal reflections.

While several teachers faced challenges, those who were willing to work past them found benefits of student reflection. For instance, Sophie suggested she would carry the use of a PE diary into the new school year because she felt it enhanced student motivation, gave opportunities for all students to share their opinions, and allowed students to be consciously aware of what they were learning (Interview). This challenged her previous conceptions related to PE. While she saw value in student reflection in other subjects, she noted: ‘With PE, it’s just different; they’ve never done anything like that before...this reflection time is great’ (Interview). Similarly, Liam felt that reflection allowed students to ‘become independent’, ‘make up their own minds’, and ‘[be] honest in their own opinions’ (Interview). While Eva initially struggled with getting students to write in journals, the process got easier as time went on and eventually ‘[made] it easier for the teacher to assess...and [made] the students mindful that PE isn’t just about playing games or the end product...it’s the process of getting there as well’ (Interview).

Teacher participants were often surprised by students’ written reflections. For example, Liam saw that some students were struggling with a ‘lack of confidence and low self-esteem’ (Liam, Diary, Wk6), while Sophie was surprised to discover how many students enjoyed the challenge of experiencing something new (Diary, Wk1). In relation to the implementation process, teachers were able to use reflections to prioritise student voice by understanding students’ perspectives of various aspects of each lesson and using that feedback to adjust how they were implementing the approach going forward. This allowed teachers to ‘provide so much more focus to the PE lesson’ (Sophie, Diary, Wk2) and ultimately influenced their pedagogical decision-making. In particular, several teachers commented on the ways they were able to offer greater autonomy support to students. In response to students’ first set of journal entries, Cara was struck by ‘how well the children respond to contributing to the lesson and how they become enthused and motivated by this’ (Diary, Wk1). Similarly, Sophie noticed from reflections that students were particularly keen on setting their own level of challenge. She allowed this to influence her pedagogical decision-making by looking to incorporate more challenge by choice in the future. Student reflections also offered Eva an informal assessment of student outcomes, being able to look across several weeks and measure ‘how far [students] have come’ (Diary, Wk8).
**Goal-setting.** Teachers described goal-setting as being highly related to reflection. For some, setting goals in PE was entirely novel and led them to question whether they had ever clearly articulated learning intentions for students. For example, Sophie shared:

> I never set [goals] before. We’d just go out, but never think, ‘What are we actually learning about?’ And it gave them a focus as well: ‘Am I actually doing the dodging skill properly?’ So I liked that, setting the goal at the start and then reflecting on it; they did well in that. (Interview)

Similarly, Hannah found that students were unprepared for the task of setting and achieving goals for themselves in PE:

> It’s a skill that needs to be explicitly taught first. . . . So we came up with our own class goals, and that led into a whole class lesson before even going outside on what is a goal, how do you set a goal, why do you want to set it? It was a huge amount of personal development for them as well. (Interview)

She felt the time spent on learning to set goals was worthwhile because students could see what they wanted to get out of their lessons and was a skill that could easily be applied beyond PE. It was clear that teachers attempted to implement most or all of the pedagogies of Meaningful PE advocated for through the approach, albeit to varying extents and not without challenges. Teachers’ decisions concerning What? and How? to implement seemed to be influenced by their perceptions of both their own and their students’ abilities and comfort levels. For some teachers who stepped out and tried something new, their prior conceptions were challenged. Thus, teachers’ implementation of Meaningful PE heavily influenced and was influenced by their interpretations of the approach and how they perceived it might fit (or not) with their teaching and students’ learning.

**Teachers’ interpretations of Meaningful PE: a focus on Why?**

Teachers’ perceptions of Meaningful PE were strongly related to the reasons why they implemented what they did and how they did it. Teachers were generally supportive of the approach, after having used it in their classrooms. For instance, when asked to reflect on the eight-week experience, Hannah wrote, ‘I quite liked the entire framework and used it as a guide throughout the lessons’ (Diary, Final Reflection). Eva was supportive of the ways Meaningful PE promoted more meaningful experiences for students:

> I’m definitely going to bring it into next year now. One of the children said, ‘I know that our journal is finished now, but can we please keep doing PE like that?’ That’s a testament to it now; even though the programme is over, they don’t want the lessons to change. (Interview)

Similarly, Cara was overwhelmingly supportive of the approach, suggesting in her interview that she would ‘highly recommend’ it to other teachers:

> I see nothing but positive effects, and it feeds into the classroom, creating a more positive atmosphere all-round. . . . I can see that being used outside of PE class as well. It’s having a beneficial effect on everything. . . . Definitely something I’ll continue with throughout.

Some participants were pleased with the way the approach seemed to apply to a variety of movement forms within their PE programmes. For instance, Sophie suggested, ‘With this
programme you can use it across the board in all the strands. It’s something you can apply everywhere’ (Interview). Similarly, Hannah suggested, ‘The framework itself, the language is really good, and it doesn’t matter what content you do during PE; it’s how you implement it in the framework’ (Interview). Hannah felt the approach had application in other subject areas as well, suggesting, ‘You could take it with different subjects . . . It’s a great methodology that you can apply across the board with your teaching’ (Interview). Indeed, several teachers spoke positively and intended to continue using it to guide their PE instruction in the future.

Several teachers also shared that they came to the project with some apprehensions about implementing Meaningful PE, particularly in terms of some of the pedagogical principles that were recommended. Sophie shared:

I never used self-assessment in PE before, so I was interested to see if [the students would] take up on that. I thought the reflection diaries would take up a lot of time at the end of PE class . . . so a few concerns at the start. (Interview)

Sophie’s concerns were linked to both her previous experiences (not having used self-assessment in PE before) and her perceptions of how her students might respond. However, when asked how these concerns played out, she suggested that everything turned out fine, with the reflection diaries providing a nice break when students were tired and allowing them to reflect upon what they had learned that day. Similarly, Hannah initially felt somewhat overwhelmed by the process of learning to implement the approach. However, she too was pleasantly surprised upon implementing it in her classroom: ‘It took a while to read through [the resources], but when I got it clear in my head, I was like, “Awww, this will be really good!” And then I decided to really emphasise the framework with the kids’ (Interview).

Thus, while teachers’ initial perceptions left some of them with concerns about whether it would be a fit for them and their students, several of these concerns were alleviated through the implementation process. In general, teachers’ positive interpretations of the approach were linked to two primary factors: a) perceptions of positive student outcomes as a result of using the approach and b) links to teachers’ prior experiences and beliefs about teaching.

**Perceptions of positive student outcomes.** One of the primary reasons teachers cited why they were supportive of Meaningful PE was their perception of its positive impact upon a variety of student outcomes. This is not to suggest that we (or the teacher participants) measured student outcomes in relation to the approach but that the teachers perceived several benefits for students based upon their observations and interactions. In some cases, this was related to student engagement and enjoyment of their lessons. Hannah suggested the students were ‘very positive’ about her implementation: ‘They really liked it! Every week it was “Are we doing PE today?”’ (Interview) In addition, some teachers felt student learning was enhanced when using the approach. For instance, Sophie identified a ‘stand-out’ moment for her: ‘When I heard the children who are not sporty using the proper terms and skills; that for me was great. And the friendships that were built, how they worked together as groups, outside of their normal friend groups’ (Interview). Thus, the learning that occurred was not limited to the physical domain.

Both Eva and Cara suggested that Meaningful PE helped students be more aware and inclusive of their peers. For instance, Eva felt that it was particularly beneficial for students who often excelled in PE to become aware of the need to include others:
I found that this framework was so beneficial to the less able students. It gave them the opportunity to be a part of the game and made the more able more conscious of the people around them and to be more inclusive . . . That was lovely to see. It was one of those eureka moments to see that the lessons were working. (Eva, Interview)

Similarly, Cara felt that differences in students’ physical abilities that were highlighted through her previous approach to PE instruction were minimised through the implementation of Meaningful PE:

The kids who excel and the kids who don’t play sports, you didn’t see the difference half as much when you were doing the Meaningful PE, as opposed to your regular . . . They’re all involved and giving it everything – it’s a complete whole class endeavour. (Interview)

One of the primary positive student outcomes teachers cited was a perception that the approach helped provide focus to both their own teaching and their students’ learning. Sophie shared that she had never previously considered providing students with learning goals or intentions in PE. Providing students with goal-setting opportunities before each lesson and diaries for reflection helped in that it ‘gave [students] a focus’ (Sophie, Interview). Similarly, Liam suggested that one of the helpful aspects of implementing the approach was that it ‘ensured I always shared [the] learning intention [and] made me think more about different aspects of the lesson’ (Diary, Final reflection). While he felt that there was a great deal of overlap between Meaningful PE and the way he normally taught PE, he found it helped students ‘focus more on what we were doing and their goals and how they’re learning’ (Interview). In addition, he expressed, ‘It helped focus me on the learning that I’m trying to plan and reflect more on how I can improve it’ (Interview). In this way, using the approach helped teachers be more intentional in their teaching and their prioritisation on meaningfulness. This then filtered down into more focused student learning, which became a primary reason for some teachers’ implementation of aspects of the approach.

Links to prior experiences and beliefs about teaching. Unsurprisingly, we found that teachers in this study interpreted and situated Meaningful PE in relation to what they already knew and believed about teaching, identifying ways various components aligned (or not) with their teaching philosophy. For example, Hannah suggested, ‘When I do PE I like to focus on a skill, not just a game. I like to see that they’re learning something. That’d be my philosophy in teaching, and the framework was a good way to do that’ (Interview). Hannah was able to identify ways in which parts of the approach aligned with what she already believed about PE instruction.

For some participants, interpreting the approach through their experiences and beliefs meant relying fairly heavily on available resources early in the study. Over time, some came to integrate the philosophy of the approach with their own ideas: ‘As the weeks went on I had my own ideas and I ran with them rather than going back to the website for help. So, I wasn’t using it on a daily basis’ (Liam, Interview). Similarly, Eva felt it was important to ‘be aware’ of the framework and ‘just allow it to inform your practice’ (Interview). She explained:

I was just taking what I had and improving it or putting new things into it. Those things were: stopping the game, bringing them in, giving them ten minutes to make their own games based on the skills we were doing, making it a more skills-based lesson.
Eva was drawing on the ideas of providing students with reflection time and autonomy support through involving them in designing elements of the lesson and bringing an intentional focus on the development of their motor competence. In a sense, this represents the incorporation of several individual elements of Meaningful PE into Eva’s existing practice as opposed to a more coherent implementation.

For some teachers, implementation involved simply bringing elements of the approach into their existing practice; however, Cara articulated a more noticeable divide between her prior teaching practice and her perception of the approach. After having used it in her classroom, she came to perceive the approach as the standard for ‘how PE should be’, in contrast to her previous pedagogical practice. She noted, ‘Maybe that’s how the PE programme is already expected to be taught, but I don’t recall ever giving so much ownership to the kids’ (Interview). Similarly, for Eva, learning to use the approach required ‘trying to shift [her] mindset’ from the way she had taught PE in the past (Diary, Wk2).

When teachers perceived the approach as requiring changes in their teaching practice, they tended to experience some apprehension. In her interview, Cara suggested:

The first class was the toughest class because I felt the kids had more control than I had. But when I saw the effect that had on participation, and how they were mature enough to resolve the issues of the class, and how they could improve or reflect – when I saw that in progress, that made up my mind. I was going to continue with it regardless.

Similarly, Eva maintained feelings of apprehension until week eight when she finally saw the fruits of her labour. Her advice to other teachers learning to use the approach was: ‘Trust the framework, because it’s not going to be something you see overnight; it happens over time.’ Although learning to reconcile this novel approach to PE instruction with prior experiences and beliefs about teaching and learning was a process that required an investment of teachers’ time and effort, it was often viewed as a worthwhile endeavour.

Liam offered a contrasting perspective from other teachers, suggesting that Meaningful PE offered little that was different from his regular PE pedagogy. Consequently, in reconciling his prior and present experiences of teaching this way, his implementation of the approach did not ‘[alter his] usual PE lessons drastically’ (Interview). Liam perceived that several of the students could not ‘differentiate’ this experience from their prior experiences in PE and seemed to find it ‘monotonous’ (Interview). In conclusion, Liam seemed unsure of his interpretation of the approach: ‘That’s not a result of the framework . . . I didn’t achieve what I would have liked them to achieve, but there are always other variables’ (Interview).

In spite of feeling this way, Liam was able to identify ways his implementation did alter his practice to an extent, particularly as he used his knowledge as a classroom teacher to translate ‘good’ pedagogical practice from the classroom to the gymnasium:

I [share learning goals] in every other class, but seeing it written down for them and them talking about it is really helpful because they’re thinking ‘Okay, this is what we’re trying to achieve, and this is how we’re going to achieve it over the next few weeks’. (Interview)

Importantly, the links teachers drew between their current pedagogical practice and their interpretations of the approach hold implications for connections between the What?, How?, and Why? of the implementation process. Teachers who interpreted the approach as being different
from their current teaching practice and beneficial for student learning and other positive outcomes were more likely to attempt or persevere with implementing the approach more completely and to report intentions to continue to use the approach in the future.

**Conclusion and future directions**

An actor-oriented analysis of teachers’ decision-making has provided insight into the What?, How?, and Why? of teachers’ implementation of Meaningful PE and can help developers of this approach and other new pedagogical innovations make refinements based on teachers’ and their students’ experiences. Studying teachers’ implementation of Meaningful PE has provided insight into their decision-making concerning what elements of the approach they would incorporate into their practice and how (Century and Cassata, 2016). Our analysis of teachers’ implementation decisions led us to believe there was an attempt by each teacher to implement something from the approach and by some to implement most things. However, teachers’ implementation was highly related to their individual interpretations of the approach in relation to a) their perceptions concerning positive student outcomes (similar to teachers in Goodyear and Casey, 2015) and b) their own teaching and experiences of/beliefs about teaching (similar to teachers in Penuel et al., 2014). These factors became the driving force behind why they decided to implement the approach as they did, and whether or not they expressed intentions to continue to use the approach in the future. Each teacher interpreted the framework in slightly different ways and seemed to take up and implement ideas that played to their strengths and preferences. In this way, none of the teachers seemed to push themselves drastically beyond their comfort zones or engage in any radical shifts but rather looked to ‘tweak’ their existing practice to align more closely with Meaningful PE.

An actor-oriented analysis (Penuel et al., 2014) has led us to draw the following conclusions about teachers’ implementation of Meaningful PE. First, similar to Beni et al. (2018) and Ní Chróinin et al. (2018), we highlight the value of teachers beginning by engaging with their own philosophy of teaching in relation to the approach to identify areas of alignment/misalignment. As teachers identify these areas, we highlight the potential value in beginning with what is relatively comfortable, or ‘close’ in proximity to teachers’ current vision (Ní Chróinin et al., 2019), though not to the extent of sacrificing students’ needs and interests. We are interested in understanding how we might better support teachers who experience discomfort in the implementation process or who have moved beyond the ‘honeymoon’ period of innovation (Goodyear and Casey, 2015), and are also conscious that Meaningful PE may not be for everyone. We also see value in making use of teaching tools and resources that might support the development of a shared language, such as those offered by O’Connor (2019). Teachers in the current study who made use of such resources found them valuable, while those who did not wished they had.

Teachers required support in providing autonomy-supportive environments for students. We suggest this could be done in a step-wise manner by initially providing students with options – for example, being able to choose one type of task over another or making choices about group selection (Mandigo et al., 2008). As teachers and students become more comfortable, they may progress to more complex choices and involvement in decision-making processes. Similarly, we highlight the need for teachers to offer support to students in goal-setting activities. The need for teacher and student support in these contexts highlights the importance of an investment of time in the implementation process.

In addition, an actor-oriented analysis allowed us to outline the way teachers’ dynamic interpretations, which seemed to become more positive over time, were highly influenced by their
perceptions of positive student outcomes. In this way, for teachers in the current study the implementation process was not the result of but a means to the development of a positive interpretation of Meaningful PE. We suggest this holds important implications for the design of professional learning initiatives in future implementations of Meaningful PE, in that providing opportunities for teachers to see and perceive positive outcomes for students is a key consideration (Guskey, 2002).

In some ways, it could be argued that the use of Meaningful PE may have simply been helpful in that it promoted what might be considered ‘good pedagogy’ in PE; for instance, allowing for reflection or promoting autonomy. We acknowledge the possibility that engaging teachers in reflection about their practice, as opposed to the implementation of the approach itself, may have been the key to any potential changes in their perceptions and/or teaching practice (Parker and Patton, 2016). While we believe that Meaningful PE has more to offer than simply ‘good’ pedagogy (e.g. the facilitation of a shared language with an explicit focus on meaningfulness) and is likely to be most effective when used coherently, we also contend that if the approach can help teachers implement good pedagogy that they were not previously utilising, we consider that a valuable contribution in and of itself.

We highlight the short duration of the current study as a possible limitation. While teachers were very supportive of the approach, we are conscious that their praise and enthusiasm may have been somewhat exaggerated as a result of the narrow timeline. Further, we recognise that literature on teachers’ professional learning more broadly suggests that lasting change in teachers’ practice requires sustained support over time (e.g. Goodyear and Casey, 2015; Parker and Patton, 2016). Importantly, the purpose of the current study was to serve as a small-scale implementation of Meaningful PE, in its early phases of development. As a way forward, we highlight the need to study the implementation of the approach over a longer period of time (Century and Cassata, 2016). In addition, the current study involved only classroom teachers with limited background in PE pedagogy. We suggest the need to continue to test implementation of Meaningful PE with more diverse groups of teachers. It is our hope that the approach may be of value to teachers of PE from a wide variety of backgrounds who are interested in explicitly prioritising meaningfulness for students.

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Note
1. Ages 9–10 and 10–11, respectively.

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CHAPTER V: ARTICLE TWO

Beni, S., Fletcher, T., & Ní Chróinín, D., (in review). “It’s not a linear thing; there are a lot of intersecting circles”: Factors influencing teachers’ implementation of Meaningful Physical Education. Teaching and Teacher Education.
‘It’s not a linear thing; there are a lot of intersecting circles’: Factors influencing teachers’ implementation of Meaningful Physical Education
Introduction

If learning experiences are to promote positive growth, they should be perceived by the learner as personally meaningful (De Ruyter, 2002; Kretchmar; 2000; Schinkel, 2015; White, 2009). In finding an experience meaningful attention is drawn to its quality, which influences the likelihood of individuals seeking continuity of the experience or avoiding it (Dewey, 1938). In an age of increased standardized testing and back to basics approaches, there have been renewed calls for a focus on meaningfulness in education across subjects, including literacy (Lysaker, 2018), mathematics (Vorhölter & Schwarz, 2020), science (Westbroek et al., 2005), music (Silverman, 2020), outdoor education (Taniguchi et al., 2005), and in general teacher education (Kostiainen et al. 2018). The same renewed attention is evident within physical education (PE), to the extent that meaningfulness is identified as a key element to transformative and innovative PE curricula (Ennis, 2017). It has been suggested that the prioritization of meaningful experiences in PE has the potential to improve quality of life for students and to promote greater engagement with physical activity across the lifespan (Kretchmar, 2000; 2006; Brown & Payne, 2009), particularly when compared with extrinsic motivational factors, which often focus on obesity reduction or improved health outcomes (Teixeira et al., 2012).

While the value of promoting meaningful PE experiences has been widely acknowledged, few teachers are taught about how to make that a priority for students; as such, experiencing meaningfulness is often left to chance rather than facilitated by design (Kretchmar, 2000). A lack of attention to meaningfulness has led many students to claim that PE is not personally relevant or valuable (Lodewyk & Pybus, 2012), which can impact on long-term physical activity participation (Engström, 2008).

Recognizing this gap in PE teachers’ development, Beni et al., (2017) reviewed literature
on meaningful experiences in PE and identified six common features students regularly referred to: social interaction, fun, challenge, motor competence, personally relevant learning, and delight. Although these serve as a provisional and tentative set of features – a starting point rather than finished product – they have since been used to guide how meaningfulness can be prioritized for students in elementary school (Beni et al., 2019; Beni et al., 2021), high school (Walseth et al., 2018) and PE teacher education (Fletcher et al., 2020). In addition to using these features to help understand what students tend to find meaningful in PE, some authors have highlighted pedagogies that support how students experience the features (i.e. how students experience positive social interaction, optimal levels of challenge, and so on). For example, several studies identify how reflective approaches can support a focus on meaningfulness (O’Connor, 2019; Ní Chróinín et al. 2020). Further, Beni et al. (2018) and Ní Chróinín et al. (2018) used autonomy-supportive strategies to support students in experiencing meaningfulness, including, for example, allowing students to make some choices and be involved in decision-making processes in the classroom, as well as engaging in goal-setting activities. Lynch and Sargent (2020) yielded similar findings with students in higher education.

While these features and pedagogies have provided a valuable starting point, Beni et al. (2017) highlighted the need to develop a coherent pedagogical approach by which teachers might intentionally promote meaningful experiences for students in PE. The Meaningful PE approach (Fletcher et al., 2021) was developed in response to this call. Initial research on the Meaningful PE approach has been small-scale, consisting mostly of case studies of individual teachers who have implemented the approach in one unit of work (e.g. a cycling unit or a softball unit) or over no more than one school year (Beni et al., 2018, 2019; Ní Chróinín et al., 2018, Vasily et al., 2021). In order to develop a more robust understanding of the value of the Meaningful PE
approach, there is a need to advance implementation, studying its use with a larger group of teachers working in public schools over time. The purpose of the current research was therefore to examine the experiences of 12 elementary teachers implementing Meaningful PE in their classrooms over two school years and to understand the factors that influenced the implementation process.

*The Meaningful PE Approach*

In Meaningful PE the facilitation of meaningful experiences becomes the prioritized filter for teachers’ pedagogical decision-making. Through using the approach teachers can help students recognize the individual and collective value in their PE experiences and identify ways participation may enhance the quality of their lives. The approach acts as a flexible, overarching framework, and can complement other models and approaches.

Meaningful experiences are defined as those that are full of personal significance (Kretchmar, 2007). Recent developments in positive psychology have led to some shared agreement upon a tripartite conceptualisation of life-related meaningfulness, that involves: (a) purpose as a motivational component, related to goals, aims and direction, (b) feelings of significance as an emotional component involving evaluation of life’s inherent value and worth, and, (c) coherence as a cognitive component related to understanding of one’s life making sense and being comprehensible (Leontiev 2017; Martela & Steger 2016). Thus, questions and inquiries into meaningfulness can have concrete implications for how individuals live their lives, find value in, and make sense of their lived experiences. Dewey (1938, p. 44) suggests that value is attached to an experience ‘because of a transaction taking place’ between an individual and aspects of the environment. Personal meaning transactions and interpretations are therefore not constructed solely within but in relation to culture (Bruner, 1990), where individuals make
connections to ‘something that reaches beyond the actual experience, linking it to something else’ (Leontiev, 2013, p. 462).

Given this definition, Meaningful PE is grounded in democratic, student-centred pedagogy, where it is assumed that learning occurs as students construct knowledge in relation to both their prior experiences and their interactions in the learning environment (e.g. with peers, teachers, artifacts) and community (Vygotsky, 1978). Supporting students in seeking and becoming aware of how they and others experience meaningfulness becomes a central purpose of PE, to initiate students ‘into a range of worthwhile social and cultural practices’ that enrich their lived experiences (Thorburn 2018, p. 26). Importantly, given its early stage of development, the Meaningful PE approach is designed to have a flexible implementation so teachers may implement it in ways they perceive to be appropriate to their teaching context.

Ideas related to the Meaningful PE approach have developed over the last several years as more conceptual and empirical research has been published (e.g. Beni et al., 2021; Fletcher et al., 2021; Lynch & Sargent, 2020; Walseth, et al. 2019). Teachers in our research were introduced to the Meaningful PE approach in its very early stages, when it consisted of three primary principles. First, the features of meaningful experiences (social interaction, fun, challenge, motor competence, personally relevant learning, and delight) (Beni et al., 2017; Kretchmar, 2006) support planning and instructional decisions. These features may be prioritized differently in different classrooms in relation to both student interests and outcomes, and teacher beliefs. Second, the features of meaningfulness are explicitly shared with students (in age-appropriate terminology) to facilitate a shared language through which teachers and students may discuss, express, and reflect upon the meaningfulness of their experiences in PE. Teachers may choose to make use of visuals (e.g. posters) to display the features in their classrooms. Third, the features
of Meaningful PE are best supported through student-centred strategies that are autonomy supportive. Teachers are encouraged to engage students in goal-setting and reflective activities and to provide students with opportunities to make choices for themselves and be involved in decision-making processes. For a more detailed description of the approach and how it has evolved over time, readers are referred to Fletcher et al. (2021).

Implementation Research

This research is focused specifically on teachers’ experiences of implementing Meaningful PE, which we position as a pedagogical innovation. Century and Cassata (2016) define *implementation research* as “systematic inquiry regarding innovations enacted in controlled settings or in ordinary practice, the factors that influence innovation enactment, and the relationships between innovations, influential factors, and outcomes” (p. 170). Implementation research is focused on understanding not only the *what*, but also the *why*, and *how* of implementing an innovation (Dearing & Kee, 2012). A clear and robust implementation framework can help inform design, development, and refinement of both new and existing innovations. Given the early stages of the development and implementation of Meaningful PE, it is imperative that a deep understanding of the factors that influence implementation is gained.

An Actor-Oriented Approach to Implementation Research. Penuel et al. (2014) suggest that much research on implementation of innovations has been framed by integrity-oriented perspectives, which focus on the extent to which teachers implement innovations as the innovation designers intended. However, Penuel et al. (2014) also highlight the value of an *actor-oriented* approach, particularly with new innovations. An actor-orientation begins with an assumption that implementation is not linear and that adaptations may be necessary to implement innovations within varying contexts (Lee & Choi, 2015). Indeed, Penuel et al. (2014) contend
that there is an ‘inevitable’ gap between how innovation designers envision materials being implemented and the ways teachers use such tools. Thus, adaptations are viewed as holding potential to add effective strategies, promote contextual relevance, and highlight which elements of an innovation are in fact vital to facilitating student learning (Century & Cassata, 2016). For these reasons, an actor-oriented approach can be particularly beneficial with approaches that have yet to be tested extensively, as the perspectives of actors implementing the approach can inform refinements and adjustments to innovation design and delivery.

Actor-oriented implementation research is aimed at describing the how and why of teachers’ decisions and thus explicitly focuses on the ways teachers interpret various characteristics of an innovation and the consequences those interpretations hold for implementation (Century & Cassata, 2016). In other words, there is an intention to understand the teacher’s perspective from an interpretive, rather than judgemental, stance (Penuel et al., 2014). Researchers and innovation designers working within an actor-oriented approach tend to engage in a process of co-creation – collaboratively designing innovations, allowing multiple stakeholders to be a part of the process of making productive adaptations (DeBarger et al., 2013).

Given that the Meaningful PE approach has been used primarily by individual teachers and studied as single cases, it has yet to be tested extensively. In light of our intention to listen to teachers’ voices in adapting and refining the approach, we take an actor-oriented perspective to this particular research.

Research around implementation of innovations has a long history; however, much previous implementation research in PE has primarily used barriers and facilitators as the main analytic frame. While these inquiries have led to significant contributions, Vasily et al., (2021) argue that Century and Cassata (2016) offer a more conceptually rigorous approach to studying
implementation research that may be beneficial for researchers both in PE and beyond who seek to make sense of teachers’ decision-making and their lived experiences of implementation to inform the design and effectiveness of innovations.

**A Conceptual Framework for Implementation.** To move beyond simple descriptions of facilitators and barriers, Century and Cassata (2016) highlight several interwoven ‘spheres of influence’ that enhance understanding of the how and why of teachers’ implementation. These factors include the characteristics of individual end users, organizational and environmental factors, attributes of the innovation, implementation support strategies, and implementation over time.

**Characteristics of Individual End Users.** The characteristics of the individual end user of educational innovations, in this case the teacher, can play a significant role in the implementation process. Characteristics may include those that relate to the innovation itself (e.g. understanding of the innovation; the role of previous experience, values, beliefs) as well as those that are independent of the innovation (e.g. views about teaching and learning; willingness to try new things). This acknowledges that implementation is not merely dependent upon a teachers’ ‘skillfulness’ and involves an element of risk and openness to change. Rather than being passive ‘recipients’, teachers actively filter the innovation through their dispositions, prior experiences, and beliefs.

**Organizational and Environmental Factors.** Organizational and environmental factors acknowledge the contexts of implementation. Organizational factors, those that exist within the organization, may relate to the setting (e.g. class size, resources, physical environment, scheduling) as well as administrative decision-making and organizational culture. Environmental factors are generally those that fall within a broader context (e.g. government agencies;
economic conditions; geographical context).

**Attributes of the Innovation.** Attributes of the innovation itself also play a role in the implementation process and may include both *actual* (‘objective’) attributes and those which are *perceived* by the end user (‘subjective’). Actual attributes may include the number of components involved in the innovation, evidence of its effectiveness, and cost. In relation to the Meaningful PE approach, these may include, for example, the features of Meaningful PE. Perceived attributes may include attractiveness of the materials, how easy the innovation is to use, and its perceived relevance. Whether attributes are considered to be objective or subjective may relate to the way the innovation is presented (i.e. affording more or less room for ambiguity and adaptation of the innovation to the local context).

**Implementation Support Strategies.** Implementation support strategies include ongoing, intentional efforts to support end-users, including, for example, planning support, mentoring, and professional development. Implementation support strategies may be offered by the innovation developer, the enacting organization (e.g., a school or school board/district), or an intermediary. Considering *how* end users are supported in learning to implement the innovation is a key component in implementation research.

**Implementation Over Time.** Studying implementation over time, unsurprisingly, requires a longitudinal look at the implementation process. This involves consideration of stages of implementation that occur from the point of initial adoption to when its use becomes routine. Different factors or spheres of influence may play differential roles during different phases of implementation or adoption. As Goodyear and Casey (2015) suggest, innovations often fail to be taken on beyond ‘the honeymoon period’, so it is important to understand the reasons for ongoing uptake or rejection.
Vasily et al. (2021) used Century and Cassata’s (2016) framework to examine one teachers’ implementation of Meaningful PE in a cycling unit in a Saudi private school. They found that each of the factors influenced implementation to varying degrees, highlighting the strong impact that the teachers’ background (experiences, beliefs, values) and the specific context played. While Vasily et al. (2021) demonstrated the value of using Century and Cassata’s (2016) framework to gain insights into the influences of implementation, they also identified a need to advance understanding of how the Meaningful PE approach is implemented by examining its use with a larger sample of teachers in a different context over time. Our particular research addresses this need, studying the experiences of 12 PE teachers in a public school board in Canada over two years. Using Century and Cassata’s (2016) factors influencing innovation implementation and taking an actor-oriented approach to the implementation research process, the questions guiding this research are: What are teachers’ experiences of implementing the Meaningful PE approach? What factors influenced their implementation and in what ways?

**Methodology and Methods**

In this research we took a qualitative approach through a social constructivist lens. We view knowledge construction as a social process grounded in active inquiry and exploration, with teachers making sense of knowledge through reconciling present and future experiences with those from the past and in interaction with the social environment (Vygotsky, 1978). In line with our commitment to prioritizing teachers’ voices, we took the perspective that the subjective experiences of participating teachers were worth understanding and sharing. It is our position that there is value in listening to teachers in order to refine the Meaningful PE approach and understand helpful ways to introduce it to other teachers in the future. This required prioritizing depth over breadth in terms of data collection and interpretation, and for this reason a relatively
small sample of teachers was recruited and studied over two years.

**Context and Participants**

Twelve elementary (Grades 1-8) PE teachers from the same school board participated in this research. In the first year, teachers were invited to participate via an email sent by the school board’s instructional program leader for PE. From the list of teachers who showed interest, we invited five with a range of experience levels (one to 27 years) to participate in Year One. Three teachers elected to continue their participation into the second year (the other two were not allocated to teach PE in Year Two). In the second year, we invited those teachers from the original list who showed interest (but were not invited) and then used a snowball sampling technique to recruit additional teachers. This led to seven additional teachers electing to participate in Year Two. Many participants had pre-existing relationships with one another through having taught together, collaborated on projects, or participated in professional development initiatives. Table 5.1 summarizes each participant’s teaching experience, grade and school context, the duration of their participation in the research, and their opinions of the purposes of PE (particularly in relation to meaningfulness) at the beginning of the research.
Table 5.1

Background on Teacher Participants

<table>
<thead>
<tr>
<th>Participant (Pseudonym)</th>
<th>Years of Teaching Experience</th>
<th>Years of Experience Teaching PE</th>
<th>Summarized Opinion on the Purpose of PE at outset of research</th>
<th>Grade and School Context</th>
<th>Participation in the Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunter</td>
<td>9</td>
<td>6</td>
<td>Something everyone can succeed and have fun in</td>
<td>Primarily Grade 7; large student body within a small space; supportive administration</td>
<td>Years 1 &amp; 2</td>
</tr>
<tr>
<td>Greg</td>
<td>8</td>
<td>6</td>
<td>Not provided</td>
<td>Co-taught with Hunter in Year 1 and Tracy in Year 2 of the research</td>
<td>Years 1 &amp; 2</td>
</tr>
<tr>
<td>Tracy</td>
<td>27</td>
<td>27</td>
<td>Important for teaching physical, cognitive, and life skills; should prioritize movement</td>
<td>Grade 1-8; large, highly ethnically diverse school with many newcomer immigrants</td>
<td>Years 1 &amp; 2</td>
</tr>
<tr>
<td>Molly</td>
<td>1</td>
<td>1</td>
<td>Should prioritize fun and movement</td>
<td>Grades 6-7; new school where PE program was previously sport-centred</td>
<td>Year 1</td>
</tr>
<tr>
<td>Mia</td>
<td>1</td>
<td>1</td>
<td>Should prioritize fun and movement</td>
<td>Co-taught with Molly</td>
<td>Year 1</td>
</tr>
<tr>
<td>Emily</td>
<td>5</td>
<td>0</td>
<td>Important for cooperation and social interaction</td>
<td>Grade 3 classroom teacher who has to teach PE; small student body with significant behaviour management challenges</td>
<td>Year 2</td>
</tr>
<tr>
<td>Camille</td>
<td>14</td>
<td>14</td>
<td>Should prioritize keeping students active and having fun</td>
<td>Grade 5-6; teaches at the same school as Emily</td>
<td>Year 2</td>
</tr>
<tr>
<td>Miranda</td>
<td>19</td>
<td>8</td>
<td>Important for life skills, fun, challenge and risk-taking</td>
<td>Primarily Grades 4-5; well-established PE program and supportive administration</td>
<td>Year 2</td>
</tr>
<tr>
<td>Melissa</td>
<td>20</td>
<td>8</td>
<td>Should focus on variety and health-related benefits of activity</td>
<td>Primarily Grades 4-5; large PE class sizes; number of PE</td>
<td>Year 2</td>
</tr>
<tr>
<td>Participant (Pseudonym)</td>
<td>Years of Teaching Experience</td>
<td>Years of Experience Teaching PE</td>
<td>Summarized Opinion on the Purpose of PE at outset of research</td>
<td>Grade and School Context</td>
<td>Participation in the Research</td>
</tr>
<tr>
<td>--------------------------</td>
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<td>--------------------------------</td>
<td>---------------------------------------------------------------</td>
<td>--------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Liam</td>
<td>11</td>
<td>2</td>
<td>A place where everyone can have fun and be active</td>
<td>Co-taught with Tracy</td>
<td>Year 2</td>
</tr>
<tr>
<td>Felix</td>
<td>8</td>
<td>0</td>
<td>An outlet that prepares students to learn better in other courses</td>
<td>Teaches with Hunter</td>
<td>Year 2</td>
</tr>
<tr>
<td>Sharron</td>
<td>1</td>
<td>0</td>
<td>Not provided</td>
<td>Grades 5-8 gifted students with behaviour management challenges; PE program previously very sport-centred</td>
<td>Year 2</td>
</tr>
</tbody>
</table>
**Research Design**

Teachers were introduced to the Meaningful PE approach through a blend of online resources and face-to-face interactions. Initially they were given access to an online learning platform with several video and print resources (e.g. blog posts, relevant research articles, visuals for use in the classroom) designed to help them learn about the Meaningful PE approach and consider suitability of implementation in their schools. These resources were bolstered through ongoing support in a community of practice (CoP), where participating teachers, Stephanie and Tim regularly met to learn with and from one another and share experiences of the implementation process. After being introduced to Meaningful PE, teachers were asked to implement it in one or more units with a grade/class and content focus of their choice. In Year One, the CoP met twice: once before and again after the teachers’ implementation. Intermittently, teachers were supported through one-on-one meetings and/or phone calls, email, and text messaging with Stephanie and Tim if teachers had questions. Based on feedback from Year One participants, in Year Two we took a more systematic approach, facilitating CoP meetings every six weeks initially, and then every eight weeks as teachers became more comfortable. To test implementation over a longer period of time, in Year Two teachers were asked to implement the approach across the whole school year. However, this was cut short by three months due to the mandated closure of schools as a result of the covid-19 pandemic.

**Data Collection and Analysis**

Three qualitative data sources were generated. First, teachers participated in semi-structured interviews at pre-, mid-, and post-implementation periods. Interview questions focused on various topics at different points, including, for example, teachers’ prior conceptions about PE, their thoughts about the Meaningful PE approach, and their experiences of learning
about Meaningful PE and implementing it in their classrooms. Interviews ranged from 14 minutes to one hour.

Second, non-participant observations were conducted in teachers’ classrooms at least once each school year, conditional to parental consent. An observation template was used to observe key elements of Meaningful PE (e.g. use of the features of Meaningful PE, autonomy-supportive strategies) and how they were/were not being implemented. The purpose of the observations was to corroborate teachers’ perspectives with other data sources. As a result of parental objections to having their children observed, we were only able to observe seven of the 12 teachers.

Third, CoP meetings were audio-recorded and transcribed for inclusion as a data source. To provide teachers an opportunity to become comfortable sharing amongst the group, the first CoP meeting each year was not recorded. Topics of conversation within the CoP were guided largely by teachers’ needs and requests and typically focused on discussion of practical aspects of implementing the approach in a variety of contexts, such as students’ reactions and receiving support from administration. There were six CoP meetings, all of which were facilitated by Stephanie and Tim, and which ranged from 76 to 103 minutes. Most teachers were present for all meetings, with two teachers missing one meeting each and one teacher missing two.

An inductive, thematic analysis of the data was conducted, guided by Braun and Clarke’s (2012) six phase approach. In phase one, interview data and CoP meetings were transcribed and all data sources were read and reread for familiarisation. In phase two, initial coding was done using In Vivo codes (i.e. coded with a word/phrase used by the participant; Miles et al., 2014) (e.g. ‘normal with a twist’), in an effort to prioritize teachers’ voices. In phase three, data were coded a second time, using descriptive codes to begin grouping In Vivo codes together (Miles et
al., 2014) (e.g. In Vivo codes ‘being purposeful’ and ‘being more mindful’ were recoded as ‘intentional’). Initial themes were developed in this phase (e.g. ‘relating Meaningful PE to current practice/perceptions’). In phase four, themes were reviewed against each other and the data set; one of the four preliminary themes was relabeled as a code rather than a theme. The following three themes were defined (fifth phase) and named (sixth phase) as factors that influenced teachers’ decision-making processes in the implementation process and are presented in the section that follows: teachers’ prior experiences and beliefs, students’ responses to the implementation process, and external organizational pressures.

Findings

Century and Cassata (2016) argue that the conceptualization of an innovation itself offers insight into the what of implementation, while the factors that influence innovation enactment provide insight into the how and why. Understanding the what of implementation offers insight into the how and why and thus provides context for answering the research questions.

Teachers generally reported that the attributes of the innovation “made sense” to them (Liam-Yr2-Int1), and there were no suggestions that the innovation or ideas underpinning it were inaccessible or out of reach. In explaining her interpretation of the key features of Meaningful PE, Miranda described it “as a framework that allows teachers to be able to create culture, get at their curriculum, be able to teach their curriculum” (Yr2-Int2). She suggested that, rather than Meaningful PE involving a step-by-step or linear process, she envisioned it as a Venn diagram with “a lot of intersecting circles where you’re getting a lot done at the same time” (Miranda-Yr2-Int2).

A key attribute of the Meaningful PE approach is its flexibility, in that it should be implemented in a way that is most appropriate for teachers and students in their context. Our
analysis led us to believe that teachers understood, valued, and made use of the flexible nature of the approach. For example, some perceived the value of Meaningful PE to be its “elastic” nature (Miranda & Felix-Yr2-CoP3). In addition to our presentation of Meaningful PE through the online tools and face-to-face meetings, teachers’ perceptions of the attributes of the approach were often influenced by comparisons they made to the ways others in the group were implementing it, which they often heard about through the CoP or informal conversations with each other. For instance, as a result of having compared themselves to their colleagues, some spoke of the approach being “easier to implement” for others (Camille-Yr2-Int2) or said that they “weren’t there yet” (Felix-Yr2-Int2).

The implementation process itself also shaped teachers’ perceptions of the approach. Although teachers tended to express confidence in their understanding of the approach following our presentation of it, they found that translating that knowledge into practice was, at times, challenging. For instance, while it was easy for Liam to look at aspects of the approach he had been introduced to and say, “That makes sense to me,” trying to implement it “in a way that [made] sense” in relation to his teaching practice was a bit more challenging (Yr2-Int1). Indeed, several teachers suggested that, although they understood the approach in theory, they needed to “leap in and see how it [could] work” in practice (Melissa-Yr2-Int1). Thus, teachers’ perceptions of the attributes of the Meaningful PE approach were shaped not only by our formal presentation of ideas but also informally by the ways their colleagues were implementing it and their own experience through the implementation process. In the sections that follow, we turn our attention to the factors that influenced the decisions teachers made in the implementation process (i.e. the how and why of implementation).
Teachers’ Prior Experiences and Beliefs

In learning about and implementing the Meaningful PE approach, teachers tended to compare the approach to their existing beliefs about the purposes of PE, their experiences as educators, and perceptions of their own teaching practice. Century and Cassata (2016) describe these elements as characteristics of end users. This led most teachers to claim that Meaningful PE was very similar to what they believed they were already doing in their classrooms. For example, Felix suggested, “It’s been an easy fit. I don’t think the pendulum for me has to swing very far” (Yr2-Int1). Teachers often drew specific connections between attributes of their typical PE practice and Meaningful PE. For instance, Hunter and Greg saw alignment between the approach and parts of the Teaching Games for Understanding model (e.g. reflective processes), which they perceived as making the implementation process easier for them and their students (Yr1-Int2).

Given a tendency to view their practice as being closely aligned with the attributes of the Meaningful PE approach, many saw their implementation as a source of personal validation for their teaching practice. For instance, Tracy suggested, “It’s that new layer, that [other] little piece that kind of validates what I’m doing for all these years” (Yr1-CoP2). Felix also perceived that the research behind Meaningful PE “[gave] some legitimacy” to his practice (Yr2-Int2). Others valued Meaningful PE because it provided a sense of collegial validation that rebuked some of their colleagues’ ideas about PE being a marginal subject (Sharron-Yr2-Int2).

Although teachers tended to perceive Meaningful PE as closely aligned to their teaching practice, there were also instances when this was challenged. In general, there tended to be a perception amongst teachers that their primary responsibility was to ensure students were active, safe, and having fun, or what Placek (1983) described as keeping students busy, happy, and
good. At times, this seemed to conflict with various attributes of the approach, particularly in relation to engaging students in regular reflection and promoting personal relevance to support how students connected their learning in PE with their lives beyond school. For some teachers the emphasis on reflective activities challenged the notion that students should constantly be moving; reducing movement time, even marginally, to promote reflection was often seen as a “waste [of] time” (Melissa-Yr2-Int1) or stealing time from students who wanted to be active (Felix-Yr2-Int1). This led some to question their priorities: “What’s more important? The getting the kids moving and active and stuff or having those deep, meaningful conversations?” (Mia-Yr1-Int2).

Where teachers’ prior conceptions and experiences of PE were perceived as conflicting with the Meaningful PE approach, some viewed it as an opportunity to work toward change. For example, Miranda suggested she was looking for the approach to both fit her philosophy and extend her practice: “This is exciting, because I feel like I’m doing a lot of these things, but it also gives me a lot to work on, and it gives me a framework” (Yr2-CoP1). However, in spite of their desire and willingness to change, some teachers encountered difficulty in translating intentions into actions. For instance, Melissa struggled with challenging her perception that students should constantly be ‘busy’ in order to place a higher priority on reflective activities:

I find we get into a game and they’re having fun, they’re doing so much… [and I ask myself], “Well, what am I making better use of my time? Let’s keep them active.” And I end up choosing that where maybe it’s better to be having that reflective discussion time. (Yr2-Int2)

Though Melissa wanted to change her approach, she continually returned to her habit of maximizing movement time. Although this arguably represented the feature of ‘fun’ in
meaningfulness and thus has some legitimacy, we have cautioned elsewhere about drawbacks of prioritizing fun over student learning (Beni et al., 2017). In this way, the characteristics of individual end users acted as a strong influence on implementation (Syrmpas et al., 2017).

Positively, some teachers were able to highlight specific areas where their practice had changed because of the Meaningful PE approach, though it often remained a work in progress. For example, Hunter suggested that the greatest change in his practice was “allowing more student voice and student choice in [PE]” (Yr2-Int2). Camille acknowledged that her new focus on facilitating a shared language through the features of Meaningful PE (particularly fun, social interaction, and personally relevant learning) opened new opportunities for student reflection (Yr2-Int2).

One of the most profound examples of changes in practice occurred for Tracy who had taught for 27 years and was someone who had mentored many participating teachers. While much of the approach resonated with Tracy’s teaching philosophy, it still left her with room for growth, and at times she was challenged not to “fall back to what [she was] used to” (Yr1-Int1). Like many others, Tracy initially struggled with taking time for reflection and helping students make personally relevant connections. The first time the approach was presented, she questioned if it was even possible to have elementary-aged students make these types of connections. In the second year, Tracy focused a lot of her attention on this attribute of the approach and began to see positive results. Reflecting on the experience, Tracy shared with the group: “The personally relevant learning answers [from students] are brilliant. It just gives you goosebumps […] That’s the piece that I feel the most satisfaction from” (Yr2-CoP3). Thus, Tracy’s willingness to challenge her own conceptions of PE and students’ learning allowed her to experience the professional satisfaction of seeing change in her teaching practice that she did not realize was
possible.

Given that the Meaningful PE approach was closely aligned with much of what teachers already believed about the purposes of PE, one of the most common changes described was a sense of becoming more “intentional” about prioritizing meaningfulness (Hunter, Tracy, Liam). Part of the perceived benefit of Meaningful PE was that it provided a “framework” to guide that intentionality, helping teachers know where they “need to go with it” (Tracy-Yr1-Int3). Hunter concluded that purposeful implementation of the approach “just makes sense. I just think it’s good practice” (Yr2-Int2). In this way, the Meaningful PE approach is working toward correcting Kretchmar’s (2000) observation that few teachers are being taught to prioritize meaningfulness.

While teachers’ prior experiences and beliefs about PE played an influential role in the implementation process, their perceptions were also challenged as a result. This led to opportunities for change in their teaching practice, which although challenging, were often viewed as valuable.

**Students’ Responses to the Implementation Process**

Due to school ethics board restrictions, we were not able to collect data directly from students. Thus, we are not able to report on students’ responses to the approach but rather to the ways teachers’ perceptions of students’ responses influenced their implementation decisions.

Throughout the implementation process, teachers’ decisions were heavily influenced by their perceptions of student outcomes and how students were responding. Teachers often suggested they were ‘reading’ their students and making implementation decisions with them in mind. For instance, Miranda explained:

I always go back to reading my kids and all the other things that impact them… [If] they
haven’t been outside for recess, their need for physical activity is [high] and the reflection piece is harder because they are not there. So, it’s always taking into account all of those other things. (Yr1-Int1)

For some teachers, reading and knowing their students led them to conclude that certain aspects of the approach may not be viable in their teaching context. For example, Camille perceived that in her class with 12 students on modified individualized education plans, written reflective activities would be challenging (Yr2-CoP3).

Teachers also acknowledged and wanted to be sensitive to the ways implementing an innovation challenged students’ conceptions of and experiences in PE. They recognized the implementation process required adjustment for both teachers and students, as students tend to “get accustomed” to PE being delivered in a certain way (Melissa-Yr2-Int2). Because of this, Miranda was very intentional about easing her students into the implementation process by formatting her lessons around a structure that would be familiar for her students to help “make it less jarring for them” (Yr1-Int1). Similarly, Emily felt the need to introduce the language of Meaningful PE slowly but consistently to her students so that it would become “familiar and consistent” before trying to implement too many changes (Yr2-Int2). Teachers thus used their own professional and practical knowledge of teaching to make decisions about the degree of implementation based on their understanding of students and pedagogy.

In their effort to be sensitive to students’ needs, teachers’ implementation decisions were often influenced by students’ reactions and behaviours. When students’ reactions were perceived to be positive, teachers tended to express greater confidence implementing the approach more fully. For example, early on Hunter and Greg were feeling apprehensive about initiating the implementation process: “We were pushing each other like, ‘Let’s do it,’ and we were nervous,
and then our students just responded really well to that first couple lessons” (Hunter-Yr1-Int2). The positive reactions of their students over time pushed them to continue with the implementation process. Similarly, Tracy, who was very enthusiastic about her use of the approach, suggested that not having any “eye rollers” and experiencing student buy-in were keys to her implementation success (Yr2-Int2).

However, students’ responses and behaviours were not always positive. This sometimes occurred when students’ previous experiences were strikingly different from their teacher’s implementation of Meaningful PE. For instance, Sharron spoke of getting “push-back from the kiddos, because all they wanted to do [was] play their sports” (Yr2-Int2). Mia and Molly faced similar difficulties with students who were accustomed to a sport-based PE program (Yr1-Int2). Thus, when students’ prior conceptions of PE were challenged, at times the implementation process was difficult for both students and teachers.

Some of the challenges teachers faced in managing students’ reactions during the implementation process related to prior behavioural issues, which, while unrelated to the approach, posed a serious challenge to implementation. This was particularly true for Camille and Emily who taught in a school where many students were facing behavioural challenges. Because of this, Camille and Emily were often hesitant to implement various elements of the approach, particularly written reflection: “Both of us were talking about [doing a written reflection], and then we were like, ‘No.’ It’s not going to work. We were going to try, and then we just knew” (Emily-Yr2-Int2). When Camille did attempt to engage her students in reflection, their responses were often deemed inappropriate (Yr2-Int2). Given the context and challenges they were facing, Camille and Emily envisioned themselves using the approach “casually, on the fly” (Camille-Yr2-Int2), as they were unable to see how full implementation would be possible
with their students.

In spite of facing some challenges, all teachers were able to identify ways their flexible implementation of the approach resulted in positive outcomes for their students. While other innovations that teachers had previously been exposed to were sometimes perceived to be “fluff,” they appreciated that the Meaningful PE approach resulted in “valuable learning for the kids” (Tracy-Yr1-Int2). For teachers who were initially hesitant, their perceptions often became more positive as they were able to see changes in the quality of their students’ experiences over time. For instance, Sharron suggested that the ‘aha’ moments that led to her positive perceptions came from being able to recognize, “Hey, [student] would never do that, but here he is. He’s actually engaged” (Yr2-Int2). Even in contexts where teachers faced challenges related to student behaviour, there was a recognition that the reflective components and language of Meaningful PE provided students with ways to express their frustrations and work toward a more positive PE experience (Emily & Camille-Yr2-Int2).

As with teachers, over time, students began to seem more comfortable with their new experiences of PE. For instance, Greg suggested that, while the process was “overwhelming” in Year One, “[students] kind of start expecting it as part of the norm” over time, concluding that “the more and more that you’re constantly doing this, the more relevant it is, because kids start thinking more about [the meaningfulness] of their activities” (Yr2-CoP3). While Century and Cassata (2016) mainly conceptualize teachers as the end users of innovations, our research suggests that the end users of the Meaningful PE approach consisted of teachers and students, with both serving as strong influencing factors on implementation.

External Organizational Pressures

Teachers cited several sources of external organizational pressures that influenced their
implementation decisions. Early in the process, some external pressure came from teachers knowing they were being researched. For instance, some were initially hesitant to allow us to visit their classrooms because they wanted time to practice implementation “just for [them]selves” to “[get their] feet wet with it” before any formal implementation occurred (Greg & Hunter-Yr1-Int1). Some teachers thus viewed the research team as being evaluators rather than collaborators or supporters. While the research process added a sense of pressure for some early on, most external pressures teachers experienced came from their responsibility to ensure the formal curriculum was being taught, managing expectations and demands placed on their time, and administrative and organizational decisions beyond their control.

Teachers tended to evaluate the Meaningful PE approach in relation to the formal provincial PE curriculum. For some, Meaningful PE was perceived as something they needed to plan for in addition to curricular expectations rather than as something that could help them and their students reach curricular objectives. For instance, Liam suggested that when planning he considers, “What are the lessons from the curriculum that I’m trying to hit, and then what are the points from Meaningful PE that I could try and hit within these lessons?” (Yr2-Int2). Similarly, Camille suggested that incorporating the reflective elements of Meaningful PE was not a priority for her based on her perception of its failure to align with curricular objectives: “It’s not something I have to assess, so I don’t know if I would spend a ton of time [on it]” (Yr2-Int2). However, for other teachers, Meaningful PE was perceived as being directly aligned with the curriculum. For instance, Tracy was able to identify “five fundamental principles in the curriculum that totally connect” (Yr1-Int3) and used Meaningful PE to plan toward and assess these objectives. Similarly, Miranda found that several elements of the Meaningful PE approach aligned with curricular expectations in relation to students’ motor competence, skill
development, goal-setting, cognitive development, and living skills (Yr2-Int2). For Miranda, “the value in [Meaningful PE] is how well it relates to the curriculum” and “allows teachers to […] be able to teach their curriculum” (Yr2-Int2). Importantly, all teachers were teaching from the same curriculum document; it was their perceptions of how Meaningful PE did/did not align that differed.

Unsurprisingly, teachers regularly cited time as a source of pressure in the implementation process. Often, finding a balance between all their responsibilities was challenging. For example, Mia and Molly related their ambition in taking on implementation to “When you go to a grocery store and you buy everything because you’re like, ‘Yeah, I’m so hungry!’ But then you have regrets” (Yr1-Int2). Camille faced similar challenges in that after having signed up to participate, her teaching role changed to include some science classes: “Science is unfortunately my priority. […] it’s so intense and heavy, and I’ve taught PE for a decade. I can walk into the gym with no plan and I’m okay” (Yr2-Int2). In addition to the need for time in their daily timetables, teachers recognized that learning to implement the approach required a long-term commitment, recognizing that, “it takes a long time to master something” (Miranda-Yr2-CoP3). When teachers faced challenges that prevented them from being able to invest time into the implementation process, they recognized that these constraints were often the result of administrative and organizational decisions that were made for them: “If administrators, principals want the approach in their school, then they can give time to people. So, it’s also getting [principals] on board too, because they control our time ultimately” (Emily-Yr1-Int1).

When teachers perceived that they were receiving support from their administration, this was identified as a facilitator of implementation. For instance, it was apparent to teachers that PE was valued by administration when they invested money into hiring specialist PE teachers and
releasing them for professional development opportunities (Felix, Tracy, James). When Sharron faced “push-back” from students through the implementation process, “the sense that [she] had administrative support” enabled her to continue (Yr2-Int2). However, for some teachers there was less administrative support, which served as a source of frustration. For example, Emily and Camille faced challenges with class sizes, scheduling, and a longer-than-expected renovation to the gymnasium, which became a source of tension: “Is it my job to say, ‘Let’s rejig the schedule so that the big kids can actually have some space’?” (Camille-Yr2-CoP2). Even tensions unrelated to the approach sometimes left teachers feeling unable to focus on the implementation process (Emily-Yr2-CoP3).

The most substantial sources of external pressure identified were a series of ‘work-to-rule’ sanctions and province-wide labor negotiations followed by the sudden covid-19 related mandated closure of schools. Sanctions disrupted students’ routines and left teachers feeling as though they were “fly[ing] by the seat of [their] pants” (Hunter-Yr2-Int2). For some teachers, the frustration with facing sanctions and school closures in the middle of the implementation period was the recognition that these disruptions often caused them to revert to previous ways:

What I find is, anytime you’re working through a new approach or something else that you’re adding to your program or a new way to think about doing things is, it’s kind of like using a muscle, and then if you don’t use it, you kind of go back into some old habits […] I don’t think this is for me a one-year process. It takes a really long time to build something that stays (Miranda-Yr2-Int2).

Discussion

The purpose of this research was to examine the experiences of 12 elementary teachers implementing Meaningful PE in their classrooms over two school years and to understand the
factors that influenced the implementation process. This research makes a significant contribution by highlighting three primary factors that influenced teachers’ decisions in the process of implementing the Meaningful PE approach, including teachers’ prior experiences and beliefs, students’ responses to the implementation process, and external organizational pressures. This research also provides insight into the value of using Century and Cassata’s (2016) factors that influence innovation implementation to frame and conceptualize implementation research design and analysis, particularly when studying innovations in their early stages. Using Century and Cassata’s (2016) framework for implementation research and applying it through an actor-oriented lens (Penuel et al., 2014) has offered deeper insights into implementation of Meaningful PE than a more traditional focus on barriers and facilitators alone. Studying implementation research from this perspective provides the opportunity to consider factors that are both determined by and beyond the control of the end user. Making sense of individual teachers’ experiences and decision-making processes in depth is important for thinking about how the approach and its presentation to teachers can be refined (Penuel et al., 2014). However, we recognize the subjective nature of these experiences and small sample size in the current research and highlight the need to be sensitive of the ways other teachers in other contexts may be influenced in different ways.

**Implications for Implementation of Meaningful PE**

In light of the findings, we highlight several suggestions for those supporting teachers in learning about and implementing Meaningful PE. First, there is a need to support teachers in making sense of the approach in relation to their prior beliefs and experiences as well as policy (e.g. curriculum documents). Given that teachers tended to interpret the approach in terms of how well it did/did not align with their personal beliefs, beginning with a personal vision-for-
teaching activity may assist teachers in making sense of the approach in light of their beliefs and prior experiences. Regarding teachers’ tendencies to interpret Meaningful PE in relation to the curriculum, we highlight the need to help teachers draw specific connections and areas of alignment between the approach and their local curricular/policy objectives.

Second, the use of an actor-orientation (Penuel et al., 2014) has been valuable in providing insights into teachers’ perspectives of the Meaningful PE approach, which we view as helpful in continuing to refine the approach and share it with other teachers in the future. Similar to teachers in Beni et al. (2021), the attributes of Meaningful PE mostly made sense to teachers and were relatable both to teachers and their students. However, many teachers remained unconvinced of the critical role of reflection and used it selectively based on their interpretation of its value for students and alignment with curricular expectations. Becoming aware of the value of an experience and making connections between experiences (past-present-future) are central ideas in theories of meaningfulness and its contribution to learning (Bruner, 1990; Dewey, 1938; Leontiev, 2013). Recent studies on meaningfulness in PE have also highlighted the critical role of reflection in helping students makes sense of and find value in their learning experiences (O’Connor, 2019; Thorburn, 2021; Lynch & Sargent, 2020). For this reason, it seems important to engage teachers in developing a deeper understanding of why reflection is a key component in prioritizing meaningfulness and is worth taking time for, even at the expense of movement time. Making use of theoretical understanding of the role of reflection in relation to meaningfulness may therefore be important to consider when introducing this idea to teachers. Therefore, future presentations of Meaningful PE to teachers warrant focused time and attention on this. In addition, given that autonomy-supportive strategies are a key component of the approach but were not mentioned as frequently by teachers as we anticipated, future presentations of
Meaningful PE should foreground student-centred pedagogy with a focus on autonomy-support.

Third, we highlight the need to consider context and afford teacher flexibility in the implementation process. Even though all teachers worked in the same school board, the specific contexts in which teachers were implementing the approach was highly variable and played a significant role in the implementation process. Much like the teacher who implemented Meaningful PE in Vasily et al. (2021), where teachers perceived strong support from administration, colleagues, students, and even parents, their confidence in implementing the innovation was bolstered. However, where teachers faced significant resistance, unsurprisingly implementation was hindered. This also extended to policy, where labour negotiations and mandates related to covid-19 were both reported by teachers as negatively impacting the implementation process. Notably, these schools were all within the same school board (i.e. the same set of policies, same curriculum, etc.) and located within approximately twenty kilometres of one another. This highlights the value of affording teachers some flexibility in the process of implementing the Meaningful PE approach. Indeed, teachers’ valuing of the flexibility of the approach adds support for recent calls in the literature to develop “more loosely framed guiding principles” for the promotion of meaningful experiences that do not require teachers to “blindly adhere to the mandatory and non-negotiable features of practice advised” (Thorburn, 2021, p. 2).

Finally, several teachers mentioned the challenges associated with sustaining their implementation of Meaningful PE in that there was a tendency to return to their former habits. It seems that when the factors outlined here worked together (i.e. the approach was well-aligned with teachers’ beliefs about PE, they experienced positive responses from students, and environmental and organizational factors were managed in such a way that teachers had
sufficient time and support), teachers were more likely to believe the changes they were making would be sustained. We highlight the importance of considering the interplay among these factors when supporting teachers in implementing Meaningful PE.

**Implications for Educational Implementation Research**

Teachers in the current research tended to conceptualize and implement the approach in varying ways and to various extents in relation to their individual characteristics, including their prior conceptions of PE and the role of the PE teacher, level of experience, and interpretations of how well the approach did/did not align with their personal priorities and philosophies for teaching PE. Consistent with studies of implementation of educational innovations in various subjects, even where teachers saw value in the innovation and consequently wanted to change their practice, their prior experiences and beliefs made it difficult at times to do so (Spillane et al., 2002; Cohen & Ball, 1990). This highlights the need to help teachers make sense of innovations in relation to their existing beliefs and practices.

Organizational and environmental factors also played a role in how teachers implemented Meaningful PE. Decisions made at the administrative level influenced the time, space, and support teachers received within their schools and had the potential to either facilitate or hinder teachers’ implementation of the approach. Beyond the level of the school, the provincial curriculum document influenced the extent to which teachers implemented various aspects of the approach. This highlights the need for administrators and policy makers to be supportive of and make provisions for the implementation process, particularly when teachers themselves see value in what it is they are implementing. Administrators might advocate for time spent working with the innovation and for innovation developers to help teachers draw connections between innovations and curriculum/policy (Kwok, 2014). On a broader scale, province-wide labour-
negotiations and ultimately the transition to online schooling related to covid-19 were extremely influential factors, essentially halting teachers’ implementation of the approach. While these are factors well beyond the control of teachers and the research team, they highlight the very dynamic and unpredictable nature of innovation implementation in schools.

The attributes of the Meaningful PE approach itself tended to be well-received by teachers in the present research, particularly those attributes that might be considered more objective (e.g. the features of Meaningful PE). However, given its flexible nature, teachers tended to interpret certain aspects of the approach subjectively, and at times, these were rejected or neglected as a result. Importantly, teachers’ initial perceptions of the attributes of the approach tended to change across the implementation process in response to both their own comfort level and their students’ responses. Thus, the implementation process itself should be viewed as having the potential to influence teachers’ perceptions of the attributes of innovations (Beni et al., 2021).

The longitudinal nature of this research has highlighted the importance of implementation over time. In spite of teachers perceiving the approach as being quite close to their practice early on, similar to Dyson’s (2002) research, teachers often expressed the need for a substantial investment of time over multiple school years in order to make their implementation of Meaningful PE consistent. This, along with the implementation support strategies we offered to teachers and how they influenced the implementation process, are beyond the scope of the current paper and will be taken up elsewhere.

While Century and Cassata’s (2016) framework has offered a valuable lens through which to consider the implementation process, the current research highlights a notable gap. Teachers in this research were deeply concerned with their students’ responses and behaviours
throughout the process. However, the role of students is seemingly absent from the spheres of influence Century and Cassata (2016) highlight. While this framework has been useful, we caution that the role of students in the implementation process should not be overlooked. The results of the current research add merit to Syrmpas et al.’s (2017) findings suggesting classroom management is a factor in the decisions teachers make during the implementation process and to Guskey’s (2002) assertion, along with findings from Beni et al (2021), that when teachers perceive positive student outcomes from the implementation process, they are more likely to commit to long-term change in their teaching practice. In addition, we suggest the potential value in considering not only teachers but also students as ‘end users’ who influence the implementation process.

**Future Directions**

The current research involves the largest sample of teachers implementing the Meaningful PE approach across the longest period of time. To sustain implementation of Meaningful PE ‘beyond the honeymoon period’ (Goodyear & Casey, 2015), we argue for the importance of continuing to study the implementation of the approach with other samples of teachers in varying contexts and with various levels of experience across multiple school years. We also highlight the need to focus on implementation support strategies that might effectively support teachers in learning to implement Meaningful PE across time. In addition, while some work has been done to understand students’ experiences of Meaningful PE (Ní Chróinín et al., in review), there is a need to expand understanding of the ways the implementation of Meaningful PE over time does/does not influence the meaningfulness of students’ experiences.

Positively, we believe the current research highlights the value of an actor-oriented approach (Penuel et al., 2014) to studying the implementation of educational innovations, guided
by Century and Cassata’s (2016) framework. We concur with Hall et al. (1975) that “innovation adoption is a process rather than a decision-point – a process that each innovation user experiences individually” (p. 52), and we highlight the value of studying teachers’ experiences of the implementation process in designing educational innovations so that they may be more effectively shared with teachers and used to better meet the needs and interests of students.
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“It’s a really good delivery if you want something to stick”: Teachers’ engagement with professional development to support implementation of Meaningful Physical Education
Introduction

Traditional forms of teacher-centered physical education (PE) pedagogy are under scrutiny, having been identified as largely ineffective for students in contemporary times (Armour & Harris, 2013). Kirk (2010) cautioned that without radical change to PE programs and pedagogies, they would either continue to repeat themselves in their current form (as they have done for decades) or become altogether extinct. One avenue for radical reform is through the development and use of approaches that change the way PE programs and curricula are delivered (Casey, 2014). However, the development of new approaches alone does not ensure their translation into practice in schools. Without robust support during implementation of innovations, there is a risk they will remain ideas detached from the realities of life in schools (Spillane et al., 2002). Indeed, sustained pedagogical change for PE teachers learning to implement innovative approaches has proven to be difficult, requiring both conceptual and practical shifts (Casey, 2014). Tyack and Cuban (1995) contend that making lasting changes to teachers’ instruction has proven to be the “most difficult kind of reform” (p. 135). This has highlighted the need for reimagining how teachers receive support as they learn about and implement innovative PE approaches (Goodyear & Casey, 2015).

The current research is part of a large-scale project focused on examining the experiences of teachers learning to implement the Meaningful PE approach, which is designed to help teachers prioritize meaningful experiences for students (Fletcher et al., 2021). We recognize the need to support teachers’ implementation of innovations through effective professional development (PD) initiatives if they are to experience lasting changes to their teaching practice (Century & Cassata, 2016; Goodyear & Casey, 2015). Thus, the purposes of this research were to design a PD initiative to introduce teachers to Meaningful PE and support them in
implementing it in their classrooms and to understand their experiences of the PD process.

**Teachers’ Professional Development**

The ongoing PD of teachers is a major focus for policy and practice in education on a global scale (Banks & Smyth, 2011) and has long been a topic of interest in PE research (Bowes & Tinning, 2015; Makopoulou & Armour, 2011). Currently there is a renewed attention to PD that is attributable in part to the educational standards movement, the role of professional organizations, and a push for research focused on teaching (Osmond-Johnson et al., 2019). Importantly, teachers’ learning can strongly influence the quality of their students’ learning (Fishman et al., 2003). With this potential impact in mind, providing PD opportunities for teachers has been seen by some as a panacea to solve a variety of problems in education (Armour & Yelling, 2007). However, this idea is misguided, particularly when the dominant, traditional form of PD often fails to result in meaningful opportunities for teachers’ learning (Bechtel & O’Sullivan, 2006; Darling-Hammond et al., 2017). Amongst the reasons for the weaknesses in traditional forms of PD are their decontextualized nature, treatment of teachers as passive learners, and insufficient focus on student learning (Parker & Patton, 2016). In light of these concerns, in the last decade there has been a focus on factors that might promote “effective” PD.

We conceive of PD as including a variety of learning opportunities for teachers related to and designed to improve the quality of their own practice (Parker & Patton, 2016; Darling-Hammond & McLaughlin, 2011). This encompasses experiences in which teachers engage to deepen their understanding of and learn about both teaching and learning (their own and that of their students). These experiences may be either voluntary or mandated, formal or informal, and undertaken individually or as collaborative initiatives (Desimone, 2011; Patton et al., 2015). Darling-Hammond et al. (2017) define effective PD as “structured professional learning that
results in changes to teacher knowledge and practices, and improvements in student learning outcomes” (p. 2). In other words, effective PD can be simply defined as that which accomplishes what it sets out to: cause changes in teachers’ practice that result in student learning.

Identifying core features of “effective” PD can be challenging given that the effectiveness of PD initiatives is influenced by factors at both the school and system levels including available resources and policies (Darling-Hammond et al., 2017), the specific outcomes being measured (Penuel et al., 2007), and the stage of a teacher’s career (Guskey, 1995). Indeed, Parker and Patton (2016) contend that viewpoints on effective PD vary based on the purpose, context, and school culture in which the PD takes place. Notwithstanding the need to acknowledge context and personal preferences (Guskey, 1995; 2003), in recent years some consensus has been established regarding the characteristics of effective, high-quality PD for teachers (Darling-Hammond et al., 2017). Several of these (drawn from Desimone, 2009; Darling-Hammond et al., 2017; Parker & Patton, 2016; and Hunziker, 2011) are outlined in Table 6.1.

Table 6.1

Characteristics of Effective PD

<table>
<thead>
<tr>
<th>Effective PD...</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>…focuses on teachers’ content knowledge and pedagogical skills.</td>
<td>discipline-specific; focuses on teachers’ everyday work</td>
</tr>
<tr>
<td>…is based on teachers’ needs and interests.</td>
<td>considers context and teachers’ prior learning and experience</td>
</tr>
<tr>
<td>…acknowledges teachers as active learners in a social environment.</td>
<td>focuses on inquiry and reflection; promotes discussion; allows teachers to engage in types of learning experiences they will facilitate for students</td>
</tr>
<tr>
<td>…supports collaboration.</td>
<td>provides opportunities to work with others one-on-one, in small groups, and/or at the school-level in a format that is job-embedded and specific to teachers’ context</td>
</tr>
<tr>
<td>…is ongoing and sustained.</td>
<td>provides teachers with time to learn, implement, reflect, and make changes in practice</td>
</tr>
<tr>
<td>…provides support.</td>
<td>includes time and support from other teachers, key stakeholders, and experts</td>
</tr>
<tr>
<td>…uses models and modelling of</td>
<td>includes curricular/instructional models and modelling of</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>effective practice.</th>
<th>instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>...offers feedback and reflection.</td>
<td>provides teachers opportunities to reflect on practice, receive feedback from an expert, and make changes</td>
</tr>
<tr>
<td>...is facilitated with care.</td>
<td>supportive, not domineering, provider facilitates teacher-centred learning experiences</td>
</tr>
<tr>
<td>...is focused on improving student learning outcomes.</td>
<td>teachers’ engagement results in sustained impact on student learning gains</td>
</tr>
<tr>
<td>...includes opportunities for collaboration within learning communities.</td>
<td>teachers learn with/from one another in learning communities</td>
</tr>
</tbody>
</table>

While listing common features of effective PD can be helpful for PD providers, this should not be viewed as a silver bullet, nor should it negate the difficulties in providing effective PD for teachers. Such difficulties stem from the fragmented and voluntary nature of teachers’ learning (Bechtel & O’Sullivan, 2006), personal factors that influence teachers’ motivation and ability to pursue and benefit from PD (such as a willingness to participate or personal time constraints) (Makopoulou & Armour, 2011), and the time and cost of these initiatives. In addition, facilitating dialogue amongst teachers, creating a context where teachers are willing to share their own shortcomings, helping teachers and students find shared value in teaching and learning, comparing what teachers say and do in practice, and the difficulty of linking teacher learning to student learning outcomes can all contribute to the challenging task of promoting effective PD (Bechtel & O’Sullivan, 2006; Armour & Yelling, 2007).

These challenges highlight the need to position teachers as active learners and agents in their own PD experience. This acknowledgement has led to a move away from forms of PD that position teachers as passive learners both in PE (Patton & Parker, 2016), and in education more broadly (Avalos, 2011). Knowledge of the characteristics of effective PD and other theoretical developments have provided some ideas to improve the quality of teachers’ professional learning. One of the primary ways this has been done in PD for PE is through the use of communities of practice (CoPs).
Communities of Practice. CoPs are positioned within Lave and Wenger’s (1991) work on situated learning which “assumes that knowledge is inseparable from the contexts and activities in which it develops” (Parker et al., 2010, p. 338). Learning is situated through what Lave and Wenger (1991) refer to as legitimate peripheral participation, where it is embedded within activities of a community (Kirk & Macdonald, 1998; Kirk & Kinchin, 2003). Learning is legitimate in that participants’ work matters to the community’s success, peripheral in that apprentices are novices who are not yet full participants in the community, and participatory in that knowledge acquisition often occurs through interaction with others (Kirk & Kinchin, 2003).

Wenger’s (1998) conceptualization of CoPs positions learning as social participation, suggesting that educational processes based on actual participation are more “epistemologically correct” as they effectively match knowledge and learning (p. 102). Thus, learning is a process that involves a) “mutual engagement” where one identifies as a member of the community; b) “joint enterprise” where goals are shared by members of the community; and c) “a shared repertoire” of subjects or materials that community members hold in common (Yoon & Armour, 2017). Importantly, mutual engagement or collaboration does not necessarily result in a CoP (Wenger, 1998). CoPs are “meaningful, purposeful, and revolve around authentic tasks” (Parker et al., 2010, p. 338) and must be intentionally facilitated (Hadar & Brody, 2010). While collectives and groups of teachers may have some merit in facilitating collaboration for teacher learning, these are distinguished from CoPs in that the level of mutual engagement within a CoP holds greater potential for teacher growth and development (Parker et al., 2012).

Our work is inspired by others who have intentionally facilitated CoPs when introducing teachers to various models and approaches in PE including, for example, Cooperative Learning (Goodyear & Casey, 2015), Teaching Personal and Social Responsibility (Walsh & Wright,
2016), and the Activist Approach (Oliver et al., 2017). We build on these examples by designing a PD initiative to support teachers in learning about Meaningful PE. The processes of the PD initiative are guided by the principles of facilitating a CoP, with the aim of understanding teachers’ experiences of the process and how to better support teachers learning to implement Meaningful PE. While we recognize that not every collaborative group constitutes a CoP, we make use of this concept because it best represents the theoretical perspective upon which the PD initiative was designed (i.e. social learning theory), particularly when compared with other types of learning communities based upon learning organization theory (Blankenship & Ruona, 2007). The questions guiding this research are: What are teachers’ experiences of a PD initiative designed to support their learning about and implementation of the Meaningful PE approach? What strategies are most effective for supporting teachers in implementing Meaningful PE over time?

**Methodology and Methods**

In line with situated learning theory, this qualitative research was conducted through a social constructivist approach, where learning is viewed as a non-linear process grounded in active inquiry and exploration, with teachers making sense of knowledge through reconciling past, present and future experiences in interaction with the social environment (Vygotsky, 1978). It was our intention to work with, rather than on, teachers in supporting their PD, and we sought to learn from and share their experiences (Cooper et al., 2021). In particular, there is value in listening to teachers in order to understand helpful ways to engage other teachers in PD focused on learning about implementing Meaningful PE in the future.

**Context and Participants**

This research was conducted with twelve elementary (K-8) PE teachers in one school
board in Canada across two school years. Teachers were invited to participate in the study via an email sent out from one school board’s PE instructional leader. Five teachers who showed interest and had a range of experience levels were invited to participate in Year One; three of whom continued their participation into Year Two (the other two were reallocated to non-PE teaching roles). The remaining teachers who showed interest but were not invited in Year One were invited to participate in Year Two, along with several others who had shown an interest in the project since then. This resulted in an additional seven teachers in Year Two. Many participants had pre-existing relationships with one another as a result of having worked and/or participated in PD initiatives together in the past and being located in neighbouring schools to one another. Table 6.2 provides background information on teachers’ years of experience, grade(s) they used the approach with, and the duration of their participation in the study.

**Table 6.2**

*Background on Teacher Participants*

<table>
<thead>
<tr>
<th>Participant (Pseudonym)</th>
<th>Years of Teaching Experience</th>
<th>Grade(s) the Approach was Used With</th>
<th>Year(s) of participation in the Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunter</td>
<td>9</td>
<td>7</td>
<td>1&amp;2</td>
</tr>
<tr>
<td>Greg</td>
<td>8</td>
<td>7</td>
<td>1&amp;2</td>
</tr>
<tr>
<td>Tracy</td>
<td>27</td>
<td>1-8</td>
<td>1&amp;2</td>
</tr>
<tr>
<td>Molly</td>
<td>1</td>
<td>6-7</td>
<td>1</td>
</tr>
<tr>
<td>Mia</td>
<td>1</td>
<td>6-7</td>
<td>1</td>
</tr>
<tr>
<td>Emily</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Camille</td>
<td>14</td>
<td>5-6</td>
<td>2</td>
</tr>
<tr>
<td>Miranda</td>
<td>19</td>
<td>4-5</td>
<td>2</td>
</tr>
<tr>
<td>Melissa</td>
<td>20</td>
<td>4-5</td>
<td>2</td>
</tr>
<tr>
<td>Liam</td>
<td>11</td>
<td>1-8</td>
<td>2</td>
</tr>
<tr>
<td>Felix</td>
<td>8</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Sharron</td>
<td>1</td>
<td>5-8</td>
<td>2</td>
</tr>
</tbody>
</table>

**Facilitators.** The first and second authors facilitated the CoP. Stephanie facilitated the majority of the CoP meetings. She had been using the Meaningful PE approach in her own
classroom for several years. Tim participated in and offered support facilitating the CoP. He had been working in teacher education for ten years and had previously taught secondary school PE for five years. Along with Déirdre, he had developed an approach to teach pre-service teachers how to prioritize meaningful experiences in PE.

**PD Initiative**

We intended to facilitate PD in a way that would be effective for teachers’ professional learning, grounded in our understanding of the characteristics of effective PD (see Table 6.1). Italicized phrases in the following passages indicate how we aimed to integrate the characteristics of effective PD in our approach. Teachers were introduced to the Meaningful PE approach through online resources we created and shared via a password-protected page on our research website. This included: short videos outlining main ideas of the approach and providing suggestions from teachers who had previously used it in their classrooms, blog posts, relevant journal articles (e.g. Beni et al., 2017), and several materials for use in teachers’ classrooms (e.g. student reflection templates). Our intention in beginning with an online platform was to allow teachers to work through the material at their own pace. Teachers were given several weeks to engage with the online resources and were provided with a suggested timeline for how to do so.

After this introductory period, our approach to the PD initiative centered around fostering a **CoP to support collaboration** amongst teacher participants and members of the research team. During the first meeting in both school years, we introduced the approach to teachers through a slideshow presentation (much of which overlapped with the content of the website). This was followed by Stephanie or Tim **modelling the approach** for them in one or two mock lessons in the gymnasium with teachers acting as students. Initially, the intent in modelling was to establish trust by making ourselves vulnerable by putting our teaching on display before visiting their
classrooms to watch them teach. Our modelling focused primarily on pedagogies (e.g. strategies to facilitate student choice), while also guiding reflections on the meaningfulness of their experiences in the lesson. For example, when Tim modelled a guided reflection following a folkdance lesson, one teacher described the cultural connections of the dance as meaningful while another expressed feeling uncomfortable dancing in front of colleagues. Thus, in this case they were seeing the pedagogy of reflection being modelled while also reflecting upon meaningfulness as their students would. We also set aside time to facilitate discussion after the lesson, giving teachers the opportunity to ask questions and engage in conversation with fellow members of the group to begin to create a sense of community.

Although teachers elected to participate and thus came to the study with an interest in learning about Meaningful PE, the literature recommends CoP meetings center around teachers’ needs and interests; thus, we were intentional about allowing teachers to play a pivotal role in guiding the conversation. We did this by inviting them to contribute topics for discussion via email before each meeting and by allowing the meetings to be guided by teachers’ voices rather than a rigid and imposed schedule. For example, one of the first items in each meeting was to have each teacher provide an update of their experiences of implementing Meaningful PE. Quite often the discussions that ensued took up all of the meeting time that was allocated. Although we prepared activities and discussion topics for each meeting, these were secondary to supporting teachers’ needs and interests, and thus we did not feel things were lost when they were not incorporated. We were also intentional about positioning ourselves as peers in the group as opposed to ‘experts,’ by openly challenging our own assumptions, sharing our own failures and uncertainties, and asking questions rather than directing conversation. This helped create an environment where we were all positioned as active learners and to facilitate PD with care.
In Year One CoP meetings occurred once before and once after implementation. While it was our intention to facilitate more regular meetings, it was challenging to schedule this with all teachers. However, some teachers did initiate interactions with one another outside of official CoP meetings to support their learning about Meaningful PE (e.g. observing a more experienced colleague’s use of the approach). In response to these scheduling challenges and Year One teachers’ suggestions, during Year Two we took a more systematic approach, pre-scheduling and facilitating group meetings once every six weeks early in the year and then every eight weeks as teachers became more comfortable using the approach in their classrooms.

In addition to CoP meetings, we stayed in regular contact with teachers, following up via email every few weeks, and making ourselves available through email, text messaging, and in-person meetings at teachers’ request to offer support by, for example, answering questions and sharing resources. We also visited teachers’ classrooms to observe their teaching; however, we were careful to position these observations as an opportunity to provide feedback and promote reflection rather than to evaluate their teaching. While we were not allowed to have direct contact with students due to school board ethics guidelines, and thus were unable to measure student learning outcomes, through facilitating reflection, we helped teachers draw connections between changes they were implementing in their practice and the ways they perceived these changes were impacting their students. Finally, all of these support strategies were continued across a period of two school years, providing an ongoing, sustained PD experience for teacher participants. Unfortunately, our efforts in Year Two (including three scheduled CoP meetings) were cut short by covid-19-related mandated school closures.

Data Collection and Analysis

Three qualitative data sources were generated. First, teachers participated in semi-
structured interviews before, during, and after implementation each year. Interview questions focused on teachers’ experiences of learning about and being supported in implementing the Meaningful PE approach in their classrooms. Interviews ranged from 14 minutes to one hour. Second, non-participant observations were conducted in teachers’ classrooms once each year, conditional to parental consent. Conducting observations allowed us to see how teachers were using the approach in their classrooms, to offer supportive feedback and suggestions, and to compare other forms of data to what we observed. In line with school board ethics guidelines, we were only able to visit seven of the 12 teachers’ classrooms due to parental objections to having their children observed. Third, CoP meetings were audio-recorded and transcribed. Topics of conversation within the CoP were guided by teachers’ needs and requests and typically focused on discussion of very practical aspects of implementing the approach within their varying contexts, such as time management and the development of resources for use in the classroom. There were six CoP meetings in total (two in Year One; four in Year Two), four of which were recorded (one from Year One, three from Year Two), ranging from 76 to 103 minutes. The first CoP meeting each year was not recorded to allow teachers to become comfortable with the process; however, some reflective notes were taken by Stephanie and Tim.

Our inductive, thematic analysis of the data was guided by Braun and Clarke’s (2012) six phase approach. In phase one interview data and CoP meetings were transcribed and all data sources were read and reread for familiarisation. In phase two initial In Vivo codes were applied (Miles et al., 2014), meaning a word/phrase from the participant’s words was used for each code (e.g. “let your guard down”). In phase three data were coded a second time, using descriptive codes to begin grouping In Vivo codes together (e.g. In Vivo codes “grab and go”, “it needs to be simple”, and “simple, quick reference” were recoded as “simple/fast”). Initial themes were
subsequently generated (e.g. “face-to-face versus online context” from codes “not normally a ‘techy’ person” and “face-to-face”). In phase four, themes were reviewed, several of which (e.g. “self-direction and accountability” and “support over time”) were renamed as subthemes and grouped together under a single theme. At this stage, a secondary deductive analysis was conducted, comparing coded data with the characteristics of effective PD we aimed to foster. Since the questions teachers were asked centered around their experiences of the PD, many responses aligned with these characteristics. In phase five we defined two primary themes and several sub-themes within each. Finally, in phase six, we named the following two themes that are reported as findings: “It’s apples and oranges” and “Utopia versus reality”. Importantly, it was our intention to conduct a reflexive thematic analysis; we do not view themes as pre-existing entities, waiting to be discovered, but rather as being crafted by us as researchers and reflecting our theoretical assumptions and interpretive choices (Braun & Clarke, 2019). To ensure the quality of our thematic analysis, we guided the process by Braun and Clarke’s (2006) list of suggestions by, for example, checking transcripts against recordings for accuracy, conducting a comprehensive coding process, and positioning ourselves as active in the analysis process.

Findings

“It’s Apples and Oranges.”

When we asked teachers to compare their experiences of the PD we designed to other PD opportunities they had experienced, Camille’s quote was representative of the responses we received: “I can’t even compare it because it’s apples and oranges,” (Yr2-Int2) suggesting their experiences of this PD were very different from their previous experiences. Teachers’ perceptions of the current experience were largely positive. Teachers drew from their previous experiences to identify aspects of this PD that supported their learning, much of which related to
the characteristics of effective PD we had intentionally planned toward. Most prominently, the teachers spoke of the value they placed on both collaboration (particularly through the CoP) and our modelling of the approach.

Collaboration. Our intentional facilitation of a CoP to introduce teachers to Meaningful PE and support their implementation provided a space to “share best practices [and their] high and low moments” (Tracy-Yr1-CoP2), to “reflect” (Mia-Yr1-CoP2), and to network with other PE specialists (Hunter-Yr2-Int2) in a context where many of the teachers felt “forgotten” (Miranda-Yr2-Int2). Importantly, given that many participants knew each other beforehand, there was a strong sense of community and trust (Miranda-Yr2-Int2) within the group, much of which had been established prior to the research. This facilitated an environment where teachers felt they could “take risks” (Tracy-Yr1-CoP2) and feel unafraid of “looking stupid” (Miranda-Yr2-Int1). The vulnerability and willingness of some to share both successes and failures allowed other, often less-experienced, teachers to feel reassured. For instance, Greg suggested, “It was nice to hear that we weren’t the only ones saying, ‘Oh my God. We’re behind the eight-ball.’ […] That was reassuring.” Additionally, the CoP meetings allowed teachers to hear from others who were working in different contexts, which allowed them to “broaden horizons” (Melissa-Yr2-Int2). Tracy shared:

Learning from each other was so powerful. I live in my little bubble […] and I don’t really think about it, but when I heard the women from [another school] talking, and their challenges with their kids and all that, it was such an eye-opening experience with me, saying, “Wow, okay. So, it’s not easy everywhere.” (Yr2-Int2)

In addition to the CoP, teachers valued opportunities to collaborate with colleagues in their own school. Where teachers from the same school participated together, they tended to
view this as beneficial for their learning: “Where one of us leaves off, the other one can pick up, or we can work together on things” (Felix-Yr2-Int2). When recruiting participants, we prioritized accepting all teachers from a given school who had signed up to participate; this was valued by teachers and highlighted the importance of creating a learning community *within* the school wherever possible. Several teachers who were the sole PE specialist in their school or who taught with a colleague who was not involved in the research spoke of this and expressed a desire to work with a partner in their own school: “It would probably have been really good to have someone here in the school to bounce ideas off more often” (Melissa-Yr2-Int2). Although some participants were already collaborating prior to the research, they found value in the intentional facilitation of a CoP with a broader group of participants around a common interest.

**Modelling.** Teachers spoke extensively of how much they valued our modelling of the approach, allowing them to experience it as their students may and envision how it might be implemented. For many participants, seeing the approach modelled was “by far the most helpful” aspect of their learning (Camille-Yr2-Int2). For instance, Emily suggested:

That was the most that I’ve gotten out of something, when Tim did the dance lesson and then we talked about it and then we went in the room. I found that was helpful, because at other PDs it’s just them standing up there talking at you. (Yr2-Int2).

Seeing the approach modelled “[brought] it to life” (Felix-Yr2-Int2) and allowed teachers who were previously apprehensive to be able to say, “Okay, I can do that” (Greg-Yr1-Int3). In addition to modelling the approach in practice, we also provided teachers with sample lesson plans from Stephanie’s use of the approach in her own classroom. Teachers suggested this was another helpful aspect in getting them started. For instance, Tracy shared: “Your lesson plans were excellent. Having that there was really, really good and not overwhelming because I could
see it. I went ‘Oh, okay I get it’” (Yr1-Int3). Thus, in addition to modelling a new approach in practice, we highlight the value of modelling other aspects of teaching, including how teachers may plan toward it or assess student learning.

**Other Characteristics.** While collaboration and modelling were interpreted as the most valued aspects, several other characteristics of effective PD were mentioned. For instance, teachers valued being treated as *active* (rather than passive) *learners*. They suggested that this was something that separated this PD experience from others they had been a part of in the past. For instance, Felix described previous PD experiences as “sit and get”, often with several hours of a facilitator talking to, rather than conversing with, teachers. Relating this to the current PD, he suggested: “That’s been different; I appreciate that” (Yr2-Int2). Similarly, Miranda suggested:

> I think it’s unlike a lot of other things I’ve done […] The biggest issue with education and teachers is we’re not treated as learners…like, at all. So, if we’re expected to learn something, and it sticks with us, the approach that’s used doesn’t match that, whereas this does […] It’s a really good delivery if you want something to stick. (Yr2-Int2)

One of the things that helped position teachers as active learners was providing them with ample time to “tinker and play” (Miranda-Yr2-Int2) over two years, experimenting with the approach in their classrooms. The *continuous* nature of the PD initiative was also highly valued by the teachers. For instance, Tracy suggested:

> This was ongoing, and I think sometimes in the past some of my PD kind of gets lost in translation […] You go with it, and you’re all gung-ho, and then you forget […] But this [PD] has been more of a constant, and I feel like it’s going to stick around probably until I retire. (Yr2-Int2)

Teachers perceived that the ongoing nature of the PD made it possible for them to implement the
approach in a way that they felt would result in lasting change to their teaching practice. This was compounded by a sense that teachers had our support, in that we were readily available to them: “I think what you (Stephanie) and Tim did really well was your availability to us” (Yr2-Int2). In addition, teachers valued that we facilitated opportunities for their learning through the CoP: “To have you guys lead us through it; this is what you guys are doing regularly. It’s fantastic. That’s nice” (Felix-Yr2-Int2).

While many aspects of the PD initiative were well-received, several participants suggested that, although they found the online resources to be helpful, they were initially quite overwhelming: “Mia: ‘The resources are helpful; I just found it sometimes a little overwhelming […] The amount of resources is great because there’s so many… but there’s, like, so many.’ Molly: Yeah, it’s an instant feeling of [being] overwhelming” (Yr1-Int3). Similarly, other teachers spoke of feeling “lost in the website [and] blog posts” (Camille-Yr2-Int2), with some suggesting that this produced initial anxiety by making the approach seem more complicated than it really was (Greg-Yr1-Int3). Given that some teachers later felt that the resources were helpful, we suggest that when using online resources for teachers’ PD, there may be value in limiting the amount of material teachers are given access to initially and making materials easily accessible in terms of time required, language used, and concepts explained.

While many teachers wanted a particular kind of resource, some (particularly those with the most experience) saw value in a “mixed-bag approach” (Tracy-Yr1-Int1) that allowed them to pick and choose the resources that were most helpful for their own learning. For instance, Miranda suggested: “I think you need more than one way. You guys have done a good job with that” (Yr2-Int2). Consequently, we highlight the value of using a CoP-based approach that is continuous in its nature to introduce teachers to a novel pedagogical approach. We suggest
providing several opportunities for teachers to see the approach modelled. In addition, teachers should be positioned as active learners who are provided with a variety of resources from which they might choose those which are most appropriate for their own learning.

“Utopia Versus Reality”

In the several years leading up to this project, teachers in our research had experienced very few, if any, PE-specific PD sessions initiated by the school board. For instance, Camille shared that the last PE-PD initiative she had attended was six years prior and took the form of a single three-hour session to which only a handful of PE teachers were invited. Similarly, Liam shared, “If you look at what all the PDs are for, it’s never PE. It’s always math or literacy; literacy or math. And I get it; I get it. That’s where the money is.” (Yr2-Int1). Given this context, the participants had come to expect that what might be ideal for their PD was often not possible because of organizational and personal barriers. Liam’s quote captured this sentiment: “Well, it’s kind of one of those utopia versus reality scenarios” (Yr2-Int2). In many cases, teachers painted a picture for us of what they would consider to be utopian PD – that which would be ideal in a perfect world – versus what they thought might be a more realistic expectation given both organizational and personal constraints. In the following passages we present five tensions in utopian PD versus reality, grounding each in data generated by teachers. Importantly, these suggestions are not our own but rather are our interpretations of participants’ experiences of the PD and the teachers’ suggestions for how they might be improved going forward, particularly in finding a balance between what is ideal and what might reasonably be expected.

**Tension One.** In utopian PD, teachers are very self-directed; they take initiative to access provided resources and ask questions and then implement the approach in their classrooms. In reality, teachers need to be held accountable for their learning. While teachers
appreciated being treated as active learners, they also recognized a need to be “pushed” to prioritize their learning. In some cases, they compared themselves to what they might expect from their students, suggesting, for example, “I need to actually watch the videos and do my homework!” (Camille-Yr2-Int1). Indeed, several teachers never accessed all the resources that were available online. In many cases, there was a sense that they “should have” (Melissa-Yr2-Int2) or at least “could have” (Liam-Yr2-Int2) been more self-directed by accessing provided resources. Some of the issues teachers faced with staying on top of PD tasks were related to time; consequently, some teachers wanted “short and quick” (Tracy-Yr1-Int1), “grab-and-go” (Mia-Yr1-Int1) learning materials that were fully-prepared (Liam-Yr2-Int2) and provided for them. Others suggested that, while that might be convenient, it may also hinder the value of the learning experience: “If all of this is ready but I haven’t had any part in it at all, then I don’t know if the meaning is the same” (Miranda-Yr2-Int2).

Given time constraints and the effects on accessing learning materials, teachers valued the design of the PD as it provided a source of accountability by “pushing” teachers to “prioritize” Meaningful PE and come prepared to the meetings (Molly-Yr1-Int2). For instance, Melissa shared that in between meetings she would “fall off a little bit,” but when she knew a meeting was approaching, she would be inspired to “ramp up” her implementation (Yr2-Int2). Thus, though it required an investment of teachers’ time, having regular meetings, particularly early the process, was valuable in that it motivated teachers to prioritize their learning.

**Tension Two.** Utopian PD occurs in a purely face-to-face context. In reality, this is expensive and time-consuming and could take the form of a mix of face-to-face and online interactions. Early in the research, several teachers shared that they “get more” out of “in-person meetings” and would prefer not to meet via video conferencing (Tracy, Mia, Molly-Yr1-CoP2).
Particularly for participants who did not view themselves as being very “techy”, the “information coming online [was] overwhelming” (Melissa-Yr2-Int1). Given that teachers were coming from several cities, after-school in-person meetings were not feasible; thus, all face-to-face meetings required paid release time to cover teachers’ regular responsibilities. Some teachers recognized that face-to-face meetings were problematic for these reasons, though they were consistently perceived to be more beneficial (Tracy-Yr1-Int1). As the research progressed, and particularly after covid-19 regulations forced teachers to begin teaching from home, participants were more willing to consider the possibility of future engagement with online interactions. For instance, Liam, who was previously vocal about his preference for face-to-face learning, suggested, “With this whole Zoom/Google Meet piece, I think if you wanted to do once a month, you could even maybe do biweekly, but it wouldn’t have to be face-to-face […] And that would be such an easy, cost-saving way” (Yr2-Int2). Thus, while their preference was clearly for in-person learning, teachers’ understanding of the cost of this, along with their introduction to video conferencing software, led them to be more willing to engage in a combination of in-person and online PD.

**Tension 3.** *Utopian PD involves opportunities to see the innovation modelled by colleagues with a classroom full of students. In reality, due to time and money constraints, the innovation is modelled by “experts” with teachers as participants.* While our modelling of the approach was highly valued by teachers, after having seen it modelled by a member of the research team, many teachers expressed a desire to see how their colleagues were implementing it. For some teachers, this was viewed as something they might do “instead of” seeing it modelled by the research team (Camille-Yr2-Int2). For others, watching a colleague model the approach was seen as a “next step” that would provide an opportunity “to see how other people are interpreting [the] framework” (Felix-Yr2-Int2). While this was something several teachers
suggested, there was also some understanding that it was a bit utopian and likely not possible because of time and money, along with a sense of intimidation for some of the less experienced teachers in the group. Alternatively, teachers were open to our modelling of the approach and/or to having it modelled via video if necessary (Tracy-Yr2-Int2). Although it was our hope to enable teachers to observe one another, our efforts were short-circuited by covid-19.

**Tension Four.** *In utopian PD, teachers are fully supported across several years in learning to implement a novel pedagogical approach. In reality, teachers are supported through a phased approach.* Teachers who participated in the research only in the second year often suggested it was not long enough. For instance, Sharron highlighted, “I really think you need to do two cycles if funding allows it or your time allows it” (Yr2-Int2). She suggested that the focus of the first year should be on learning about the approach and determining how it might work in the classroom, while the second year should focus on full implementation. Those teachers who participated across two school years tended to value their extended involvement and believed they were ready to implement it on their own. Tracy, who participated in both years, suggested other teachers should be given the advantage of experiencing it across two years (Yr2-Int2). However, there was also an acknowledgement that this approach can be quite costly. Consequently, some suggested a phased approach that involved substantial support in Year One when teachers were learning to use the approach and half as much support in Year Two when they were implementing it more fully (Camille; Emily-Yr2-Int2). Camille suggested that, while two years of full support would be nice, this money would be “better spent” helping other teachers in the school board also learn to implement the approach, thus representing a “scaling up” and enabling coherence and shared understanding across the school board (Yr2-Int2). Teachers were also open to the possibility of serving as mentors in Year Two to interested
teachers who would be beginning phase one of the PD.

**Tension Five.** In utopian PD, teachers’ busy schedules are taken into account, and they are asked to invest very little, if any, of their own time. In reality, time means money and teachers will need to invest some of their own time into their continuous PD. We came to this project wanting to acknowledge the busyness of teaching and respect teachers’ personal time. However, paying for substitute teachers to cover the research participants (“release time”) is expensive. Although we released the teachers whenever possible, preparation for meetings and engaging with resources for their learning was largely up to them and they engaged with this in their own time. It was evident, based on a lack of engagement with resources and teachers’ comments, that this was a challenge. For instance, Emily suggested, “No one goes to PD after school. Nobody’s going to that” (Yr2-Int2). Teachers highlighted the need for facilitators to be “conscious of their time,” considering that many of them had young families and were coaching after school (Tracy-Yr1-CoP2). However, teachers were often open to finding a balance when they felt their time was valued. For instance, Miranda suggested, “There was a good balance of, ‘We’re going to get together in the summer,’ or, ‘We’re going to do this during the school day.’ I appreciate that” (Yr2-Int2). We highlight the importance of valuing teachers’ time and providing paid release whenever possible. Having access to funds for research allowed us the opportunity to offer quality PD to teachers who had been without it for several years and highlights the potential value of these types of university-school partnerships for teachers’ PD.

**Discussion**

The purposes of this research were to design a PD initiative built upon characteristics of effective PD to introduce teachers to the Meaningful PE approach and to understand their experiences of this process. Importantly, it has not been our intention here to suggest whether
this PD initiative has or has not been effective, most particularly because student learning outcomes were not assessed. Instead, we aimed to share teachers’ perspectives and experiences of a PD initiative designed around the characteristics of effective PD and in turn, make suggestions for future PD designs based on the analysis. Teachers found value in the way the PD was designed, particularly in relation to past experiences with board-level and personally-initiated PD opportunities. In particular, like teachers in Goodyear and Casey’s (2015) study, the intentional facilitation of a CoP was well-received by teachers in the process of learning to implement an innovation. As has been demonstrated elsewhere, a CoP helped teachers overcome feelings of isolation and feel part of a learning community (Cooper et al., 2021), which can be particularly challenging for specialist PE teachers and those teaching elementary compared to secondary school (Gaudreault et al., 2018). We highlight the value of facilitating intentional CoPs that allow opportunities for collaboration both with-in and beyond the level of the school, fostering support and the broadening of horizons, wherever possible.

Teachers also spoke repeatedly of the value of having the approach modelled – both in practice and on paper in the form of lesson plans. This modelling helped them to make sense of the approach. Although teachers valued the modelling provided by the research team, there was a preference for a peer-modelling approach. Similar to teachers in Cooper et al. (2021), teachers wanted to know what was happening in colleagues’ classrooms and tended to value learning from one another more so than from external sources. While peer observations have been used effectively in PE-PD built around Lesson Study (e.g. Kihara et al., 2021), we highlight the value of providing opportunities for both expert modelling and peer observation within a CoP to introducing teachers to innovations in PE, particularly given the practical nature of the subject.

When considering factors that influence teachers’ use of innovations, Century and
Cassata (2016) highlight the importance of the roles of implementation over time and support strategies. Teachers regularly highlighted the need to consider implementation over time – considering stages or phases of implementation that occur from the point of initial adoption to the point at which implementation of an innovation has become routine. Our findings support those of Dyson (2002), who reported that teachers wanted two years of support in learning to implement an innovative approach in their classrooms. Implementation support strategies include ongoing, intentional efforts to support end-users. This research highlights the value of using characteristics of effective PD to guide the development of implementation support strategies to introduce teachers to innovative approaches. Although some of these characteristics have been used previously in PE-PD (e.g. a CoP), they are often used in isolation rather than in an integrated manner to guide the design of PD. Importantly, designing PD around characteristics of effective PD provided teachers with a supportive environment that enabled them to envision themselves being able to sustain implementation over time.

The tensions between utopian and realistic forms of PD have highlighted the interplay between personal and organizational/environmental factors in teachers’ learning process. While there is a substantial body of literature in PD on the role of individual characteristics and factors in teachers’ professional learning, Allen and Penuel (2015) suggest there has been much less of a focus on the organizational contexts where PD occurs and how these influence teachers’ practice. Although teachers’ individual characteristics played a role in the process, it was clear that the organizational structures within which their teaching and learning was situated influenced their professional learning when implementing an innovation. While teachers suggested that the PD worked well, their highlighting of tensions has shown that, even when recommendations on effective PD design were followed, teachers still had clear ideas on how it could be made better.
Thus, while the literature offers an effective starting point, we highlight the need to listen to teachers in attempting to find realistic solutions to barriers that may influence their PD, even when those concerns may be difficult to work around (e.g. time and money issues).

In their recent analysis of the types of PE-PD being offered in European countries, Tannehill et al. (2021) highlight the value of using key characteristics of effective PD for researchers and providers to “assess, analyse, compare, and improve [continuous] PD policies and practices to impact teacher learning”, suggesting that PD “might reasonably be tested against these characteristics” (p. 150). Our research responds to and builds on these assertions. Specifically, in addition to assessing PD practices during or after their implementation, we highlight the value of using the characteristics of effective PD identified in the literature in a coherent way to plan for and initiate PD opportunities that are more likely to result in changes to teachers’ practice. At the same time, we also acknowledge that several characteristics of effective PD may be positioned as utopian versus realistic in their aims and delivery. PD designers and facilitators would thus do well to acknowledge the tension between utopia and reality in effective PD when designing and facilitating PD for teachers.
References


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CHAPTER VII: ARTICLE 4

Beni, S. (in review). “It’s messy and it’s frustrating at times, but it’s worth it.” Facilitating the professional development of teachers implementing an innovation. *Studying Teacher Education.*
‘It’s messy and it’s frustrating at times, but it’s worth it.’ Facilitating the professional development of teachers implementing an innovation

As I’m going through the teacher data from the interviews where we asked them about the role of the professional development experience, I’m really struck by the fact that so much of what they have to say has nothing to do with the effort [I] put into all of this for them...But when I think about what I set out to do, which was to be a facilitator, as opposed to director, of a positive professional development experience for teachers, I think this is proof that that is what happened. They enjoyed and found value in the learning opportunities [I] facilitated... It really requires me to shift my perspective of what it means to be a facilitator of professional development. (Reflective Journal, 19-Aug-20)

Introduction

This self-study research is focused on my facilitation of a series of professional development (PD) experiences for teachers who were learning to use a novel approach to physical education (PE) instruction. The Meaningful PE approach is designed to guide teachers in prioritizing meaningful experiences through an explicit focus on six pedagogical features – social interaction, fun, challenge, motor competence, personally relevant learning, and delight (Beni et al., 2017) – and the incorporation of student-centred, democratic pedagogies that are autonomy-supportive and support student goal-setting and reflection (Fletcher et al., 2021). Following five years of development in teacher education programs and two pilot studies in elementary classes in Ireland and Canada, the purpose of the overarching project was to expand
implementation by introducing it to a sample of 12 elementary PE teachers in Canada over two years. This particular paper represents part of that larger project.

PE teachers are typically willing to change their pedagogical practice; however, innovations are rarely sustained beyond initial implementation (Goodyear & Casey, 2015). Such claims also apply across time and to teachers outside of PE (Berman & McLaughlin, 1976; Penuel et al. 2007). This had led to questions being raised over the common format and quality of PD opportunities that support teachers in implementing innovations (i.e., off-site, one-time workshops in contexts removed from teachers’ lived experiences) (Brown, 2011; Penuel et al. 2007). The use of a community of practice (CoP) contrasts with the common approach to PD in that it provides teachers with ongoing, collaborative opportunities grounded in their local contexts and experiences, which can result in a sense of growth and empowerment in their teaching practice (McLaughlin & Talbert, 2006; Tannehill & MacPhail, 2017).

O’Sullivan (2007) suggests that CoPs serve as “places and spaces where […] teachers have the opportunity to engage in worthwhile conversations and actions about the nature and direction of their work with children and youth” (p. 11). Introducing teachers to innovations through the use of a CoP has the potential to promote a sense of co-ownership of the innovation and reduce the likelihood of teachers’ resistance (De Jong, 2012). Thus, CoPs have been used to introduce teachers to innovative practices (e.g. school-based curriculum development; Tam, 2015). While CoPs have often been facilitated ‘in-house’ by teachers or resource personnel affiliated with the school/district, in recent years CoPs have been used by university-based teacher educators to introduce teachers to pedagogical innovations in PE (e.g. the activist approach [Oliver et al., 2017]; cooperative learning model [Goodyear & Casey, 2015]). At times this has resulted in sustained pedagogical innovation (Parker & Patton, 2016). However, in spite
of the potential of CoPs for teachers’ PD, developing and maintaining such a community is often a challenging task (Parker & Patton, 2016; McLaughlin & Talbert, 2006).

Given that CoPs call for a departure from traditional forms of PD, the typical role of ‘PD providers’ is also challenged. While CoPs benefit from continued support and input, ‘providers’ need to strike a balance between being leaders in facilitating collaboration and sharing their expertise while simultaneously being followers who are sensitive to group members’ needs (Armour & Yelling, 2007). Thus, the PD provider takes on the role of ‘facilitator’, with an aim to “guide rather than direct, question rather than show the way, and listen rather than tell…not to impose vision, but listen and hear, gently push and pull” (Parker et al., 2012, p. 324).

Poekert (2011) suggests that teacher educators wanting to facilitate PD experiences for teachers must move beyond the question of “what skills and content to transfer to teachers and consider how to facilitate teachers who are learning content for themselves” (p. 19), shifting the focus to a ‘pedagogy of facilitation’. Examples include the ‘developing the developers’ program, which offers a model for facilitators and provides them with opportunities for collaborative reflection to improve their pedagogy and practice of facilitation (Perry & Boylan, 2018). Further, several studies outline specific pedagogical strategies for facilitation (e.g. Molle, 2013; Patton et al., 2013). However, less is known about the processes of learning to facilitate teachers’ PD and the ways in which a facilitator’s identity or sense of self is embedded in their facilitation practices.

Lange and Meaney (2013) highlighted the need for PD facilitators to reflect upon their practice in order to understand the tensions between their aims and the contextual factors that influenced their enactment. Within PE, Hunuk (2017) highlighted how she developed facilitation skills in a CoP, while others have demonstrated the extent to which facilitators’ perceptions of
effective PD align with their practices (Makopoulou, 2018), the development of a facilitator’s pedagogy (Luguetti et al., 2021), and how these pedagogies influence teachers’ empowerment (Gonçalves et al., 2020). While the process of enacting a personal pedagogy of facilitation from the perspective of the facilitator has become a recent point of interest, there remains little research on the topic.

As part of my doctoral research, I facilitated a CoP whose members were teachers learning to implement the Meaningful PE approach. The aim of this particular self-study has been to document my experience of facilitating this process across two school years and understand how these experiences and my identity as a facilitator informed the enactment of my personal pedagogy of facilitating PD experiences for teachers. This research adds to the knowledge base of how teacher educators might facilitate CoPs and other PD experiences for teachers.

Self-study of teacher education practice (S-STEP) methodology has been used primarily to examine teacher educators’ practice with future (or pre-service) teachers. However, it can serve as a useful tool to interrogate the practice of teacher educators who work with in-service teachers. Elsewhere, S-STEP has been used to conduct research into the processes and outcomes of teacher educators facilitating CoPs with colleagues in a university-based context (e.g., Kitchen et al., 2008; Vanassche & Kelchtermans, 2016), and its characteristics offer helpful guidance to understand the development of facilitators’ personal pedagogies. There are, however, few examples of its use by university-based teacher educators to study the facilitation of PD for practicing teachers. Hamilton (2019) utilized S-STEP methodology to study the experience of a university-based teacher educator facilitating teachers’ PD when learning to develop a teaching portfolio. Similarly, Peeters and Robinson (2015) study the role of an external (hired by a school
district) beginning facilitator implementing PD for 89 schools. However, there remain few examples of its use to study the process of facilitating a CoP (Luguetti et al., 2021). S-STEP methodology has also been used to study teacher educators’ identity formation (e.g. Rice et al., 2015), the transition from identifying as teacher to teacher educator (e.g. Allen et al., 2016), and the impact of PD facilitation on a teacher educators’ personal identity (Vozzo, 2011). Yet, little is known about the concurrent identity formation of university-based teacher educators as they are facilitating teachers’ PD specifically within a CoP format; this research therefore grounds the self in the practice of facilitating PD.

**Theoretical Framework**

A social constructivist perspective of identity theory offers a helpful lens in making sense of my experiences of becoming a facilitator of teachers’ PD. Identity is both a complex and contested concept (Jenkins, 2008), with its multifaceted nature making it difficult to define. Identity is often viewed as a dynamic process rather than a stable entity (Beijaard et al. 2004) given that individuals tend to have distinct identities within different contexts and roles (Stryker & Burke, 2000).

Despite identity having clear links to one’s concept of self, identity theorists have long acknowledged the social dimension of the process of identification and the formation of self-concept, suggesting that identification occurs at the intersection of internal and external perspectives; for example, Cooley’s (1902/1964) concept of the looking-glass self suggests an individual’s perception of self is dependent upon the image they imagine they portray to others; Mead’s (1934) notion of self suggests a conglomeration of me (attitudes of others) and I (response to the attitudes of others); and Goffman’s (1959) dramaturgical metaphor suggests identification is a process involving a self-as-actor performing for an audience. In line with these
theories, Jenkins (2008) contends, “that we can’t see ourselves at all without also seeing ourselves as other people see us” (p. 41). In addition, perceptions of self are further influenced socially through the process of differentiation; identifying as ‘me’ or ‘us’ requires a recognition of what makes ‘me’ different from ‘them’ (Benhabib, 1996).

Given that identification is strongly influenced by interactions with others, language plays a key role. Positioning theory pays particular attention to the role of language in identity formation and suggests that individuals are positioned and positioning through their discourses with others (Harré & Moghaddam, 2014). Within a conversation, each participant (consciously or subconsciously) positions both themselves and the other (Van Langenhove & Harré, 1998). Positions ascribed through discourse can serve to outline, for example, who is dominant and who is subservient in the given context, and in this way have the potential to influence one’s sense of self. These positions need not necessarily be accepted; an individual may reject a position by repositioning themselves (for example, asserting dominance where previously positioned as subservient). This holds similarities to the sociological concept of ‘labelling,’ by which both negative/stigmatising and positive/valorising identities may be imposed and either accepted or resisted through discourse and interactions with others (Jenkins, 2008). Given the highly relational nature of this process, identification thus becomes:

the human capacity – rooted in language – to know “who’s who” (and hence “what’s what”). This involves knowing who we are, knowing who others are, them knowing who we are, us knowing who they think we are, and so on: a multi-dimensional classification or mapping of the human world and our places in it, as individuals and as members of collectivities. (Jenkins, 2008, p. 5)

As a teacher educator, one’s identity or sense of self holds important implications for
practice. Examination of self and identity within the context of practice allows teacher educators the opportunity to make sense of their decision-making processes and find meaning in their work (Bullough, 1997). It is through this lens that I have developed the research questions: What are my experiences of becoming a facilitator of PD? How do these experiences inform the enactment of my pedagogy of facilitation of teachers’ PD? How do these experiences shape my identity as a facilitator of PD?

**Methodology and Methods**

LaBoskey’s (2004) characteristics of S-STEP guided the research design, in that it was: self-initiated, improvement-oriented, interactive, used multiple qualitative methods, and has been shared with the S-STEP community to establish resonance and trustworthiness. The primary data source was my reflective journal (RJ), written over two school years as I facilitated an ongoing PD experience for teachers involved in the implementation of Meaningful PE. Following interactions with teacher participants, I wrote detailed reflections of my experiences as a facilitator of their PD. My doctoral supervisor acted as a critical friend throughout this process, helping me question my decisions and actions throughout the process of learning to facilitate PD opportunities for teachers. We met frequently to discuss the challenges I was facing. He was present for all of the PD sessions with teachers and helped with data collection. Across the time frame of the study, I wrote 22 journal entries (~11,100 words).

As someone who teaches PE in schools and teaches pre-service teachers about teaching PE, I came to the study with a belief in the importance of involving teachers in the research process. I had previously been introduced to the Meaningful PE approach as an undergraduate student. At the time of my initial involvement with Meaningful PE, I was teaching PE in a private school; these ideas about facilitating meaningful experiences for students resonated with
my teaching philosophy and inspired me to consider how I could implement them more fully in my practice. Soon after, I became involved in researching Meaningful PE while subsequently implementing the approach in my own classroom. I used self-study methodology to study my implementation of the approach in my teaching practice (Beni et al., 2018, 2019) and was eager to share my insights with other teachers.

In the years that followed, I began sharing ideas about meaningfulness with pre-service teachers in PE teacher education courses through my role as a university teaching assistant. I also collaborated on research projects about introducing the Meaningful PE approach to pre-service teachers. To expand my research on the topic, I was interested in working with in-service teachers to understand their experiences of learning about and implementing Meaningful PE in their classrooms. Thus, in the current research, I am using self-study in a very different way to how I used it previously (e.g. the learners I am interacting with are not children but adults). While the focus is still on my self-in-practice, the context of the practice shifts dramatically from my own classroom to my work with teachers who are implementing an innovative approach in their classrooms.

A total of 12 PE teachers from the same school district participated in the CoP, offering a source of interactivity by providing an alternative perspective, thus allowing me to “challenge [my] assumptions and biases, reveal [my] inconsistencies, expand [my] potential interpretations, and triangulate [my] findings (LaBoskey, 2004, p. 849). Five teachers from three schools participated in Year One – all of whom were PE specialists (1-27 years teaching experience). Three of these teachers continued their participation into Year Two, along with seven new participants (five specialists; two classroom teachers). Many of the teachers had pre-existing relationships with one another, as they had worked together, co-taught, or attended school board-
mandated PD initiatives together in the past. These teachers had no affiliation with the 
university, and I had no relationship with them prior to this research. They were voluntary 
research participants who showed an interest in learning about Meaningful PE. Although the 
study spanned across two school years, the second year of data collection covered a shorter 
period than initially planned for as a result of covid-19-related school closures. Table 7.1 
provides background information on teacher participants’ years of experience teaching in general 
and in PE more specifically, their teaching responsibilities, and the duration of their 
participation.

Table 7.1

<table>
<thead>
<tr>
<th>Participant (Pseudonym)</th>
<th>Years of Experience Teaching (in PE)</th>
<th>Teaching Responsibilities</th>
<th>Participation in the Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunter</td>
<td>9(6)</td>
<td>PE specialist</td>
<td>Years 1 &amp; 2</td>
</tr>
<tr>
<td>Greg</td>
<td>8(6)</td>
<td>PE specialist; classroom teacher Year 2</td>
<td>Years 1 &amp; 2</td>
</tr>
<tr>
<td>Tracy</td>
<td>27(27)</td>
<td>PE specialist</td>
<td>Years 1 &amp; 2</td>
</tr>
<tr>
<td>Molly</td>
<td>1(1)</td>
<td>PE specialist</td>
<td>Year 1</td>
</tr>
<tr>
<td>Mia</td>
<td>1(1)</td>
<td>PE specialist</td>
<td>Year 1</td>
</tr>
<tr>
<td>Emily</td>
<td>5(0)</td>
<td>Classroom teacher</td>
<td>Year 2</td>
</tr>
<tr>
<td>Camille</td>
<td>14(14)</td>
<td>PE specialist</td>
<td>Year 2</td>
</tr>
<tr>
<td>Miranda</td>
<td>19(8)</td>
<td>PE specialist</td>
<td>Year 2</td>
</tr>
<tr>
<td>Melissa</td>
<td>20(8)</td>
<td>PE specialist</td>
<td>Year 2</td>
</tr>
<tr>
<td>Liam</td>
<td>11(2)</td>
<td>PE specialist</td>
<td>Year 2</td>
</tr>
<tr>
<td>Felix</td>
<td>8(0)</td>
<td>Former classroom teacher; first year teaching PE only</td>
<td>Year 2</td>
</tr>
<tr>
<td>Sharron</td>
<td>1(1)</td>
<td>PE specialist</td>
<td>Year 2</td>
</tr>
</tbody>
</table>

Data sources collected with teachers included the following:

A) semi-structured teacher interviews conducted before, during, and after implementation 
across both school years. Interviews were conducted one-on-one for teachers who were the sole 
participant in their school but more often in small groups with all the teachers at a given school
being interviewed together. The final set of interviews in Year Two were not completed due to covid-19 school closures and the pressure this placed on teachers transitioning to online learning. Interviews ranged from 14 minutes to one hour.

B) I conducted non-participant observations in each teacher’s classroom once each school year, conditional to parental consent. In light of some parental objections to having their child observed, I was only able to observe 7 of the 12 teachers. I followed an observation template to observe for key elements of Meaningful PE and how they were being implemented in the lesson. Importantly, the purpose of these observations was to support, rather than critique teachers.

C) CoP meetings were conducted before and after implementation in Year One. The frequency was increased in Year Two, at the teachers’ request, to every six to eight weeks. The final three scheduled CoP meetings in Year Two were cancelled due to labour negotiations and covid-19-related school closures. As a result, there were a total of six CoP meetings. The first meeting each year was not recorded to allow teachers to become comfortable with the process. Transcripts from the remaining four meetings were included as a data source. These ranged from 76 to 103 minutes.

In a few cases there were absences from group meetings or teachers were non-responsive to requests for data collection. The number of interviews, observations, and CoP meetings conducted, along with the number of teachers who participated in each, are outlined in Table 7.2. Importantly, while data gathered with teachers has helped me make sense of my experience of becoming a facilitator or teachers’ PD and served as the primary data sources in the larger project, in the current research I draw primarily from my RJ.

Table 7.2

*Overview of Data Sources*
<table>
<thead>
<tr>
<th>Data Source</th>
<th>Year One</th>
<th>Year Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective Journal</td>
<td>8 entries; about 4,000 words</td>
<td>14 entries; about 7,100 words</td>
</tr>
<tr>
<td>Interview 1</td>
<td>3 interviews; 5 teachers</td>
<td>5 interviews; 6 teachers</td>
</tr>
<tr>
<td>Interview 2</td>
<td>1 interview; 1 teacher</td>
<td>7 interviews; 9 teachers</td>
</tr>
<tr>
<td>Interview 3</td>
<td>3 interviews; 5 teachers</td>
<td>cancelled due to covid-19</td>
</tr>
<tr>
<td>Observations</td>
<td>2 observations; 3 teachers</td>
<td>4 observations; 6 teachers</td>
</tr>
<tr>
<td>CoP 1</td>
<td>5 teachers</td>
<td>9 teachers</td>
</tr>
<tr>
<td>CoP 2</td>
<td>3 teachers</td>
<td>9 teachers</td>
</tr>
<tr>
<td>CoP 3</td>
<td>n/a</td>
<td>9 teachers</td>
</tr>
<tr>
<td>CoP 4</td>
<td>n/a</td>
<td>10 teachers</td>
</tr>
<tr>
<td>CoP 4</td>
<td>n/a</td>
<td>cancelled due to sanctions</td>
</tr>
<tr>
<td>CoP 6</td>
<td>n/a</td>
<td>cancelled due to covid-19</td>
</tr>
<tr>
<td>CoP 7</td>
<td>n/a</td>
<td>cancelled due to covid-19</td>
</tr>
</tbody>
</table>

Data analysis was inductive, meaning that themes were derived directly from the data as opposed to being mapped on to a preexisting framework or theory. Analysis began with open coding (Van den Hoonard, 2012) using descriptive codes (Miles et al., 2014) (e.g. ‘frustration,’ ‘trust,’ and ‘control’). During this process, I revisited the data several times. Subsequent analysis involved more focused coding, by which some of the data were recoded more specifically to reduce the number of codes and begin grouping them more productively (Van den Hoonard, 2012). For instance, where I had identified several types of challenges such as ‘time’ and ‘communication problems’, these were grouped within the category of ‘challenges/frustrations.’ After these initial rounds of coding, several preliminary themes were identified (e.g. ‘aligning practice and philosophy,’ ‘feelings of inadequacy,’ ‘identity,’ and ‘support’). As I compared data across themes, several smaller themes were collapsed into overarching themes or broader ideas. For example, identity became the framework rather than a theme and several of the challenges and frustrations I faced were grouped within other themes that explained those frustrations (e.g. perceived communication issues were sometimes related to my developing identity).

Importantly, the themes outlined here were derived from my analysis of my RJ entries. In order to promote trustworthiness, teacher-generated data were compared and contrasted with my
written reflections and interpretations of the process of facilitating teachers’ PD (Craig, 2009).

**Results**

Coming to the study, I was making sense of my personal pedagogy of facilitation primarily in relation to my understanding of the literature on ‘effective’ PD for teachers, my experience as a teacher, and my conversations and interactions with colleagues and other teachers who were not participants in the research. However, as I engaged with members of the CoP over several months, my reflections revealed several sources of tension as I attempted to enact a personal pedagogy for facilitating PD for other teachers. The following three themes are discussed below: (1) *developing an identity as a facilitator of PD*, (2) *aligning a personal pedagogical philosophy with practice*, and (3) *navigating the unexpected*.

**Developing an Identity as a Facilitator of Professional Development**

As a doctoral student, I felt very much like a novice, having limited experience as a researcher and none as a facilitator of PD. Though I had been a teacher for several years, my experience of PD as a teacher was largely informal and self-initiated; my work in a private school meant I had never experienced the type of board-wide PD my participants had. Consequently, I had little sense of what a ‘facilitator of PD’ or ‘researcher of facilitation’ might look like or do, or how I might personally identify with either of these positions. I merely knew that I wanted to be ‘different’ to what I imagined the traditional PD facilitator to be – one who hosted workshops that involved talking ‘at’ teachers. I wanted to acknowledge their expertise and learn with them.

As a result of my interactions with teachers, I conceived of my experiences and identity in terms of ‘becoming’, rather than ‘being’, a facilitator of PD. I struggled at times with feelings of inadequacy based on my age and lack of teaching experience relative to many of the teacher
participants. For example, upon meeting with one of the teachers for the first time in Year One, I wrote: “It’s obvious to me that she’s a veteran teacher […] [The teacher] said, ‘I’m very excited to learn from you,’ and I thought, ‘I can’t imagine having anything to offer to a teacher like you!’” (RJ-25-Jan-19). Her comment positioned me as the teacher and her as the learner, which produced a sense of self-consciousness as I reflected upon my own perceived inadequacy. This sense of inadequacy was compounded by teacher participants later telling me during one CoP meeting that they were trying to guess my age and wondered if I would be willing to share. While I was not self-conscious of sharing my age in other contexts, in this case I was sensitive to the way the teachers’ question about my age suggested that it mattered – that my response, positioning me as younger, would by extension produce an understanding that I was less experienced and perhaps unqualified to be a facilitator of teachers’ PD. Thus, teacher comments that positioned me as an expert and those which I perceived as questioning my expertise both served to produce a sense of self-consciousness in relation to my age and ability. Thus, I was perceiving some teacher participants as holding authority by virtue of their experience (Munby and Russell, 1994). This had implications for how I was shaping my sense of self and my facilitation practices.

As I began to reflect upon these feelings of inadequacy and something akin to impostor syndrome, the external aspect of identification (i.e., my thoughts about how others identify me) led me to think about the main sources of my identification as a facilitator of PD:

[I’m] realizing that I don’t feel inadequate as a facilitator of PD because of my lack of teaching experience relative to participants, or because of my age, or because I perceive that I don’t have anything to offer them. I feel inadequate because I imagine that they might potentially perceive me that way – too inexperienced, too young, too detached
from the context to have anything of value to share. (RJ-18-Oct-19)

In addition, I regularly experienced a tension between being a facilitator of PD and a researcher of facilitation. I wrote of feeling ‘caught’ between these two seemingly conflicting identities of being both “the researcher (who should just be collecting data and not telling anyone what to do), but also the facilitator of PD” (RJ-25-Sept-19). This tension was particularly profound when teachers’ PE practice came into conflict with my personal philosophy for PE, particularly in relation to meaningfulness. For example, when one teacher advocated for offering students a wide variety of activities, opting to rarely repeat the same activity twice, I felt unsure how to respond. In my own teaching practice, I prefer to provide students with multiple opportunities to engage in a particular activity for an extensive period to allow for the development of motor and tactical competence. In response to this interaction, I wrote: “I struggle with knowing when I should share my differing perspectives and when I should just be quiet…I want to be cautious not to make myself sound like the ‘expert’” (RJ-25-Sept-19). In a follow-up meeting with the group, I decided to raise the teacher’s idea again by asking CoP members to share their perspectives on the topic. Though many group members held views that were somewhat contradictory to my own, I shared my viewpoint and facilitated a discussion around how varying perspectives might fit with the Meaningful PE approach. Reflecting on this, I wrote:

[It was] a ‘stepping out’ in the sense of saying, ‘I see this differently,’ because I’ve been hesitant to do so given my uncertainty around when I should be a facilitator of PD and a researcher of the facilitation of PD – when I should just listen and when I should share my own thoughts/perspectives. (RJ-8-Oct-19)

While this sense of experiencing two seemingly conflicting identities simultaneously was
challenging, it was something I became more comfortable with over time, learning to evaluate the context and the moment, at times sharing alternative perspectives, and at others choosing just to listen, and thus becoming comfortable identifying myself in two ways at once – as facilitator and researcher-of-facilitation. Through reflection, I recognize this is an arbitrary separation and one I had manufactured. However, in the process, I found it difficult to reconcile what felt like two conflicting aspects of my identity.

Another source of tension between these two roles arose from a desire to do what I felt was best for teachers’ learning while also feeling a need to ensure I was able to collect the data I needed in order to progress with my doctoral research. Toward the end of the first year of data collection, I felt disappointed with the amount of data I had been able to collect. This concern led to a tension between wanting to ‘push’ teachers to have things prepared for me and wanting to prioritize their own learning, even at the expense of my data collection:

I know this is stressing [the teachers] out and they’re very busy, but it’s also been a bit disappointing for me…What if I don’t get the data I need next year either? [...] Have I been too lenient with the teachers in terms of letting them do whatever works for them in relation to data collection? [...] I’m having a hard time striking that balance. I need data, but I also want this to be about their learning. (RJ-14-May-19)

While this failure to provide data was sometimes related to time constraints, in other cases, it seemed to be related to teachers wanting to present me with a ‘polished’ picture, underscoring how they identified me as a researcher. Given that the approach was new for them, they seemed apprehensive to share their struggles. This was challenging for me: “As a researcher, I’m interested in the process, the experience – including all of their struggles, but they don’t want me to see those struggles” (RJ-14-May-19). Thus, these sources of tension –
particularly in relation to my identity formation – featured prominently in the process of my enactment of a personal pedagogy of facilitating PD for teachers.

I navigated some of these tensions by relying on my experience as a teacher of PE and associating my identity as a facilitator of PD with my identity as a teacher. For instance, when I faced challenges as a facilitator, particularly in relation to releasing ‘control’, I reflected upon my experience of learning to implement student-centred pedagogy for my students and how I navigated the challenge of that process:

It feels a lot like teaching. Sometimes it’s hard as a teacher to take a step back and feel ‘unneeded’, but I’ve come to believe those are the best learning experiences for my students – when they really take charge. I feel the same way about this. I want to be there and offer as much support as I can in any way they need me to, but I also want them drawing from one another so this can be a career long process, and not just another interesting study or PD initiative that comes and goes. (RJ-28-Jun-19)

Similarly, when I felt that some teacher participants were not taking initiative to engage with some suggested self-directed learning opportunities, I again associated the frustration I felt with similar experiences I have had as a teacher: “It’s all a bit difficult to navigate. I suppose I thought teaching adults (and specifically teachers) would be quite different from teaching children, but I’m discovering that it’s really not” (RJ-19-Aug-20). Thus, my identity as a facilitator of teachers’ PD was closely linked to my identity as a teacher, which had been shaped by nearly ten years of teaching elementary and secondary school students. Given that I had previously learned to release some of these tensions in my teaching practice, I found this connection helpful in that it provided a sense of familiarity in navigating the tensions associated with enacting a pedagogy of facilitation.
As explained previously, I came to the study with theoretical understandings of what might make for effective PD experiences for teachers based on extant literature. For example, I wanted to acknowledge teachers as active learners, provide ongoing support, model effective practice, and support collaboration (Darling-Hammond et al., 2017; Parker & Patton, 2016). In particular, I was interested in using a CoP that would support teachers with ongoing, continuous PD through a social constructivist lens, positioning myself as a fellow learner as opposed to an external ‘expert’ (Parker et al., 2012). However, I found that aligning my practices with my philosophy for PD was easier planned-for than done.

Early in the study, my noble intentions seemed fairly easy to maintain. I wrote:

I am determined to resist [the] notion [that teachers are not experts in teaching], and I really don’t find it difficult to do so. I believe these teachers have so much to offer, and although they have their preferences and ideas about teaching, they are also quite open to testing some boundaries and trying new things (21-Mar-19).

However, as the study progressed, I began to feel less confident in my ability to hold to my social constructivist perspective. For instance, while I worked hard to create a shared, social learning space without hierarchy and to position myself as a facilitator rather than transmitter of knowledge, there were instances when this left me struggling to release ‘control’. My struggle became particularly apparent to me when, early in the second year of data collection, the teachers were asked by a school district leader to share the approach with colleagues; a task I felt these new participants, who had yet to use the approach in their classrooms, were unprepared for. Further, when discussing the scheduling of how the teachers would prepare for and deliver this PD to their colleagues, one of the teachers, who was being introduced to the approach for the
first time that day, suggested that it was not necessary for me to be a part of this process, thus
positioning the teachers in the group as capable of delivering PD to support Meaningful PE to
their colleagues and positioning me as unneeded in this task – the very reason for which I was
working with this group teachers. In response, I became possessive of my understanding of what
Meaningful PE ‘should’ be. Reflecting upon this, I wrote:

I’m still struggling a bit with ‘releasing’ this (as if I own it) because I want [the approach]
to be presented in a way that is true to all of the work we have invested into it, all of the
research that has gone into it, etc. I’m also well aware that this is probably a matter of
control for me to an extent, and I need to let it go. I need to stop feeling protective of it
(8-Oct-19).

In spite of acknowledging this ‘need’ and giving teachers the space to work through this
process on their own, I found it challenging to strike a balance between offering teachers support
in learning to use the approach and pushing them to do things my way. While I was cautious not
to position myself as the expert, I was also aware that many teachers needed guidance in learning
to use any approach with which they were unfamiliar. At times, I struggled with this, wondering,
for example, “Am I being arrogant? Positioning myself as the expert in spite of telling the
teachers that I view them as experts?” (RJ-4-Sept-19). These moments of tension in my
reflection left me “aware that I [was] bordering on compromising my overtly constructivist
approach to facilitating learning experiences for the teachers” (RJ-4-Sept-19), yet I found this
difficult to manage at times.

The tension I was experiencing was compounded by a perception that teachers sometimes
also expected a more direct approach to facilitation. For example, when I interviewed
participants at the end of the first year, some of them suggested that when they were given too
much leeway, things more easily fell by the wayside amongst other competing priorities. They felt the need to be “for lack of a better word, forced, to go meet other people,” (Molly, Yr1-Interview) because “it’s very easy to prioritize other things when something’s not being pushed” (Mia, Yr1-Interview). In addition to wanting more structure, there were times when teachers felt a need to ask ‘permission’ to do things in their classrooms that they perceived were slightly different to the things presented in their PD sessions. For instance, after one teacher asked if she could alter the terminology she was using with her students, I wrote:

I see why she was asking…but it’s interesting to me that she felt like she needed our ‘permission’ to do this in her classroom. Maybe an example of the ways some of them seem to want a bit of a facilitator-directed experience though we’re trying to make it very participant-centred. (19-Nov-19)

Further, while I anticipated that initiating and maintaining a CoP structure would not be easy, the challenges I faced were different than I had expected. Given that many participants had existing relationships with one another, I found that there was already a sense of community that seemed to exist amongst most of the group. Early in the study I wrote favorably of this, suggesting: “I feel like we could not have asked for anything better in terms of the social dynamics of the group” (RJ-21-Mar-19). However, as the study progressed, I found that this pre-existing community felt difficult to penetrate, perceiving myself at times as an ‘outsider’, a view that further enhanced my fragmented sense of my identity as being either facilitator or researcher in various contexts. For example, when participants struggled with implementing the approach in their classrooms, they tended to turn to other teachers for support in spite of me continually making attempts to support them. This was frustrating for me given my experience as a PE teacher who had used this approach extensively in my classroom. At times, some of the teachers’
comments seemed to position me as something other than a teacher. For instance, when asking the teachers what I could do to better support their learning about the Meaningful PE approach, some suggested that while it was helpful to have me model the approach for them, it would be more helpful to have it modelled by a colleague. The suggestion that seeing another teacher use the approach in their classroom would be more beneficial suggested to me that I was not perceived by some participants as a teacher, or at least not the same kind of teacher. Reflecting on one such instance, I wrote “It’s interesting because it confirms what I already knew – that the teachers are functioning within this CoP that they already had established, and I am an outsider” (RJ-14-May-19).

While this was not how I envisioned the CoP structure taking shape, I came to see it as valuable in some sense, acknowledging that fostering an environment where teachers could lean upon one another was more likely to be sustainable beyond the completion of the study. This is not to say that I was content to remain an ‘outsider’, but that I could see value in the ways they were drawing heavily from one another. This experience “really require[d] me to shift my perspective of what it means to be a facilitator of PD” (RJ-19-Aug-20) in that I did not need to be the ‘lifeline’ or main support of the group.

In my efforts to become an ‘insider’ in the CoP, I wrote frequently of feeling the need to build trust with teacher participants. For instance, I prioritized opportunities for not just learning activities but social gatherings because I perceived these to be “extremely valuable in helping us to connect with them and build trust” (RJ-28-Jun-19). Having built this trust with teachers in Year One, I was disappointed when only three of the original five teachers could continue into the next year of the study (due to administrative changes). I felt the need to begin the trust-building process again with the new participants. After conducting a set of first interviews, I
As I was leaving today, I was thinking, ‘I don’t feel like I connect as well with this new group of teachers as I did with the group last year.’ Yet, upon further reflection I began to recall that I worked hard in the beginning with the last group to break down barriers to their feeling comfortable. (RJ-24-Sept-19)

In spite of the challenges I faced, teachers’ data were overwhelmingly supportive of the structure and experiences the CoP provided as most effective for their learning. For instance, teachers felt that the PD experiences I facilitated were different to their school-board mandated experiences in that the teachers were positioned as ‘learners’ and their time was ‘valued’ (Miranda, Yr2-Interview). Toward the end of the second year, I learned from the teachers that some of their hesitation to invest time early in the process was in relation to their previous experiences in and with PD. For instance, one teacher shared that “she was initially quite apprehensive to get involved because there is always something – some new, hot topic in PE research that is being pushed, sold, marketed by someone, and there’s just not time for all of it” (RJ-9-Apr-20); however, in time these apprehensions were alleviated. Indeed, I felt that the key resource required for fostering a CoP was an abundance of time – time to bring participants together repeatedly and build a sense of community and trust. The challenges I faced in aligning my philosophy of PD with my practice in implementation, along with the ways this challenged my perception of what it means to be a facilitator, further emphasized the importance of the longitudinal design of the study, as I seemed to grow more comfortable in my role over time.

Navigating the Unexpected

Everything about this experience was new to me, and as I have outlined above, there were challenges that were unexpected throughout the process. For instance, during the first year
of the study, I experienced challenges in keeping teachers on track with my imposed scheduling:

Communicating with the teachers was more difficult than I had originally anticipated. It took a long time to get five participants to commit, and then again we faced delays in getting forms signed and getting them all to access the online resources. (RJ-28-Jun-19)

In addition to delays in terms of getting the project started:

It took longer than I originally anticipated for these teachers to feel comfortable using the approach in their classrooms. They needed time to figure out how to work it into their regular teaching practice and how to make it gel with their own teaching styles and philosophies. (RJ-28-Jun-19)

Although time constraints and other issues posed some unanticipated challenges along the way, nothing was quite so unexpected as a series of ‘work-to-rule’ regulations and province-wide labor negotiations that necessitated the cancelling of CoP meetings, followed by the sudden mandated closure of schools in light of covid-19, suddenly thwarting my plans and intentions. There was little for me to do in terms of deciding how to ‘proceed’ with my research, as this was simply not an option. However, as a facilitator of teachers’ PD, I struggled with how I might support teachers during this time and continue to enact my vision for being the type of PD facilitator I had aimed to be.

From the beginning, it was my intention to phase myself out of my role as facilitator to ensure the teachers’ PD journey with Meaningful PE could continue after my research was done. I wrote of wanting to avoid what I considered to be ‘hit-and-run’ PD experiences (RJ-4-Sep-19) by finding ways to make the CoP self-sustaining. In a sense, this was my way of ensuring I was not one of ‘those’ facilitators and thus had important implications for my identity in this new role. I had established a plan for how I might go about this in the last few months of the study;
however, my good intentions were undermined by the pandemic, and the enactment of my pedagogy of facilitation was suddenly over. Once again, I returned to this place of occupying two identities (researcher and facilitator), and considering how these challenges affected both:

Of course, I’m devastated that now that we’ve reached that place [of trust with the teachers], we’ve had to shut it all down due to covid-19… But I’m hopeful we’ll be able to pick some of it up next year – not because I want or need more data but because I really want to finish strong with them and set them up to continue with these things (particularly a supportive CoP) in the future. (RJ-9-Apr-20)

My disappointment in the sudden conclusion of the study was less about my research project or data collection and more about my role as facilitator. My primary concern was for what kind of lasting impact this project might be able to have for my teacher participants and how they might return to these things in the future. While it was challenging to be faced with a problem for which there was no foreseeable solution, this experience led me to reflect on why I chose to engage in school-based research and support teachers in their PD journey in the first place in spite of anticipating that there would be challenges:

[Facing unexpected challenges] is the reality of doing research in schools. I think it’s worth it, though. I think we need to work with teachers, even though it often throws wrenches into the works. It’s messy and it’s frustrating at times, but it’s worth it. (RJ-28-Jan-20).

In spite of the challenges I faced and the ways they influenced the enactment of my pedagogy of facilitation, my experience of working with teachers as a facilitator of a CoP was invaluable and deeply meaningful; it was as much for my own PD as it was for theirs.
Discussion and Conclusion

The purposes of this research were to consider my experiences of becoming a facilitator of PD, how those experiences have informed the enactment of my pedagogy of facilitation of teachers’ PD, and how they have shaped my identity as a facilitator of PD. Coming to the study, my personal pedagogy of facilitation was grounded primarily in the PD literature and based largely around facilitating a CoP within a participant-centred, autonomy-supportive approach. My experience of implementing this pedagogy did not challenge my practice of facilitation so much as my perception of what implementing it might look like.

Although the three themes each capture distinct ways of looking at the dynamics and experiences I faced as I facilitated the CoP, there are common threads that connect them. Specifically, the presence of tensions – feelings of internal turmoil (Berry, 2007) – is readily apparent in my interpretation of the data as I enacted my personal pedagogy of PD facilitation. For instance, in coming to identify as a facilitator and as a researcher of facilitation, there was a tension in how I could occupy these two spaces at the same time. While others have highlighted the difficulty of navigating this dual role (Hamilton, 2019), functioning within the role of teacher (of students) at the same time as being a teacher of teachers introduced another element to this challenge. This was also evident in how I tried to reconcile my personal philosophy with the philosophies brought by the teachers to their CoP and research experience. Coming to terms with these tensions – and learning to live with them rather than overcome them – was a crucial part of developing my personal pedagogy of PD facilitation. That is, I recognized that both roles were crucial, and, in this context, it was impossible to exist as one without the other. Thus, I was identifying in multiple ways simultaneously (Stryker & Burke, 2000). In some ways, this reflects Fletcher’s (2020) claims about the inherent hybridity of self-study, where S-STEP researchers
are constantly managing the ways that conceptual relationships exist together rather than in opposition to each other. The influence this had on my facilitation decisions and the ways I interacted with teachers highlights the critical role of identity formation; although the importance of identity has been acknowledged in teacher education (e.g. Bullough, 1997; Vozzo, 2011), the current research suggests that identity matters in the process of becoming and practices of a facilitator of teachers’ PD.

This research also highlights the ways facilitators of teachers’ PD occupy identities and positions created both by themselves and others. Throughout the process, I tended to position myself unknowingly as a living contradiction – experiencing holding particular values in relation to teachers’ PD, while also negating those values (Whitehead, 1989). For example, at times I struggled to offer the participant-centred PD experience I believed in when it required me to relinquish control. In spite of intending to acknowledge the expertise of teacher participants, there were moments when I contradicted this by positing myself as the expert, if nothing else in my own mind. Further, my struggle to function as both researcher and facilitator simultaneously serves as an example of a living contradiction in that, in spite of believing that research and practice are intertwined (Hamilton, 2019), I arbitrarily separated these two roles, at times trying to function in one or the other. In addition, my sense of identity was influenced by the ways my interactions with teachers positioned me, similar to university-based teacher educators facilitating in-service teachers’ PD in Lange and Meaney (2013). However, recognizing and articulating these tensions, living contradictions, and positionalities through S-STEP allowed a way forward in attempting to navigate some of these difficulties.

In light of calls in the literature to redefine the role of the PD provider (Armour & Yelling, 2007; Parker et al., 2012), the construction of my identity as a facilitator often took the
form of the ‘creation of difference’ (Benhabib, 1996, p. 3), in that I looked for ways to
differentiate myself from the ‘old’ or ‘traditional’ PD provider and identify with the ‘redefined’
CoP facilitator who was sensitive to teachers’ needs. The challenges I faced in this process were
similar to those faced by a beginning CoP facilitator in Gonçalves et al. (2020). For instance, we
both faced challenges in learning to allow teachers to set the pace for progress and finding a
balance between pushing teachers in their development and providing them an appropriate
amount of space to learn and grow. Further, we both expressed similar feelings of insecurity in
the process of becoming a CoP facilitator. While previous research has shown the need for
facilitators to increase their ‘knowledge’ of effective forms of PD in order to “improve their
understanding of their role in enabling teacher learning” (Perry & Boylan, 2018, p. 268), this
research suggests that even with such knowledge, there is a need for the development of
adaptation and flexibility as key skills for facilitation.

This research holds important implications for facilitators of teachers’ PD. First,
reflecting on my experience of becoming a facilitator of teachers’ PD has highlighted the
importance of being aware of one’s identities as a facilitator and the ways these are embedded in
(as opposed to an extension of) one’s practice, particularly for outside PD providers and those
who are simultaneously functioning within other roles (i.e. university-based researchers). Given
the importance of identity when teaching teachers (Beijaard et al., 2004; Bullough, 1997; Vozzo,
2011), S-STEP methodology may provide an effective avenue for the beginning PD facilitator to
consider their sense of self and identity and thus learn to recognize and live with the tensions
associated with taking on a new role. Further, this research highlights both the luxury and
necessity of time in the process of facilitating a CoP. While time has often been viewed as a
necessary component for teachers’ learning within a CoP, this study highlights the important role
of time in learning to facilitate teachers’ learning within a CoP. Lastly, this research suggests that it is perhaps futile for facilitators to attempt to do things either teachers’ way or their own. Rather there is a need to attempt to function in the space in between. Thus, establishing a shared direction for the group might be a good first step in facilitating a CoP.

In addition to implications for facilitators of teachers’ PD, this research holds implications for research into teachers’ PD. Previous research has highlighted the need to consider facilitators’ beliefs about teachers’ PD if the role of the facilitator is going to be reimagined (Patton et al., 2012) and for teacher educators to make explicit and critically discuss their beliefs about teaching teachers (Vanassche & Kelchtermans, 2016). However, the current research highlights the need to consider teachers’ beliefs and expectations as well. In the current research, teachers’ comments which positioned me in the role of a more traditional PD provider (e.g. seeking my ‘permission’ to try something new) suggest that, although there was a preference for an approach to PD that positioned teachers as active learners, their default was to expect and seek a facilitator-centred experience. Thus, there may be value in having both facilitators and teachers consider and articulate their own expectations and beliefs about their PD as well as their positioning on multiple levels; that is, their positioning as active collaborators rather than passive learners, in relation to the facilitator within PD contexts, particularly where prior experiences of PD have been largely facilitator-centred.

In conclusion, this research makes a significant contribution to the literature on facilitation of teachers’ PD by offering insight from the vantage point of the facilitator of such experiences. In particular, it is clear there are important personal and professional tensions to be managed by the facilitator, particularly in relation to the internal and external processes of identification, in this type of practice (Jenkins, 2008). Self-study offered a useful and appropriate
methodological approach to consider the work of a teacher educator in a context outside of pre-service teacher education; that of supporting teachers in their ongoing professional development. Further examples by other facilitators may offer clearer and/or more diverse pictures of pedagogies of facilitation to develop deeper understanding for the field of teacher education. There is clearly much to be learned about understanding the complex work of the self-in-practice in facilitating teachers’ PD.
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CHAPTER VIII: DISCUSSION

The purpose of this research was to take the Meaningful Physical Education (PE) approach into the field to be implemented and tested by a sample of teachers in elementary schools in Ireland and Canada. The aim of this research has been to highlight teachers’ experiences of learning about and implementing the approach in their classrooms. To accomplish this, five elementary teachers from Ireland and 12 elementary teachers from Canada participated in two separate studies in which they learned about and implemented the Meaningful PE approach in their classrooms with their students. Article One served as a pilot study – a small-scale implementation of Meaningful PE with five elementary classroom teachers in Ireland over a period of eight weeks – that helped guide the design of the professional development (PD) initiative teachers in the second study participated in as they began the implementation process. Articles Two through Four highlight the second study, in which twelve elementary teachers (both classroom teachers and PE specialists) based in Canada implemented the Meaningful PE approach in their classrooms across one or two school years, depending on the duration of their participation. Articles One and Two offer particular insight into teachers’ perceptions of the Meaningful PE approach itself and their experiences of the implementation process. Articles Three and Four focus on the PD initiative used to introduce teachers to the approach, including teachers’ experiences and perceptions of the PD initiative and my process of learning to facilitate PD for teachers, respectively. Summaries of the major findings of each article are highlighted in the sections that follow. Moreover, I make specific connections to the research literature in order to situate the findings of each article and my overall dissertation research and identify how each study makes a significant contribution to the physical education knowledge base.
Article One

Article One focused on classroom teachers’ experiences of Meaningful PE and of implementing it in their classrooms. While teachers’ perceptions of the approach were generally favorable, their implementation was highly related to their individual interpretations of the approach. This occurred in relation to two primary factors: 1) their perceptions of positive student outcomes resulting from their implementation of the approach (similar to teachers in Goodyear & Casey, 2015, and related to Guskey’s, 2002, teacher change theory), and 2) their own experiences of and beliefs about teaching (similar to teachers in Penuel et al., 2014). This suggests there may be value in teachers beginning by engaging with their own philosophy of teaching in relation to the approach to identify areas of alignment/misalignment (similar to Beni et al., 2018 and Ní Chróinín et al., 2018, 2019). While none of the teachers in the study implemented every aspect of the approach that was shared with them, each teacher implemented something. From my analysis it is my conclusion that this resulted in no major shifts in teachers’ practice, but rather minor tweaks that helped to align their practice more clearly with Meaningful PE. This is perhaps unsurprising given the short duration of this study. Further, research has demonstrated that implementing innovative teaching approaches requires a conceptual shift on the part of teachers (Casey, 2014) which often necessitates a substantial investment of time (Goodyear & Casey, 2015; Dyson, 2002). This article highlighted the need for more longitudinal studies of teachers’ implementation of Meaningful PE, a point that provided a solid justification for collecting data over two years in the second part of my dissertation research (Articles Two-Four). The language of the features of Meaningful PE was generally perceived as accessible to both teachers and students and thus tended to be the focus of their implementation. Teachers faced greater difficulty with offering students autonomy and providing opportunities for goal-
setting. This highlights the need to offer teachers support as they learn to make this a habitual part of their teaching practice and suggests there may be value in starting small by, for example, providing students with some options from which to choose (Mandigo et al., 2008). Given the importance of reflection in the meaning-making process (Standal, 2015; Thorburn, 2021), this highlights the need to make use of teaching tools and resources that might support engaging students in reflection, such as those offered by O’Connor (2019). This research makes a significant contribution to the literature in that it has provided preliminary support for use of the Meaningful PE approach with classroom teachers with little or no prior experience or specialism in PE, while also highlighting a need for teachers to be supported, particularly in using democratic and reflective pedagogies, when learning to implement the Meaningful PE approach.

**Article Two**

Article Two focused on teachers’ experiences of implementing the Meaningful PE approach across two school years and the factors that influenced their implementation in various ways. The research design for Articles Two-Four was informed by analysis of the research design and outcomes in Article One. Findings from Article Two highlighted the value of using Century and Cassata’s (2016) conceptualizing factors that influence implementation of innovations (including characteristics of individual end users, organizational and environmental factors, attributes of the innovation, implementation support strategies, and implementation over time) within an actor-oriented analysis (Penuel et al., 2014) as a framework for implementation research. Utilizing this framework offered deeper insights than a traditional focus on barriers and facilitators alone (similar to Vasily et al., 2021). As with teachers in Article One, teachers in the Canadian arm of the study tended to conceptualize and implement the approach in different ways and to various extents in relation to their beliefs and experiences (e.g. their prior conceptions of
PE, level of experience, and interpretations of how well the approach did or did not align with their personal priorities and philosophies for teaching PE). Consistent with studies of implementation of educational innovations in various subjects, even where teachers saw value in the innovation and consequently wanted to change their practice, their prior experiences and beliefs made it difficult at times to do so (Spillane et al., 2002; Cohen & Ball, 1990). In addition to individual factors, teachers’ implementation decisions were influenced by organizational and environmental factors – both at the school level (e.g. time and scheduling, space, and support from administration) and more broadly in relation to the provincially-mandated curriculum, labour-negotiation sanctions and restrictions related to the covid-19 pandemic. Much like the teacher who implemented Meaningful PE in Vasily et al., (2021), where teachers perceived strong support from administration, colleagues, students, and even parents, their confidence in implementing the innovation was bolstered.

Teachers in this study were highly concerned with the responses and behaviours of their students in relation to their implementation of Meaningful PE. Thus, students played a significant role in the decisions teachers were making during the implementation process. Teachers considered the ways implementation of an innovation could be challenging not only for themselves, but also students, particularly when implementation resulted in an experience of PE that was quite different to what students were accustomed to. The results of the current research add merit to Syrmpas et al.’s (2017) findings suggesting classroom management is a factor in the decisions teachers make during the implementation process and to Guskey’s (2002) assertion, along with findings from teachers in Article I, that when teachers perceive positive student outcomes from the implementation process, they are more likely to commit to long-term change in their teaching practice. This highlights the critical role that students play in the
implementation process.

In addition, the particular context/community within the school and classroom were also influential. Although all teachers were working within the same school board, and thus a relatively short distance from one another, the social context of their schools tended to vary greatly (as a result of administrative decision-making and students’ behaviours). This played a role in the extent to which teachers were willing and able to implement the approach. Given the variability of their circumstances and contexts, teachers in this study appreciated the elastic nature of the Meaningful PE approach and how it could be implemented flexibly to suit their and their students’ needs. Teachers’ valuing of the flexibility of the approach adds support for recent calls in the literature to develop “more loosely framed guiding principles” for the promotion of meaningful experiences that do not require teachers to “blindly adher[e] to the mandatory and non-negotiable features of practice advised” (Thorburn, 2021, p. 2).

Although teachers’ perceptions of the Meaningful PE approach were generally quite favorable, they tended to interpret subjective attributes of the approach in varying ways. For example, some teachers were unconvinced of the potential value of facilitating student reflection, particularly when it resulted in less movement time for students. The remaining two factors from Century and Cassata’s (2016) framework – implementation support strategies and implementation over time – were considered in Article Three. This research makes a significant contribution to the literature in that it highlights a notable gap in Century and Cassata’s (2016) factors that influence implementation of innovations within education research – namely, the role of the student in both influencing teachers’ implementation decisions and acting as end users of the innovation themselves.
Article Three

Article Three focused on teachers’ experiences of a PD initiative designed to support their learning about and implementation of the Meaningful PE approach. Teachers’ responses offered support for a PD initiative that was designed around and guided by characteristics of effective PD often cited in the literature (Desimone, 2009; Darling-Hammond et al., 2017; Hunzicker, 2011; Parker & Patton, 2016). Specifically, the use of a community of practice (CoP) and modelling of the approach were the characteristics most valued by teachers. In particular, like teachers in Goodyear and Casey’s (2015) study, the intentional facilitation of a CoP was well-received by teachers in the process of learning to implement an innovation. As has been demonstrated elsewhere, a CoP helped teachers overcome feelings of isolation and feel part of a learning community (Cooper et al., 2021), which can be particularly challenging for specialist PE teachers and those teaching elementary compared to secondary school (Gaudreault et al., 2018). Additionally, several teachers suggested the most valuable experience for their learning to implement the approach was seeing it modelled. Similar to teachers in Cooper et al. (2021), teachers wanted to know what was happening in colleagues’ classrooms and tended to value learning from one another more so than from external sources. While peer observations have been used effectively in PE-PD built around Lesson Study (e.g. Kihara et al., 2021), this research highlights the value of providing opportunities for both expert modelling and peer observation within a CoP to introduce teachers to innovations in PE, particularly given the practical nature of the subject. While the PD opportunity was structured in a way that was perceived to support teachers’ learning, teachers highlighted the importance of continuing this support over time – ideally, two school years (Dyson, 2002).

When sharing their perspectives of the types of support that were most helpful for their
PD when learning to implement the Meaningful PE approach, teachers in this study also highlighted several tensions between utopian and more realistic forms of PD. Teachers tended to recognize that what might be ideal for their learning was not always realistic as a result of both personal and organizational factors. While there is a substantial body of literature in PD on the role of individual characteristics and factors in teachers’ professional learning, Allen and Penuel (2015) suggest there has been much less of a focus on the organizational contexts where PD occurs and how these influence teachers’ practice. Teachers’ articulation of five tensions in the current research have highlighted the role of both.

First, while teachers tended to believe that they should be self-directed in their learning, in reality the accountability of group meetings helped them prioritize their learning when balancing competing demands on their time. Second, although teachers preferred exclusively face-to-face interactions, they recognized that cost and time constraints imposed challenges that could be tempered with a blend of online and in-person interactions. Third, teachers valued having the approach modelled by the research team; however, they also suggested that, in a perfect scenario, having the approach modelled by peers, rather than external sources, would help further their learning. Fourth, while teachers felt that two years of full support would be most beneficial for their learning to implement the approach habitually, there was also a recognition that this is expensive and a general consensus that a phased approach with less support in the second year would be acceptable. Finally, teachers were concerned about the time investment required for their ongoing PD. While ideally, they would like to engage in these activities strictly during work hours, teachers were often willing to find a balance between being released from their teaching to participate in learning activities and investing some time of their own. This research makes a significant contribution to the current body of literature on teachers’
professional learning in that it highlights the value of using characteristics of effective PD, specifically CoPs and modelling, when introducing teachers to the Meaningful PE approach and other innovations, while also highlighting the importance of finding a balance between ideal and more realistic forms of PD in relation to personal and organizational constraints teachers face.

Article Four

Article Four focused specifically on my experiences of becoming a facilitator of teachers’ PD and how these experiences informed the enactment of my pedagogy of facilitation of teachers’ PD. This study highlights the tensions (Berry, 2007) I experienced in becoming a facilitator of teachers’ PD. For instance, in coming to identify as a facilitator and as a researcher of facilitation, there was a tension in how I could occupy these two spaces at the same time. While others have highlighted the difficulty of navigating this dual role (Hamilton, 2019), functioning within the role of teacher (of students) at the same time as being a teacher of teachers introduced another element to this challenge. This was also evident in how I tried to reconcile my personal philosophy with the philosophies brought by the teachers to their CoP and research experience. Coming to terms with these tensions – and learning to live with them rather than overcome them – was a crucial part of developing my personal pedagogy of PD facilitation. That is, I recognized that both roles were crucial, and, in this context, it was impossible to exist as one without the other. Thus, I was identifying in multiple ways simultaneously (Stryker & Burke, 2000). In some ways, this also reflects Fletcher’s (2020) claims about the inherent hybridity of self-study, where S-STEP researchers are constantly managing the ways that conceptual relationships exist together rather than in opposition to each other. The influence this had on my facilitation decisions and the ways I interacted with teachers highlights the critical role of identity formation; although the importance of identity has been acknowledged in teacher
education (e.g. Beijaard et al., 2004; Bullough, 1997; Vozzo, 2011), the current research suggests that identity matters in the process of becoming and practices of a facilitator of teachers’ PD.

In addition, this research has highlighted the ways facilitators of teacher’s PD occupy roles and positions created by both themselves and others. I often positioned myself as a living contradiction (Whitehead, 1989) in that I held particular values while simultaneously negating those values. This was most prominent in relation to the values I held concerning teachers’ PD. In spite of wanting to facilitate a learner-centred experience through a CoP, at times I struggled to relinquish control and acknowledge teachers’ expertise. In addition, although I came to the study believing that research and practice are intertwined (Hamilton, 2019), my arbitrary separation of my various roles constitutes another contradiction. In addition, my sense of identity was influenced by the ways my interactions with teachers positioned me (e.g. as ‘expert’ as ‘younger’), similar to university-based teacher educators facilitating in-service teachers’ PD in Lange and Meaney (2013). The use of self-study of teacher education practice (S-STEP) research methodology helped me recognize and articulate these tensions, living contradictions, and positionalities and allowed a way forward in attempting to navigate some of these difficulties.

In light of calls in the literature to redefine the role of the PD provider (Armour & Yelling, 2007; Parker et al., 2012), the construction of my identity as a facilitator often took the form of the ‘creation of difference’ (Benhabib, 1996, p. 3), in that I looked for ways to differentiate myself from the ‘old’ or ‘traditional’ PD provider and identify with the ‘redefined’ CoP facilitator who was sensitive to teachers’ needs. The challenges I faced in this process were similar to those faced by a beginning CoP facilitator in a study by Gonçalves et al. (2020). For instance, we both faced challenges in learning to allow teachers to set the pace for progress and finding a balance between pushing teachers in their development and providing them an
appropriate amount of space to learn and grow and in feeling insecure in the process of becoming a CoP facilitator. While previous research has shown the need for facilitators to increase their ‘knowledge’ of effective forms of PD in order to “improve their understanding of their role in enabling teacher learning” (Perry & Boylan, 2018, p. 268), this research suggests that even with such knowledge, there is a need for the development of adaptation and flexibility as key skills for facilitation. This research makes a significant contribution to the literature in that, while previous research has shown a CoP approach to offer an effective format for teachers’ professional development (McLaughlin & Talbert, 2006), the current study offers insight from the vantage point of the facilitator of such experiences. In particular, this research suggests that S-STEP methodology may provide an effective avenue for the beginning PD facilitator to consider their sense of self and identity and thus learn to recognize and live with the tensions associated with taking on a new role.

**Implications**

The results of this research hold important implications in three primary areas. First, one of the predominant purposes of the study was to test implementation of the Meaningful PE approach with a sample of teachers to help further refine the approach and understand how best to share it with teachers in the future. Consequently, this research has implications for the refinement of the Meaningful PE approach. Second, given that Meaningful PE is an innovation that teachers in the current study were unfamiliar with, this research holds important implications for educational implementation research by which teachers are introduced to innovations. Finally, the focus on supporting teachers as they have learned about the approach and implemented it in their classrooms has implications for the study of teachers’ PD.
Refinements to Meaningful PE

This research has highlighted a strong connection between teachers’ prior experiences of and beliefs about PE and their interpretations of the Meaningful PE approach. Ní Chróinín et al. (2019) have highlighted the value of using a prioritized focus on meaningfulness as a vision for teaching. Thus, it may be helpful for teachers being introduced to the approach to begin with a vision exercise or an intentional consideration of areas of alignment/misalignment between Meaningful PE and their current beliefs and practices. In addition, given that teachers in the current study also tended to interpret the Meaningful PE approach and the priority it should be given in light of the provincially-mandated curriculum document, helping teachers who are learning about the approach to draw connections between it and local curriculum/policy documents may facilitate the implementation process and enhance teacher buy-in (Kwok, 2014).

Given the elastic nature of the Meaningful PE approach that provides teachers the opportunity to make decisions about how they implement it in their classrooms, in this research subjective elements of the approach were viewed in different ways by various teachers and implemented to varying extents. While this may raise questions around the depth of teachers’ implementation, it is important to highlight that this elasticity was one of the elements of the approach that was most valued by teachers, supporting findings in Vasily et al. (2021). This adds support to recent calls in the literature for the development of guiding principles rather than non-negotiable features to facilitate a focus on meaningfulness (Thorburn, 2021). Allowing teachers flexibility in the implementation process may enhance teachers’ willingness to engage.

This research has also highlighted that, while teachers found the language of the features of meaningful experiences in PE (social interaction, fun, etc.) to be quite accessible for them and their students, they found it more challenging to implement a strong focus on democratic and
reflective principles. In spite of valuing democratic pedagogy, teachers in this study found it challenging at times to find a balance in providing students opportunities for greater autonomy. Future presentations of Meaningful PE should more strongly foreground student-centred pedagogy with a focus on autonomy-support in addition to providing teachers support in learning how to bring this into their classrooms. Further, teachers in this research were hesitant to prioritize opportunities for student reflection at the expense of movement time. Given the critical role of reflection in helping students make sense of and find value in their learning experiences (O’Connor, 2019; Thorburn, 2021; Lynch & Sargent, 2020), there is a need to help teachers learning to implement Meaningful PE understand the potential value of reflection and find ways to incorporate it into their practice. In Figure 8.1 I provide a visual depiction of my perception of what Meaningful PE is and what Meaningful PE is not as a result of my own experiences with the approach and of introducing other teachers to it and seeing their implementation of it in their classrooms.

**Figure 8.1**

*What is the Meaningful PE approach?*
### What is the Meaningful PE Approach?

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<thead>
<tr>
<th>The Meaningful PE Approach Is Not:</th>
<th>The Meaningful PE Approach Is:</th>
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<tr>
<td>A checklist or list of prescribed steps teachers should use to teach toward meaningful experiences</td>
<td>A framework to help guide teachers' pedagogical decision-making when prioritizing meaningful experiences</td>
</tr>
<tr>
<td>6 A set of six features</td>
<td>Ideas about the types of features that influence ways students experience meaningfulness and about how teachers might promote those</td>
</tr>
<tr>
<td>A stand-alone model or approach for delivery of a PE program</td>
<td>Designed to be integrated with local curricular and policy objectives and used in concert with other pedagogical models/approaches where appropriate</td>
</tr>
<tr>
<td>Aimed at maximizing students' moderate-to-vigorous physical activity within PE class</td>
<td>Designed to promote the types of experiences that will draw students back to movement both within and beyond PE</td>
</tr>
<tr>
<td>A free-for-all PE experience allowing students to do whatever will be enjoyable in the moment</td>
<td>A way to involve students more in age-appropriate decision-making to promote active learning</td>
</tr>
<tr>
<td>The golden ticket to meaningful experiences in PE</td>
<td>Built on the premise that meaningfulness is experienced in subjective ways in transaction with others in a social environment which necessitates regular reflection and adjustment</td>
</tr>
<tr>
<td>A completed project</td>
<td>A work in progress</td>
</tr>
</tbody>
</table>
Implementation Research

This research has highlighted the value of an actor-oriented approach to implementation research (Penuel et al., 2014), particularly when studying innovations that are early in their stage of development. An actor-orientation provided insight into teachers’ experiences of learning about and implementing the Meaningful PE approach, allowing for both the innovation and the way it is introduced to end-users to be further refined. In addition, the use of Century and Cassata’s (2016) conceptualizing factors that influence implementation of an innovation as a conceptual framework for this research complemented an actor-orientation and allowed a broader focus than that of barriers and facilitators alone. Each conceptualizing factor has played a role in teachers’ experiences of the implementation process and holds important implications for the process of implementing innovations in education:

- Characteristics of individual end users were found to be highly individual and to influence teachers’ interpretations of the innovation and thus their implementation decisions (similar to teachers in Penuel et al., 2014).

- Organizational and environmental factors both within the school and in a broader context influenced the time and resources teachers had available and thus the decisions teachers were able to make concerning implementation. This is a factor that has not been considered often enough in implementation research (Allen & Penuel, 2015).

- Attributes of the innovation were interpreted in varying ways, particularly with an innovation designed to be implemented flexibly. Individual interpretations can potentially lead end users to believe certain attributes of an innovation are not necessary (Walsh et al., 2010), even when teachers’ general interpretations of the
innovation are positive.

- Implementation support strategies within educational implementation research may best be guided by the literature on teacher change and teachers’ PD, supported through a CoP (Goodyear & Casey, 2015; Walsh & Wright, 2016; Oliver et al., 2017).

- A consideration of implementation over time has highlighted the necessity for ongoing support for teachers learning to implement educational innovations, ideally for two or more years (Dyson, 2002).

This research highlights the value of utilizing this framework as a guide for both introducing teachers to innovations and studying their experiences of implementing them in practice. However, this research has also highlighted a gap in Century and Cassata’s (2016) framework. Teachers in this study spoke repeatedly of the role their students played in the implementation process; a point also made by Goodyear and Casey (2015). This included both the value for students’ learning but also their responses and behaviours through the implementation period. The decisions teachers were making through the implementation process were highly influenced by their perceptions of their students’ responses and the potential for their students’ learning. Thus, it is notable that the role of students is largely absent from Century and Cassata’s (2016) framework. There is a need to consider the role that students play both in influencing the decisions teachers make in the implementation process and as end-users of the innovation themselves.

**Teachers’ Professional Development Research**

This research offers support to both studies with other teachers (e.g. Goodyear & Casey, 2015) and teacher change theories (Guskey, 2002) which highlight the need for teachers to
perceive positive student outcomes when learning to implement innovations in their classrooms. This holds important implications for both innovation designers and facilitators of PD in that there is a need to ensure educational innovations promote student learning and other beneficial student outcomes and to highlight these benefits for teachers who are learning to implement these innovations. This research also highlights the value of using characteristics of effective PD outlined in the literature (Desimone, 2009; Darling-Hammond et al., 2017; Parker & Patton, 2016; and Hunziker, 2011) to assess, analyze, compare, improve and test (Tannehill et al., 2021) but also plan and enact PD initiatives. In particular, this research supports a CoP combined with modelling of the innovation to support teachers in the implementation process.

This research has also highlighted the existence of tensions between what is ideal and what is realistic when facilitating PD opportunities for teachers. That which might be perceived as ideal for teachers’ learning may not always be possible in light of organizational and personal barriers. Consequently, there is a need to listen to teachers in finding a balance that is both beneficial for their learning and manageable in relation to other priorities. Further, although teachers tend to prefer a participant-centred (rather than facilitator-centred) PD experience (e.g. Armour & Yelling, 2004a, 2004b, 2007), this research suggests that, where prior experiences have been largely facilitator-centred, there may be a tendency to seek those types of experiences that are familiar. Thus, there may be value in teachers considering and articulating their own beliefs about teacher learning and their positioning in relation to the PD provider (i.e. as active learners rather than recipients of knowledge transmission) in order to promote more participant-centred learning experiences.

Lastly, this research provides insight into the process of becoming a facilitator of teachers’ PD. While it is generally acknowledged that CoPs take time to establish (e.g. Goodyear
& Casey, 2015), this research highlights the need for time not only for teachers but also facilitators learning to foster CoPs. There is a need for the facilitator to be aware of the important personal and professional tensions that may arise and need to be managed, particularly in relation to the internal and external processes of identification, in this type of practice (Jenkins, 2008). S-STEP may be an effective avenue to help facilitators become aware of these things and come to terms with tensions that may be encountered in the process, learning to view different sources of identity as embedded in (as opposed to an extension of) one’s practice. Further, this research highlights the value of S-STEP for teacher educators in contexts outside of pre-service teacher education, when supporting teachers in their ongoing PD.

Limitations and Future Directions

In the current research, ethical restrictions from the school board in which the research was conducted prevented the collection of student data. Future research around the Meaningful PE approach should involve students to a) examine if students perceive that the Meaningful PE approach enhances the meaningfulness of their experiences in PE, b) examine if the Meaningful PE approach results in positive student learning outcomes, and c) understand students’ experiences not only of the approach but also the implementation process. In addition, in the current study, teachers were introduced to a preliminary version of the Meaningful PE approach that has been revised and refined over time (Fletcher et al., 2021), largely in response to this and other parallel research initiatives. In light of this, and given the transactional nature of meaningfulness (Garrison, 2001) and the role of context in the meaning-making process (Mikalsen & Lagestad, 2020a, 2020b), there is a need to continue to study implementation of the Meaningful PE approach with teachers in varying contexts, with a range of teaching experiences, over an extensive period of time (ideally two or more school years). Longitudinal studies lasting
longer than two school years may offer insight into whether implementation of the approach is maintained beyond the initial implementation period. These types of studies may also lead to the identification of some aspects of the Meaningful PE approach that are deemed to be central and/or peripheral, as data becomes saturated across contexts and time. This ongoing refinement may lead, in the future, to the use of integrity-oriented examinations of teachers’ implementation of Meaningful PE.

In relation to future implementation of the Meaningful PE approach, there is a need for those introducing teachers to the approach to be wary of the notion that teachers are already doing these things in practice. As highlighted in the current research, although the approach may seem close to teachers’ current practice, even seemingly small changes to teachers’ practice can require extensive time and support (Casey, 2014). Further, there is a need to pair the implementation process to a well-designed PD initiative. This requires a consideration of the challenges to ideal forms of PD and highlights the need for teachers to be involved in the process of designing and sustaining the type of support that is needed for teachers learning to implement the approach.

**Reflections**

As outlined in Chapter III, it was my intention coming to this research to prioritize a participant-centred approach to introducing teachers to the Meaningful PE approach and seeking to understand their experiences of it. I wanted to treat teachers as experts, listen to and share their ideas and perspectives, treat them as active learners and contributors to the project, and learn with and from them. I also wanted to stay open to having my assumptions – about Meaningful PE, teachers’ PD, the implementation process, etc. – challenged. At that point I was not consciously aware of how uncomfortable that process may be at times. Although I was open to
having assumptions challenged, I am not certain I was expecting it to actually be necessary. In spite of having read all the literature I could find on these topics and building my design around what I understood to be best practices, there were still challenges. I was not expecting to struggle with constant delays (to my arbitrarily created schedule) when teachers did not respond or complete tasks as quickly as I had hoped they would. I was not expecting that teachers would not submit journal entries like I had asked them to. I was not expecting that some of them would see things quite differently to how I did. I was certainly not expecting to feel inadequate for the task of fostering teachers’ PD. However, reflecting back upon the experience now, I am confident these challenges and moments of discomfort were an important part of the process for me.

Perhaps most predominantly, my perceptions of the Meaningful PE approach have been challenged. My narrow view of what it ‘should’ look like (which I now recognize as having been derived largely from my own teaching practice) was challenged as I spoke with and observed other teachers in other contexts and their need to make adaptations to suit the needs of their students. My conceptions of what it meant to be a ‘researcher’ and a ‘facilitator of teachers’ PD’ were challenged. Where I previously tended to think of researchers as fairly passive in the data collection process, I quickly came to realize how active I was in the process from the moment I began to design to the study all the way through to writing and sharing the results. Further, in spite of my best intentions to facilitate participant-centred PD experiences, it was more challenging than I anticipated to gravitate away from a more traditional approach.

In addition, my perceptions of conducting school-based research were challenged. Coming to this project, I was aware (in the sense that I had been warned) that conducting research in schools could be challenging and unpredictable. I knew that this meant some of my original intentions may not work out in light of this (although it was still disappointing when this
occurred). Yet, my passion to involve teachers (and students) in educational research prevailed. My assumptions were challenged in that, in spite of acknowledging that there would be challenges, they were perhaps more substantive than I had imagined. However, my belief that teachers’ and students’ voices matter in educational research has only grown stronger as a result of this process. Although it was challenging at times, I have every intention of continuing to conduct research in schools with teachers and their students. This experience has been as much for my professional learning as it was for the teachers’ whose PD I was facilitating. It has truly been a deeply meaningful experience for me.

**Conclusions**

Overall, this research has contributed to the literature in relation to refining the Meaningful PE approach and how it is presented to teachers, educational implementation research, and research into teacher learning and PD. First, the Meaningful PE approach should be presented to teachers in a way that foregrounds the importance of democratic and reflective pedagogies, while simultaneously supporting teachers in learning to implement and incorporate these strategies. Further, teachers should be supported in drawing connections between Meaningful PE and local curricular and policy objectives. Given the highly subjective nature of meaningfulness and individual experiences, the elastic nature of the approach is highly valued by teachers and should be maintained.

Second, this research has highlighted the importance of considering a broad range of influences on the decisions teachers make when implementing innovations, including at the level of the individual and more broadly within the organization and environment. Specifically, this research highlights the importance of considering the role of students in the implementation process – both their influence on teachers’ decision-making and their own experiences as end
users of innovative approaches.

Lastly, in relation to teachers’ professional learning, this research highlights the value of using characteristics of effective PD acknowledged in the literature to guide initiatives designed to support teachers in implementing innovations, most particularly CoPs and modelling of novel approaches. In addition, there is a need to involve teachers in the process of finding a balance between PD experiences that are theoretically effective and those which are practical in relation to personal and organizational constraints.
References


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APPENDICES

Appendix A: Interview Guides

Interview 1

• What are your general beliefs about physical education? What do you think its main role is for students?
• Why are you interested in using the Meaningful PE approach in your classroom?
• What are your thoughts/expectations regarding implementing the Meaningful PE approach at the moment?
• Are there specific things you have found particularly helpful for your teaching in PE?
• Are there specific things you are looking forward to?
• Are there specific things you feel will be challenging?
• In terms of the process of learning to use the approach so far (engaging with resources on the website, meeting with other teachers, etc.), are there particular things that have been helpful? That have made your learning more difficult?
• Any suggestions at this point for how we might make this process easier for teachers who will learn to use the approach in the future?

Interview 2 – Year One

• How did you feel about the class?
• Can you give me some examples of when it was easy to implement the Meaningful PE approach?
• Can you give me some examples where you were unsure/it was challenging to implement?
• Since our last interview, what things have helped you learn about implementing the
Meaningful PE approach? What things have made learning to implement the Meaningful PE approach difficult?

- Let’s talk about that moment in the class when… Can you go back to that moment and explain what you were thinking for me?
- If you were going to teach this lesson again using the Meaningful PE approach, what might you change? What might stay the same? Why?

Interview 2 – Year Two

Questions about Implementation:

- How have you used/are you using the approach:
  - Is it something you find yourself using in every lesson? Select lessons?
  - Is it something you pre-plan for or something that you bring into the lesson as it’s happening?
- Do you see yourself continuing to use this approach in the future and if so, how?
  - Are there select content areas and/or grade-levels you would use it with, or would you use it ‘across the board’?
- Are there any aspects of the approach that you don’t particularly like or find useful with your students? Are there any aspects of the approach that you like or make use of more than others?
  - E.g. eliminating or emphasizing one or some of the features, making limited (or no) use of reflection, etc.
- Would you say that being involved in this project and using the Meaningful PE approach in your classroom has changed the way you teach? Your outlook/philosophy on teaching PE? If so, in what ways?
• Are there any factors that have been either a facilitator or a barrier to your ability to use the approach in your classroom?
  o E.g. support from the board, the school, other teachers, us; time; students, parents; personal factors; beliefs about teaching…

Questions about Professional Development:

• We’ve been working together now with the group since August (earlier for some). How has your experience of both learning to use the approach and implementing it in your classroom been different from or similar to other professional learning experiences you’ve had in the past?
  o Think of the online resources, the CoP meetings, any one-on-one meetings...

• What types of things have made learning about and using the approach in your classroom easier? More challenging?
  o E.g. working together with other teachers, support from Tanya, support from us; types of resources available; amount of contact with us and other teachers (too much, not enough?); CoP meetings; demonstrations/sample lessons…

• If we were going to do this all over again with another group of teachers, what sort of recommendations would you make about how we would/should teach them to use the approach and support them as they do so across the school year?

• Does the length of this project (running for a full school year) feel too long? Too short? Just right? What about frequency of meetings with other teachers?

• At the end of this project in June, what are you hoping to be able to say you personally have gotten out of this experience in terms of your own professional learning? Is there anything we can do from now until then to support you in reaching that goal?
Interview 3

- What was your overall experience of using the Meaningful PE approach in your classroom? (e.g. Was it positive, negative, neutral? And why?)

- Do you see yourself continuing to use this approach in the future and if so, how?

- How have your perspectives of the Meaningful PE approach changed as a result of your use of the approach in your classroom?

- What things helped you best learn about using the approach? Where has the best or most valuable information about using the approach come from? (e.g. reading journal articles, blog posts, professional development, etc.) Why was it best/most valuable?

- What things made implementing the approach challenging?

- What would you suggest to a colleague who was going to begin learning about using the Meaningful PE approach? What should they know and be prepared for? What should they look forward to?

- What recommendations would you make to the researchers in terms of modifying the approach, suggesting additional pedagogical strategies that might be useful, etc.?
### Appendix B: Observation Template

**TEMPLATE FOR NON-PARTICIPANT OBSERVATION**

<table>
<thead>
<tr>
<th>Observer name:</th>
<th>School/ Class/ Number of students:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of observation:</td>
<td>Class duration:</td>
</tr>
</tbody>
</table>

**Pre-observation meeting/discussion with research team AND/OR class teacher**

Note here any information you gathered from the Pre-observation discussion/ since the last observation

<table>
<thead>
<tr>
<th>PHASE OF LESSON</th>
<th>ACTIVITY – WHAT IS THE TASK/ ACTIVITY</th>
<th>WHAT DO YOU HEAR/ SEE e.g children laughing/ children jumping/ throwing</th>
<th>MOMENTS RELATED TO SOCIAL INTERACTION/ FUN/ CHALLENGE/ COMPTENCE/ PRL</th>
</tr>
</thead>
<tbody>
<tr>
<td>WARM UP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEVELOPMENT 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEVELOPMENT 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COOL DOWN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>ANY OTHER COMMENTS/ ACTIONS FROM THE CHILDREN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ANY COMMENTS/ ACTIONS YOU WERE ASKED TO NOTE BY THE TEACHER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PEDAGOGIES OF MPE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C: Timeline of Events

Year One

2019

JAN
Recruit Participants
Participants given access to online resources

FEB
First meeting with each teacher
Continuing to access online resources

MAR
First CoP Meeting
Teachers begin implementation at their discretion

APR
Ongoing individual support
at teachers’ request

MAY
Ongoing individual support
at teachers’ request

JUN
Second CoP
Year Two

**2019**

**JUL**
- Recruit new participants
- New participants given access to online resources

**AUG**
- Continued access to online resources
- CoP meeting 1

**SEP**
- Teachers begin implementation at their discretion
- First meeting with new participants

**OCT**
- CoP meeting 2
- Ongoing support at teachers' request
**JAN**

- Ongoing support at teachers’ request
- CoP 4
- Sanctions and labour negotiations

**FEB**

- Ongoing support at teachers’ request
- Sanctions and labour negotiations

**MAR**

- Ongoing support at teachers’ request
- CoP 5 - replaced with individual meetings due to sanctions
- Schools closed - covid-19

**APR**

**MAY**

- Scheduled CoP - cancelled

**JUN**

- Final CoP meeting - cancelled
Appendix D: Letter of Invitation

Invitation and Information Letter for Teachers

Dear Teacher,

I am writing to invite you to participate in a research study entitled “Meaningful physical education: Testing a model for teaching and learning”. The principal investigator of this research is Dr. Tim Fletcher, Associate Professor in the Department of Kinesiology at Brock University. The principal student investigator of the study is Stephanie Beni, a doctoral student in the Faculty of Applied Health Sciences at Brock University.

The purpose of this research project is to examine the experiences of elementary physical education teachers implementing the Meaningful Physical Education (MPE) approach in a physical education classroom. We believe that meaningful experiences are one of the main driving forces that lead children to want to participate in physical education and physical activity both inside and outside of school. We are trying to understand ways that we can foster these types of experiences through teaching in certain ways.

If you choose to participate, you will be provided with an opportunity to become familiar with the model, (through reviewing some freely accessible online resources including videos and some reading material) to familiarize yourself with the MPE approach. You will also have many opportunities to ask questions of and engage with the research team to further your understanding of the approach across the duration of the study. You will engage with other teacher participants and/or members of the research team online every second week, during which time you will be asked to share your experiences of implementing the MPE approach in your classroom. This part of the project will take approximately 30-40 minutes of your time every second week. This will also provide the opportunity for you to ask questions and consider ideas other teachers share. These meetings may be audio recorded for transcription purposes. We can offer three half-days of paid release time (i.e., to pay for supply teacher coverage) for you to participate in the project.

You will also be asked to engage in three one-on-one interviews with a member of the research team. These interviews will be audio-recorded for transcription purposes. This part of the project will require approximately 20-30 minutes of your time and will take place at your convenience.

In addition, you will be asked to keep a short reflective journal in which you will record your experiences of using the MPE approach following each lesson. You may use this journal to prompt discussion in meetings with other participants and will also be asked to submit these journal entries to the research team. We imagine this would be similar to the processes you regularly engage in as part of your daily work as a teacher, and so will not require excessive

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Department of Kinesiology
amounts of extra time.

Lastly, a member of the research team would like to visit your classroom several times to conduct observations of your teaching practice while using the MPE approach. The purpose of these observations is not to ‘critique’, evaluate, or criticize your practice but rather to learn more about how teachers learn to use and apply the approach and how it might be adapted for different teachers in different contexts.

**Potential Benefits and Risks**

There are few direct benefits to teachers (e.g., there is no payment for participating nor elevation in status or qualification) other than those that contribute to your ongoing professional learning. If you participate, you will not directly benefit from participation in that you will not receive professional benefits from participation, nor will you be penalized for not participating or withdrawing.

There are, however, several benefits to your ongoing professional learning, and to the contributions this research may make to knowledge about teaching physical education. First, the findings of this research will contribute to understanding a meaning-oriented approach in physical education, as well as to the literature on this topic. Second, the reflections you will be asked to engage in through journal writing, learning community meetings and interviews have the potential to influence the development of your teaching practice, consequently benefiting the students in turn. Third, you will have the benefit of engaging in a sustained form of professional development as you work together with the research team in a professional learning community and have the freedom to ask questions across the duration of the study.

Participation in professional learning community meetings involves a level of vulnerability in sharing one’s experiences with other teachers in the group. Any statements made in this context cannot be considered confidential or anonymous given the nature of the group dynamic. With that said, we will aim to provide an environment where participants feel safe to share their successes and challenges regarding implementation of the Meaningful PE approach. The research team will present any findings from these meetings anonymously.

**Confidentiality**

All information you provide will be considered confidential, with the exception of professional learning community meeting notes as described above. Your name will be replaced with a pseudonym to protect your identity and that of your school and school board; access to the master list of pseudonyms will be restricted to the research team. Please note that with your permission, your anonymous quotations may be used in final reports of the research. Please note that no information will be reported that will render your quotations personally identifiable.

Data collected during this study will be stored on password-protected computers in locked offices on Brock University’s campus. Data will be kept only until the completion of the final report, after which time any hardcopy documents will be confidentially shredded and electronic files will be permanently erased.

**Voluntary Participation**

Participation in this study is completely voluntary. If you wish, you may decline to answer any questions or participate in any component of the study. Further, you may decide to withdraw from this study at any time and may do so without any penalty. Upon your withdrawal you may request that all your data is destroyed.
Publication of Results
Results of this study may be published in professional journals and presented at conferences to audiences of teachers and researchers. If you wish to receive a final report of this research, please contact Stephanie Beni via email.
If you are interested in participating in any aspect of this research, or have any questions about this research, please contact a member of the research team using the information on the form to ask any questions and/or to indicate your interest in participating in the study. If you would like to participate, we will send you a Letter of Informed Consent that further outlines expectations and our responsibilities as researchers.
Thank you for your time.

Sincerely

Tim Fletcher, PhD
Associate Professor
Department of Kinesiology
Brock University
E: tfletcher@brocku.ca
P: 905 688 5550 x 6358

Stephanie Beni
PhD Student
Faculty of Applied Health Sciences
Brock University
E: sb12kz@brocku.ca
Appendix E: Teacher Informed Consent Form

Informed Consent Form

January, 2019

Project Title:
Meaningful physical education: Testing a model for teaching and learning

Principal Investigator (PI):
Dr. Tim Fletcher, Associate Professor
Department of Kinesiology
Brock University
905-688-5550 ext. 6358
tfletcher@brocku.ca

Principal Student Investigator (PSI):
Stephanie Beni, PhD candidate
Faculty of Applied Health Sciences
Brock University
sb12kz@brocku.ca

Invitation
You are invited to participate in a study that involves research. The purpose of this research project is to examine the experiences of elementary physical education teachers implementing the Meaningful Physical Education (MPE) approach in a physical education classroom. We believe that meaningful experiences are one of the main driving forces that lead children to want to participate in physical education and physical activity both inside and outside of school. We are trying to understand ways that we can foster these types of experiences through teaching in certain ways.

What’s Involved
As a participant, you will be asked to review some freely accessible online resources including videos and some reading material to familiarize yourself with the MPE approach. You will also have the opportunity to ask questions of the research team to further your understanding of the approach across the duration of the study. You will be required to use the MPE model in at least one unit of instruction, though you may choose to use it for more. Depending on what you choose, you may be involved in the project for one unit of instruction only, however, if you are interested, you are able to be involved for longer, for a maximum of two years. We will also ask you to submit several artifacts, including lesson plans and the teacher diary, which we will provide. You will be asked to engage in a professional learning community meeting every second week with other teacher participants and members of the research team during which time you will be asked to share your experiences of implementing the MPE approach in your classroom. This part of your participation will take approximately 30-40 minutes on each occasion. This will also provide the opportunity for you to ask questions and consider ideas other teachers share. These meetings may be audio recorded for transcription purposes. You will also be asked to engage in three one-on-one interviews with a member of the research team.
These interviews will be audio-recorded for transcription purposes. Participation will take approximately 20-30 minutes of your time (each interview) and will take place at your convenience. In addition, you will be asked to keep a short reflective journal or teacher diary in which you will record your experiences of using the MPE approach following each lesson. You may use this journal to prompt discussion in meetings with others participants and will also be asked to submit these journal entries to the research team. Lastly, a member of the research team will visit your classroom a minimum of three times to conduct observations of your teaching practice while using the MPE approach. The purpose of these observations is not to ‘critique’ or criticize your practice but rather to learn more about how teacher learn to use the approach and how it might be adapted for different teachers in different contexts.

If you are a teacher at (Name of) School, your students may be asked to participate in focus groups and to share their work (e.g. exit slip, their diary, and goal of learning). However, if you are a teacher in (Name of) School Board, we will not collect any data from students.

**Potential Benefits and Risks**
This research and its findings offer the following possible benefits. First, the findings of this research will contribute to understanding a meaning-oriented approach in physical education, as well as to the literature on this topic. Second, the reflections you will be asked to engage in during through journal writing, learning community meetings and interviews have the potential to influence the development of your teaching practice, consequently benefiting the students in turn. Third, you will have the benefit of engaging in a sustained form of professional development as you work together with the research team in a professional learning community and have the freedom to ask questions across the duration of the study.

Participation in professional learning community meetings involves a level of vulnerability in sharing one’s experiences with other teachers in the group. Any statements made in this context cannot be considered confidential or anonymous given the nature of the group dynamic. However, the research team will present any findings from these meetings anonymously.

**Confidentiality**
All information you provide will be considered confidential, with the exception of professional learning community meeting notes as described above. Your name will be replaced with a pseudonym to protect your identity; access to the master list of pseudonyms will be restricted to the research team. Please note that with your permission, your anonymous quotations may be used in final reports of the research. Please note that no information will be reported that will render your quotations personally identifiable.

Data collected during this study will be stored on password-protected computers in locked offices on Brock University’s campus. Data will be kept only until the completion of the final report, after which time any hardcopy documents will be confidentially shredded and electronic files will be permanently erased.

**Voluntary Participation**
Participation in this study is completely voluntary. If you wish, you may decline to answer any questions or participate in any component of the study. We will ask you throughout your
involvement if you wish to continue and give consent to participating. You may decide at that
time whether or not you wish to participate in that part of the study. Further, you may decide to
withdraw from this study at any time and may do so without any penalty.

In the event that you choose to withdraw consent, you will be asked if you wish for your data to
be destroyed or maintained (for example, a participant may withdraw due to lack of time to
continue participation but may be happy to allow their data to remain) – and the investigators
will do so.

**Publication of Results**
Results of this study may be published in professional journals and presented at conferences to
audiences of teachers and researchers. If you wish to receive a final report of this research, please
contact Stephanie Beni via email.

Part of the results will be used and published as the Principal Student Investigator’s doctoral
dissertation.

**Contact Information and Ethics Clearance**
If you have any questions about this study or require further information, please contact Dr. Tim
Fletcher, the principal investigator, or Stephanie Beni, the principal student investigator for this
study, using the contact information provided above. This study has been reviewed and received
ethics clearance through the Research Ethics Board at Brock University (File:18-073-
FLETCHER). If you have any comments or concerns about your rights as a research
participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035,
reb@brocku.ca.

Thank you for your assistance in this project. Please keep a copy of this form for your records.
Informed Consent Form

I agree to participate in the study “Meaningful physical education: Testing a model for teaching and learning” as described above. I have made this decision based on the information I have read in the Information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at any time. I also understand that I will be asked throughout my involvement if I wish to continue and give consent to participating, and I may decide at that time whether or not I wish to participate in that part of the study.

Please check which parts of the study you are willing to provide data for:

Teacher Diary □

Reflective Journals □

Lesson Plans □

Individual Interviews □

Group Meetings □

Lesson Observations □

Name of Participant: _____________________________________________________

Signature: ___________________________________________________________ Date: ___________
# Appendix F: Research Ethics Board Approval

![Brock University Logo](image)

**Certificate of Ethics Clearance for Human Participant Research**

<table>
<thead>
<tr>
<th><strong>DATE:</strong></th>
<th>11/1/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRINCIPAL INVESTIGATOR:</strong></td>
<td>FLETCHER, Tim - Kinesiology</td>
</tr>
<tr>
<td><strong>CO-INVESTIGATOR(S):</strong></td>
<td>Deirdre Ni Chronin (<a href="mailto:Deirdre.NiChronin@mic.ul.ie">Deirdre.NiChronin@mic.ul.ie</a>); Doug Gleddie (<a href="mailto:dgleddie@ualberta.ca">dgleddie@ualberta.ca</a>)</td>
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<tr>
<td><strong>FILE:</strong></td>
<td>18-073 - FLETCHER</td>
</tr>
<tr>
<td><strong>TYPE:</strong></td>
<td>Faculty Research</td>
</tr>
<tr>
<td><strong>STUDENT:</strong></td>
<td>Stephanie Beni</td>
</tr>
<tr>
<td><strong>SUPERVISOR:</strong></td>
<td>Tim Fletcher</td>
</tr>
<tr>
<td><strong>TITLE:</strong></td>
<td>Meaningful physical education: Testing a model for teaching and learning</td>
</tr>
</tbody>
</table>

## ETHICS CLEARANCE GRANTED

<table>
<thead>
<tr>
<th>Type of Clearance</th>
<th>NEW</th>
<th>Expiry Date: 11/1/2019</th>
</tr>
</thead>
</table>

The Brock University Social Science Research Ethics Board has reviewed the above named research proposal and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement. Clearance granted from 11/1/2018 to 11/1/2019.

The Tri-Council Policy Statement requires that ongoing research be monitored by, at a minimum, an annual report. Should your project extend beyond the expiry date, you are required to submit a Renewal form before 11/1/2019. Continued clearance is contingent on timely submission of reports.

To comply with the Tri-Council Policy Statement, you must also submit a final report upon completion of your project. All report forms can be found on the Research Ethics web page at [http://www.brocku.ca/research/policies-and-forms/research-forms](http://www.brocku.ca/research/policies-and-forms/research-forms).

In addition, throughout your research, you must report promptly to the REB:

a) Changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
b) All adverse and/or unanticipated experiences or events that may have real or potential unfavourable implications for participants;
c) New information that may adversely affect the safety of the participants or the conduct of the study;
d) Any changes in your source of funding or new funding to a previously unfunded project.

We wish you success with your research.

Approved:

[Signature]

Lynn Dempsey, Chair
Social Science Research Ethics Board

[Signature]

Robert Steinbauer, Chair
Social Science Research Ethics Board

**Note:** Brock University is accountable for the research carried out in its own jurisdiction or under its auspices and may refuse certain research even though the REB has found it ethically acceptable.

If research participants are in the care of a health facility, a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of research at that site.
Appendix G: Research Ethics Board Renewal

Certificate of Ethics Clearance for Human Participant Research

DATE: February 20, 2020

PRINCIPAL INVESTIGATOR: FLETCHER, Tim - Kinesiology

FILE: 18-073 - FLETCHER

TYPE: Faculty Research

STUDENT: Stephanie Beni

SUPERVISOR: Tim Fletcher

TITLE: Meaningful physical education: Testing a model for teaching and learning

ETHICS CLEARANCE GRANTED

Type of Clearance: MODIFICATION  Expiry Date: 11/1/2020

The Brock University Social Sciences Research Ethics Board has reviewed the above named research proposal and considers the procedures, as described by the applicant, to conform to the University’s ethical standards and the Tri-Council Policy Statement.

Modification:
- Protocol adjustments:
  - Interview questions simplified to language that is familiar to the children.
  - Children’s work samples will focus on visual (drawings, maps) rather than written text.

The Tri-Council Policy Statement requires that ongoing research be monitored by, at a minimum, an annual report. Should your project extend beyond the expiry date, you are required to submit a Renewal form before 11/1/2020. Continued clearance is contingent on timely submission of reports.

To comply with the Tri-Council Policy Statement, you must also submit a final report upon completion of your project. All report forms can be found on the Office of Research Ethics web page at http://www.brocku.ca/research/policies-and-forms/research-forms.

In addition, throughout your research, you must report promptly to the REB:
  a) Changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
  b) All adverse and/or unanticipated experiences or events that may have real or potential unfavourable implications for participants;
  c) New information that may adversely affect the safety of the participants or the conduct of the study;
  d) Any changes in your source of funding or new funding to a previously unfunded project.

We wish you success with your research.

Approved:

Lynn Dempsey, Chair
Social Science Research Ethics Board

Robert Steinbauer, Chair
Social Science Research Ethics Board

Note: Brock University is accountable for the research carried out in its own jurisdiction or under its auspices and may refuse certain research even though the REB has found it ethically acceptable.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of research at that site.