



Teacher Educators' Explorations of Pedagogies that Promote Meaningful Experiences in Physical Education

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Abstract

In this research, collaborative self-study was used to examine our experiences as teacher educators who enacted a pedagogical innovation across three pre-service teacher education programs in two countries. The innovation focused on ways to promote pre-service teachers' learning about teaching through the lens of meaningful physical education. Results show that teacher educators found it valuable to create meaningful learning environments where the role of meaningfulness was explicitly prioritized but there was varied impact in teaching for meaning in physical education teacher education. This was due to the different contexts and the order in which the teacher educators enacted the pedagogical innovation, whereby one teacher educator engaged with the pedagogical innovation in semester one and the others in semester two.

Keywords: Meaningful PE; professional learning; self-study; teacher education

Résumé

Dans cette recherche, une approche d'autoformation collaborative a servi à examiner nos expériences de formateurs d'enseignants engagés dans une innovation pédagogique dans trois programmes de formation initiale dans deux pays. Cette innovation était centrée sur des modalités de développement des apprentissages des enseignants en formation sur l'enseignement d'une éducation physique signifiante. Les formateurs participants ont trouvé que la création de tels environnements d'apprentissage et leur priorisation étaient bénéfiques; les retombées de cette innovation sont variables. Ceci est dû aux contextes différents des formateurs et à l'ordre dans lequel l'innovation a été implantée, soit le premier ou le second semestre du programme.

Mots-clés : éducation physique signifiante; développement professionnel; autoformation; formation initiale à l'enseignement.

Introduction

Providing pre-service teachers (PSTs) with the knowledge and understanding of how to provide meaningful experiences in physical education for the children they will teach is an objective that many physical education teacher educators strive for. Over the past number of years, a research team has been experimenting with their respective teacher education practices where meaningful experiences in physical education are positioned as the main filter for pedagogical decision-making (Beni et al., 2017; Beni et al., 2019a; Beni et al., 2019b; Fletcher et al., 2016; Fletcher et al., 2018; Fletcher et al., 2020; Fletcher et al., 2021; Ní Chróinín et al., 2015; Ní Chróinín et al., 2023). In this paper, the focus expands beyond these practices with our purpose being to examine ways other teacher educators explore how to enact a recent pedagogical innovation, Learning about Meaningful Physical Education (LAMPE), in their teacher education courses. While acknowledging that there is no one superior version of Physical Education Teacher Education (PETE) (and resultant physical education) across contexts, we suggest there is great value in sharing of context- and orientation-specific PETE practices (for example, see Oliver & Oesterreich, 2013 and Oliver et al., 2015 related to inquiry- and activist-oriented approaches).

O'Sullivan (2014) identified a need for more PETE research at the programmatic (and thus cross-programmatic) level that considers ways teacher educators make pedagogical decisions about how best to support future teachers' learning. Such research would provide much-needed direction on both the emphasis and priorities in PETE programs, as well as enabling the identification of complementary pedagogical strategies and approaches that work across contexts to support PSTs in achieving important outcomes in their programs and beyond. Based on several positive outcomes from previous self-study of teacher education practices (S-STEP) work exploring the LAMPE innovation (Fletcher et al., 2018; Fletcher et al., 2020; Fletcher et al., 2021; Ní Chróinín et al., 2015; Ní Chróinín et al., 2023), our research takes up O'Sullivan's (2014) recommendation to conduct programmatic and cross-programmatic analyses; we do this by using a community of practice (CoP) to support how teacher educators learned to prioritize and enact meaningful physical education. Moreover, we hope that by documenting and sharing our engagement with LAMPE and the challenges and opportunities it provides, we also demonstrate how we developed our professional knowledge of teacher education practice. For each of us, this learning had implications for our own developing pedagogy of teacher education. When shared with others, as in the case of this collaborative S-STEP, it can help build a collective professional knowledge base that not only highlights the complexity and sophistication of teaching as a profession but also reinforces the specialist work of teacher educators in teaching about teaching (Mansfield & Loughran, 2018), particularly in the field of physical education.

According to Fletcher et al., (2018) meaningful physical education offers “the potential for a common, shared language that allows others to build upon and extend their own practices resulting in the development of new understandings and approaches of how to facilitate meaningful experiences” (p.3). Our understanding of meaningful experiences has been guided by the writing of Scott Kretchmar (2000, 2006, 2008) who identified features of physical education promoting meaningful experiences for participants. These include: increased social interaction, learning tasks with a ‘just right’ level of challenge, opportunities for motor skill learning, experiences that were fun in the moment as well as extended experiences in physical activity that were delightful. With the addition of the role of personally relevant learning, these features have been supported through a comprehensive review of the literature (Beni et al., 2017) and subsequent work beyond (Lynch & Sargent, 2020; Walseth et al., 2018). While there is substantial support for the value of promoting meaningful experiences, Kretchmar (2000) outlined a lack of understanding of how to promote meaningful experiences in physical

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education for children, noting that “almost nobody in professional preparation programs is being trained to do it well” (p. 19). To address this gap, an approach to PETE that prioritizes PSTs’ learning about meaningful physical education was developed and implemented (Ní Chróinín et al., 2015; Fletcher et al., 2016). From that research, five pedagogical principles were generated that support pre-service teachers’ learning about meaningful physical education (Fletcher et al., 2018). Specifically, teacher educators:

- Explicitly prioritize meaningful participation in teaching physical education teacher education (PETE) courses;
- Model pedagogies that promote meaningful participation;
- Support future teachers’ engagement with meaningful participation as a learner and as a future teacher;
- Frame learning activities using Kretchmar’s (2006) and Beni et al.’s (2017) features of meaningful participation (that is, social interaction, fun, challenge, motor competence, personally relevant learning, and delight);
- Support reflection on the meaningfulness of physical education and youth sport experiences.

Research carried out by Lynch and Sargent (2020) demonstrated that pre-service teachers can experience meaningfulness particularly if the “environment for learning is set up in a democratic way” (p. 640). From a pedagogical perspective, our findings contribute to the research field by highlighting the importance of providing possibilities for students to experience elements such as challenge, overcoming fear, experiencing new ways of moving, joyful memories and a sense of accomplishment to enhance the experiences of ‘fun’. Encouraging articulation through naming and renaming specific understandings of practice can support how beginning teachers can actively construct their knowledge of teaching by making their tacit knowledge about teaching – or their local language of teaching – explicit to themselves and to others. In turn, this can lead to the development of a shared professional language of teaching (Bakkenes et al., 2010) that can be used across teacher education programs.

Teaching about Teaching

Teacher education pedagogies include the relationship between teaching and learning, and how teacher education experiences support the development of knowledge and understanding in learning to teach (Loughran, 2006). Subsequently, teacher educators are continually in a process of changing. A teacher educator’s relationship with their contexts and experiences become central to who they are, and how they learn and teach (Hordvik et al., 2020, Martin, 2018). Teacher educators are required to challenge not only pre-service teachers’ expectations of learning to teach but also their own pedagogies of teacher education (Hordvik et al., 2020; Bullock 2009). MacPhail et al. (2019) have called for teacher educators to employ methodological and pedagogical approaches that enable them to explore their own practices, experiences, and identities in the specific contexts where teacher education occurs. Due to the lack of formal learning opportunities, many teacher educators have sought learning experiences alone or collectively (Gallagher et al., 2011), even extending to collaborations across international borders (Pithouse-Morgan & Samaras, 2018) to examine and facilitate their ongoing professional learning (Lunenbergh & Willemse, 2006; Smith, 2003; Zeichner, 1999). According to Hordvick et al. (2020) utilizing S-STEP “in helping teacher educators engage in collaborative relationships to facilitate their individual and collective practice and to improve

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their understandings of such practices” (p.10) should be valued. Collaborations can help teacher educators from different career stages, universities and continents come together to evolve in their commitments to their practices and that of others.

The teacher educator’s task is to prepare teachers to meet the requirements of their local education system (in order to become qualified) and to influence the nature and quality of their pupils' learning and achievements. This is similar to a description of “living the curriculum”, where pre-service teachers experience the same or highly similar approach that their students will (Dillon et al., 2017). Teacher educators, in serving the teaching profession, should cooperate with colleagues, support professional development, share their experience and concepts, promote professional discussions, and deal systematically with learning and reflection (Koster & Dengerink, 2008; Murray et al., 2008; Nevin et al., 2009).

The pedagogies used in physical education teacher education (PETE) require consideration of both learning about teaching physical education by pre-service teachers and teaching about teaching physical education (Parker et al., 2016). The three teacher educators whose practice lies at the centre of this research shared a common goal – teaching their existing modules through the prioritized lens of meaningful physical education. Sharing how we came to understand and improve our teaching about teaching using the features and pedagogical principles of meaningful physical education serves to extend understandings of the professional knowledge teacher educators draw from, how they engage with this knowledge and adapt it for use within their own context, thus generating discussion and debate in the PETE community. Quality professional development (PD), is about implementing select pedagogies to provide a set of conditions reflecting teachers’ expertise and acknowledging their interest in expanding their repertoire of teaching skills. The identification of PD signature pedagogies provides opportunities to bridge the theory/practice gap in that the strategies identified support teachers in thinking strategically about the purpose of schooling, the nature of their discipline, and their role in educating students in the subject and beyond (Parker et al., 2016). Learning about teaching physical education involves students learning physical education content while simultaneously learning the pedagogical knowledge and pedagogical content knowledge about the teaching of this content to children. Teaching about teaching physical education involves teacher educators “unpacking teaching in ways that give students access to the pedagogical reasoning, uncertainties and dilemmas of practice that are inherent in understanding teaching as being problematic” (Loughran, 2006, p. 6). The teacher educator must help make clear how the teaching approach, in this case meaningful PE, encourages learning and how learning in turn triggers how we teach in that moment. In fact, some researchers would go so far as to say it is their professional responsibility to build a structured and orderly pedagogy, and their duty to furnish their pre-service students with a deeper understanding of teaching and learning (Furlong et al., 2000; Loughran, 2006). Teacher educators may not have the required knowledge, skills and emotional willingness to risk exposing their insecurities and mistakes in front of their students (Lunenburg et al., 2007). Furthermore, to support student teachers’ professional development, teacher educators need to be engaged in deep reflection that involves scrutiny and clarification of their own educational beliefs, values and mission (Korthagen & Vasalos, 2005, Loughran & Hamilton 2016). Therefore, our research question was, what were the experiences of three teacher educators from two countries learning about teaching meaningful physical education and teaching about teaching physical education?

Methodology

Collaborative self-study of teacher education practice (S-STEP) (Ritter et al., 2018) guided the research design. The process enabled us to consider the ways each teacher educator experienced learning and practice around meaningful physical education, and came to gain insights into their experiences of “learning about teaching” and “teaching about teaching” pedagogies in PETE. The research builds on several other recent examples where international groups of teacher educators have examined their respective selves-in-practice (e.g., Ritter et al., 2018) by looking at teacher education practices across programs and contexts. There is much evidence of learning in collaborative self-studies in teacher education practices (Bullock & Ritter, 2011; Fletcher & Bullock, 2012; Petrarca & Bullock, 2014; Richards & Ressler, 2016). Collaborative self-study highlights the importance of openness and critical honesty within the group (Butler et al., 2014), a collective commitment of the participants to their learning and growth (Berry et al., 2018) and contributes to the criteria for rigor in self-study research. The trustworthiness of self-study is established when researchers provide a detailed explanation of their procedures and commit to sharing their work with others (LaBoskey, 2004). Guided by these principles of collaborative self-study (Richards & Ressler, 2016) and responding to Zeichner’s (2007) call for S-STEP researchers to develop chains of inquiry across departments, cultures, and contexts to build a robust knowledge base of teacher education research, our learning and teaching about meaningful physical education across our contexts is significant and timely. LaBoskey’s (2004) characteristics of S-STEP were embedded in the research design: it was self-initiated by group members; it was improvement-oriented and interactive; multiple forms of qualitative data were generated, and validation was based on trustworthiness.

Context

Five teacher educators, from four different Universities, participated in the research over one academic year (see Table 1). Tim and Doug were based in Canada, while Deirdre, Richard, and Maura were based in Ireland. As PETEs more experienced with LAMPE, Deirdre and Tim acted as critical friends to Richard, Maura, and Doug (in their respective countries), whose experiences of learning to enact LAMPE are the focus for the inquiry. In Canada, Doug was teaching generalist PSTs (i.e., those learning to become generalist elementary teachers) in an introductory course for curriculum and pedagogy in elementary physical education. This course took place at a college in the northern part of Alberta in a program that focuses on developing teachers in their local communities. Doug flew into the community six times over the term and taught class for an afternoon, followed by a morning session the next day for a total of 36 hours of instruction in the term. Doug has been a physical educator for 29 years and a teacher educator for the past 15. In Ireland, Maura was teaching generalist PSTs, who were undertaking a physical education specialism module (22 hours) in teaching personal and social responsibility through Outdoor and Adventure Activities. These generalist PSTs were in the third year of a four-year Bachelor of Education degree program. Maura has taught physical education at secondary school (12-18 year olds) for 7 years and was in her 18th year as a teacher educator when undertaking this research. Richard was also teaching generalist PSTs enrolled in a four-year Bachelor of Education degree program. During the course of this project, he was working with a group of final year students who were undertaking a specialization in physical education. The module, focusing on physical education and school sport, involved 36 contact hours over the course of the semester. Richard has been a teacher educator for 14 years, having previously taught as a generalist elementary teacher for 17 years.

Table 1*Participants, their Experience and Teaching Groups*

Name	Experience as a teacher	Experience as a teacher educator	Year group for study	Critical Friend
Doug	14 years as a PE teacher	15 years	Year 1 primary generalists	Tim
Richard	17 years as a primary generalist	14 years	Year 4 primary generalists PE specialism module	Deirdre
Maura	7 years as a PE teacher at secondary school (12-18)	18 years	Year 3 primary generalists PE specialism module	Deirdre

Data Sources and Analysis

Ethical approval was granted by each of the three institutions where Doug, Richard and Maura worked and carried out the research. Reflective journal entries (N=17), final meta-reflections (N=3) and recorded Skype meetings (N=6) were generated over two semesters of one academic year. Doug (Semester 1), Richard, and Maura (both Semester 2) made journal entries utilizing a structured reflection template designed by Tim and Deirdre, during each term they taught. Entries were typically made every other week and involved responding to several prompts such as: “What worked and what didn’t in your implementation of LAMPE?” or “Identify critical incidents or moments when involvement in the group led to new insights about LAMPE and/or teacher education practice”. The critical friendship worked in layers. In Semester 1, Doug enacted LAMPE in a physical education course for generalist teachers at the University of Alberta, while Tim acted as a critical friend providing support, critique, and feedback to Doug. Deirdre provided another layer of critical friendship, supporting Tim as he worked with Doug. A Skype meeting with all five of us occurred at the end of the term, where Doug recounted “aha” moments or times when new insights occurred, such as the emergence of meaningful PE components organically from PSTs. This was followed by an open discussion where we asked questions aimed at deepening Doug’s and each other’s understanding of LAMPE. In Semester 2, the process switched so that Deirdre acted as a critical friend to Richard and Maura as they enacted LAMPE in the courses they taught to generalist PSTs in Mary Immaculate College and Dublin City University, respectively. During this process Tim interacted with Deirdre as another layer of critical friendship. As in Semester 1, the entire research group met at the end of term through Skype. On completion of their teaching and having engaged with the comments of their critical friends and reflected on the discussions, Richard, Doug and Maura completed a final written meta-reflection (i.e. a summative reflection) focusing on their experience and learning through the process of the innovation.

Reflexive thematic analysis (Braun & Clarke, 2019) was utilized to guide us in systematically and robustly exploring, interpreting and reporting a pattern-based analysis. Initially, each of the five teacher educators became familiar with the data, making notes on observations and insights on each individual piece of data and across the overall data set as they read. Following this stage, Doug and Tim inductively coded reflections, meta-reflections made by Richard and Maura, while Richard, Maura, and Deirdre coded those made by Doug. All five teacher educators coded the transcribed Skype discussions. After multiple reviews of the data, initial coding and discussions, Doug and Maura together generated initial categories to begin to develop significant broader patterns of meaning. These initial categories were refined and agreed upon with the intended outcome of the process to create seven summary groupings which in the coders’ views captured the key aspects of the messages in the raw data

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and which are assessed to be the most important messages given the research objectives (Thomas, 2003). Within each message, subtopics were searched for to allow for contradictory or new insights. Having analyzed each message and working out the scope and focus, Doug and Maura refined the analysis into three overarching themes and decided on an informative name for each (see Table 2).

Table 2

Summary of Categories and how they Developed into Overarching Themes

Summary Grouping of Categories	Themes Developed
<ul style="list-style-type: none"> • Peer and critical friend support • Different contexts • Reflexivity 	Creating meaningful learning environments
<ul style="list-style-type: none"> • Using the features of meaningful experiences in physical education to support shared language • Teaching about teaching through meaningful physical education 	Explicitly prioritizing the role of meaningfulness in the teaching environment
<ul style="list-style-type: none"> • Value of Meaningful PE • Pre-service teachers' and teacher educators' growth 	The varied impact of teaching for meaning in PETE

Trustworthiness was addressed through consistency checks whereby the remaining authors checked the categories and their descriptions against the text and came to an agreement. Finally, appropriate quotes were selected to weave together the analytic narrative and data extracts and to contextualize the analysis in relation to existing literature (Braun & Clarke, 2019). The themes developed were:

1. Creating meaningful learning environments
2. Explicitly prioritizing the role of meaningfulness in the teaching environment
3. The varied impact of teaching for meaning in PETE

Findings and Discussion

Creating Meaningful Learning Environments

The learning environment is a crucial aspect of teacher education (Richards & Levesque-Bristol, 2014; Rink, 2010). We would also affirm the critical nature of a safe and supportive environment for our own learning as academics and instructors exploring meaningful PE (Gibbons, 2014). As we read, re-read and coded the data, it quickly became apparent that we had established such an environment for our collaborative self-study through working toward building a CoP and it impacted our progress and growth in three key areas: the support of peers and the efficacy of critical friends, the value of different contexts, and the fundamental need for reflexivity.

Peer and Critical Friend Support

Changing deeply ingrained practice can be slow, tedious (and lonely?!). The support provided by this CoP, however, lessened the possibility of isolation as I grappled with the practicalities of making LAMPE part of my teaching. (Final Reflection - Richard)

A common thread was how valuable the support of a peer can be. Having a collaborative team made a big difference in how we approached our classes and the implementation of meaningful PE. Our experiences reflect those of other physical education teacher educators who have

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conducted collaborative S-STEP research, finding increased ‘confidence in the validity of their actions and voice, as well as becoming more resilient and supported in their work’ (Fletcher & Ovens, 2014, p.182). Common words such as ‘reassurance,’ ‘support,’ ‘secure,’ ‘together’ and “‘experience’ were evident across the data and speak to the community that was created to do this work. Over the course of the year, the space that was created to learn in together provided a safe place to share struggles, successes and wonderings. We leaned on each other for support through the Skype calls and certainly within the critical friend relationship (more on that below). Overall, it was the creation of a community of learners (Fischer & Pribesh, 2012) that kept us together, on track and learning.

“Tim’s critical friend comments on my own reflections was like having a window into each others’ teaching worlds and thought processes” (Final Reflection - Doug). Related to the role and function of peer support, the critical friend process allowed for a depth of reflection, connection and learning that went beyond support and mutual appreciation. Essentially, the role of the critical friend was to question, drive the reflective process and push for careful consideration of practice; “the critical friend support was valuable to question and problematize my experiences.” (Final Reflection - Richard). Each teacher educator found the experience an opportunity for professional learning. Maura shared, “...to be able to question on a basic practical level but also to talk on a more philosophical level and to see it as professional development for me... was a great opportunity” (Final Reflection).

Contexts

“We each seem to teach in very different, yet somewhat similar contexts and the interplay was fascinating” (Final Reflection - Doug). As explained earlier, the study involved five participants from four different universities and two countries and builds on the work of Casey and Goodyear (2015) who advocate for “inter-professional collaborating with researcher(s) who cross the boundary of their institutions ... to facilitate change” (p.201). Although our contexts were quite different in many ways (e.g., curriculum, setting, students), we found commonalities in course content, process and student behavior. As Richard shared, “...despite our diverse working contexts, our struggles and successes were very similar” (Final Reflection). We all enjoyed and benefited from looking into each other’s practice, appreciating the contextual diversity and applying learning to our own locations and practice. For example, although Doug and Maura are in very different environmental contexts, due to the differences between the countries they were working in, Maura felt that they could learn from each other’s pedagogical practice,

I also found it interesting that I learned lots from Doug even though his context was very different and had less in common with Richard [who was] in the same country and similar course! This was probably because of the similarity in the courses we were teaching. (Final Reflection – Maura).

Fletcher and colleagues (2021) highlight the importance of context, including access to people, financial, material, and organizational resources (such as clubs, equipment, and facilities) when delivering relevant and meaningful experiences in physical education.

Reflexivity

“The reflective diary was excellent and getting feedback from Deirdre was invaluable not just in helping with MPE but even to make me think and question my work/ teaching” (Final Reflection - Maura). The importance of reflexivity was evident in the nature and design of the project. Each of the three teacher educators whose practice was subject to analysis expressed appreciation for the formal nature of the reflections at three different levels - self, critical friend and community of practice. Richard noted that, “...the reflection template

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prompted me to think about my planning, implementation and review” (Final Reflection). We felt that the continuous nature of the reflective process allowed us to take a deep and introspective look into our practice of meaningful PE with our pre-service teachers, question the curriculum and pedagogy choices we have made and make critical changes and adjustments based on feedback and review. This supported our implementation of meaningful PE pedagogies in a way that aligned with Loughran’s (2006) conceptualization of developing a pedagogy of teacher education. As outlined by Doug, “connecting the dots between their past, present and future can be a revelation – but only with reflective practice and due contemplation” (Final Reflection).

Explicitly Prioritizing the Role of Meaningfulness in the Teaching Environment

Addressing the idea of meaningfulness and how to teach PSTs about meaningfulness in our respective teaching environments was (perhaps obviously) at the heart of this study. We worked together to unpack and discuss *how* we embedded meaningfulness in our pre-service teacher physical education classes. What strategies seemed to work? What did not work? How did we even know? We were cognizant when planning our classes that meaningfulness is fundamentally about an individual’s interpretation of experience, not the experience itself (Chen 1998). This meant that we, and the PSTs, needed to become aware and make sense of the experiences of meaningful PE through a process of synthesis and reconciliation (Jarvis, 1987). The conversations with critical friends and the large group sessions helped us to debrief about our experiences and take a reflexive look back at our practices. These aspects were expressed as two sub-themes: using the features of meaningful experiences in physical education as a ‘shared language’ and experience versus implementation.

Using the Features of Meaningful Experiences in Physical Education to Support Shared Language

Without prompting, they nailed all the features of LAMPE. Some took a bit of talking before they were clarified (motor competence as skill building), others came right out (social interaction, challenge) (Reflection 1 - Doug).

It gave me an opportunity to explicitly prioritize meaningful participation as the students were able to give relevant examples of their successes (and challenges!) in schools, and the features provided a really useful framework for our discussions. In turn, this facilitated reflection on the meaningfulness of PE experiences. (Reflection 1 - Richard)

These two quotes illustrate a common issue that each of us wrestled with - do we teach meaningful PE *implicitly* or *explicitly*? Doug did some engaging activities with his students, and then asked them why they enjoyed those activities. The students implicitly arrived at the features and were able to recognize the organic emergence in their own experiences. Richard’s example used the features more explicitly to guide and frame participation and discussions, demonstrating how teacher educators being explicit in their practice can support how PSTs make sense of and understand physical education subject matter grounded in a meaningful PE approach and furthermore supports learning about “the why” of physical education (MacPhail et al, 2013; Rovegno, 1993). However, whether the features were arrived at implicitly or explicitly shared, they provided a common language for pre-service teachers and teacher educators to describe and categorize their own experiences (shared and individual), reflect (formally and informally) and engage in discussions around facilitating meaningful experiences in the future. While we found the features identified by Beni et al. (2017) to be helpful in supporting the development of a shared language, we also realize how they might be

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quite limiting if other aspects of meaningful experiences are raised by learners (e.g., creativity, sense of adventure). At the same time, they did provide a useful starting point for these discussions but we caution against using the features as an exclusive, exhaustive list.

As teacher educators, we wanted to ensure that the educative experiences that we provided would prompt reflection on the nature of the experience in order for its outcomes to produce powerful learning (Rodgers, 2002). In our planning, we also found benefit in structuring lessons specifically (implicit or explicit) to elicit and highlight features and pedagogical principles. As Richard shared, "...it (self-reflection) got me thinking about how I, as a teacher educator, need to balance my explicit and implicit exploration of LAMPE principles with my students" (Reflection 4).

Teaching About Teaching Through Meaningful Physical Education.

And the other thing I struggle with all the time is, am I teaching the students, or am I teaching the students to teach? Where's that demarcation, where is that line? For me, is what I am doing meaningful? I am trying to make what I do for them meaningful and that they are able in turn to plan and organize meaningful PE for the children they will teach on school placement and also in a year and a half when they go out into schools and the big bad world of work and full time jobs. (Meeting 2 - Maura)

...how to have our PSTs experience MPE [Meaningful PE] and then also make the transition to implementing MPE as a teacher and leading their own students to experiences of MPE. (Final Reflection - Doug)

Maura and Doug's dilemma reflects a common struggle in PETE: although we want our students to experience meaningfulness as part of our classes, we also want to shift the focus to their implementation or teaching as future teachers (Casey & Fletcher, 2012). This conundrum led to some excellent discussion and reflection on how we teach for meaning - in the present and for the future. One of the pedagogical principles of meaningful PE is:

Teacher educators should aim to position pre-service teachers simultaneously as learners of learning about meaningful physical education (i.e., engaging in and experiencing the tasks of physical education) and learners of teaching about meaningful physical education (i.e., developing pedagogical skills, knowledge, and thinking). (Fletcher et al., 2020)

However, we struggled with this principle. All of us used reflection (both in personal, introspective ways and with our students) to try to 'bridge' this gap. Richard referred to his incorporation of the meaningful PE framework in this way: "...it effectively supports reflection on our teaching and learning experiences" (Reflection 2). Maura shared, "...perhaps I will improve as I begin to think about it more and seek the students' thoughts on LAMPE more during class" (Reflection 5). Doug also noted the role of both types of reflective practice in the following statement.

(I've been) struck by LAMPE as PETE as well as LAMPE as pedagogy. Interrelated but yet sometimes separate: planning for student reflection on meaning experienced as 'students'; Moving that reflection into meaning facilitated by 'teachers' (Reflection 2). Essentially, we agreed that both experience as a participant/ learner and implementation as a teacher of meaningful PE were important to consider and flesh out in our PETE classes. Thus, in helping beginning teachers to actively construct their knowledge of teaching to themselves and to others, we needed to model this by making our knowledge of teaching for meaning explicit and accessible for pre-service teachers, using what we did as a platform for inquiry and debate (Loughran, 2013). Common practices included taking time to create and plan

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experiences of meaningfulness for our students; allowing for reflective practice (formal and informal) to consider the experience and; directing the conversation and further reflection towards future implementation as teachers. Each of these practices aligned with the pedagogical principles of meaningful PE and demonstrated how our enactment of the pedagogical principles helped promote consistency between our ‘actions as teacher educators with our beliefs about teaching and learning in physical education’ (Fletcher, et al., 2020, p. 888).

The Varied Impact of Teaching for Meaning

As we moved through the methodological processes of our research and into data analysis, we became aware of the different types of impact that our incorporation of meaningful PE elicited. As we analyzed the data, the idea of multiple impacts came out across reflections and meeting discussions. Three main areas continued to emerge as prioritized and critical: the value of meaningful PE, the efficacy of using the approach with PSTs and the effects of the intervention on our own teaching/ programs as PETE educators.

Value of Meaningful PE

Therefore, if the vision is a healthy society: health and physical literacy, etc. then LAMPE is the ‘mission.’ (Final Reflection - Doug)

...to sum up the pedagogical principles are something I would always have used/talked about in my teaching but using them now in a framework of meaningful PE and showing how the pedagogy will affect the features, which children have reported are the best ways for learning to be meaningful, is key. It’s not a case of them and us – it’s very much a *we* process. (Reflection 5 - Maura)

In some ways, we found meaningful PE to be an expression of some of the pedagogical practices we had been engaging with all along. It just provided a framework on which to hang our pedagogical and philosophical approaches. As Richard stated, “‘Buying into’ LAMPE can inform my pedagogical approaches” (Reflection 1). The approach aligned with Deweyan theories of experience (1938) and helped us to blend theory and practice as we taught our classes. For example, the Deweyan notion of ‘educative’ experiences (1938 - those which create a desire for similar experiences) fits well with discussion of personal relevance and the continuity of previous movement experiences. It also supported Fletcher and colleagues (2021) definition of meaningful PE as a pedagogical innovation that prioritizes meaningful experiences as an organizing concept for decision-making in physical education. We used the features to guide planning, shape class discussion, evoke reflection and to help our students assess their own decision making process as beginning teachers. Doug used a final assignment that involved ongoing student reflection after each class session as well as across the course. The *winter count* (Raczka, 1979) is a way of recounting history that was used by the Blackfoot people and traditionally recorded on a buffalo hide. Doug adopted the spirit of the winter count into a course assessment) and was struck by how much the concept of meaningfulness emerged. “...when I read those, there was quite a bit of the meaningful PE that came out. I think if I was a little more explicit throughout the course it would have come out even more...” (Meeting 1). As the assignment asked them to essentially ‘demonstrate their learning’ from the class, it is important that meaningful PE came through so clearly. However, it is important to note that some students did not share anything about meaningful PE in their assignment. Further, even for the ones that did, how can we be sure that the LAMPE focus in class translates to their own future teaching. Further studies focused on student values and implementation would be helpful to delve further into this area.

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Pre-service Teachers' and Teacher Educators' Growth

Something like this gives me a sense of achievement: that I am making effective connections between theory and practice, and hopefully challenging students to apply that theoretical learning to their own experiences. (Reflection 2 - Richard)

I saw that LAMPE was coming together for students (and even more important – it was coming together for me!) – more in a way that I am becoming more confident and comfortable in articulating the principles and features and then implementing them in my planning and teaching. (Reflection 5 - Maura)

As alluded to above, the implementation of meaningful PE definitely had an impact on our PSTs' experiences, learning and growth. We found that using the features and pedagogical principles allowed us to be more effective teachers, which in turn helped our students' learning. We did also wonder about the long-term impact on our students and the connections between them identifying meaningfulness 'now' and in their own lives (historically and as PSTs) and when they enter the 'real world' of teaching where they just may get bogged down in traditional PE ethos at their schools and with colleagues.

Perhaps the changes we make as teacher educators are more often small, hard to detect changes, rather than seismic shifts in what we do. Even our identity as a teacher educator will change very slowly as we adapt our practices and/or implement new innovations fully or partially. (Reflection 5 - Richard)

According to Blankenship and Coleman (2009), "classroom teachers, or even fellow physical education teachers, who do not see the value of physical education or helping students learn can make things difficult for beginning teachers, and result in wash-out of well learned teaching skills" (p.98). Over the course of the project, our understanding of both what meaningful physical education consisted of and how we might facilitate meaningful experiences for students changed. In particular, the small changes and adaptations we were making utilizing the meaningful physical education approach, became clearer and better aligned with our practices. The small changes we made in the framing of ideas resulted in a more coherent approach in our teaching. Engaging in this project, perhaps not surprisingly, had a substantial impact on us as physical education teacher educators. We have illustrated how we developed our practice and how we developed as teacher educators working collaboratively and learning as professionals. Of course, taking the time to consciously, and formally reflect on teaching practice; having a critical friend to chat with and engaging in reflective discussions with the group as a whole are going to have an impact - or at least should! As an international community of learners, we found it very effective to implement innovative pedagogy in a collegial and collaborative way. As well, this network encouraged us to reflect and engage with our own colleagues within our institutions as well. As we presented initial findings at a national physical education research conference, Doug said, "Why would I not invite my colleague into my class to engage in a process such as what we have done here? It would lead to so much growth and improvement!" (Meeting 3) As PETEs, we engaged in continual banter about 'next time' and 'with the next class I will...'. Deep reflection and discussion between the participants led to an ongoing framing of changes and improvements to our planning and pedagogy.

Conclusion

The findings illustrated the value of teacher educators learning about and implementing pedagogical innovation with collegial support, with opportunities to apply learning in local

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contexts, and support a diverse array of pre-service teacher needs. A mind-set towards growth has been cultivated and we had created an openness to sharing and saw value in co-exploring. The professional learning we gained through these collaborative experiences were valuable in supporting our implementation of a new pedagogical approach. We were able to take and apply the learning from our reflections, critical friend comments and discussions and apply the learning to our own local context. The findings also provide important direction on how teacher educators can be supported to commit to pedagogical innovations in their practices. Loughran and Menter (2019) point to the importance of interrogating teaching about teaching, when they state that, “teaching is not just about the “doing” of teaching, it is also about the “why” – which leads to the development of informed and meaningful practice to enhance student learning” (p. 216). A collaborative growth mind-set supported our innovative practice in sustained ways and extended beyond the formal data collection process of the research. As teacher educators, we experienced the value of critical friendship and reflective practice, learning for others and being flexible and adaptable in our own teaching and teaching about teaching.

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