The challenges of models-based practice in physical education teacher education: A collaborative self-study
Abstract

There are two purposes of this study. The first is to examine our experiences as beginning teacher educators who taught using models-based practice (using the example of Cooperative Learning). The second is to consider the benefits of using collaborative self-study to foster deep understandings of teacher education practice. The findings highlight the challenges in adapting school teaching practices to the university setting, and the different types of knowledge required to teach about the “hows” and “whys” of a models-based approach. We conclude by acknowledging the benefits of systematic study of practice in helping to unpack the complexities and challenges of teaching about teaching. Our collaborative self-study enabled us to develop insights into the intertwined nature of self and practice, and the personal and professional value of our research leads us to encourage teacher educators to examine and share their challenges and understandings of teaching practice.

Keywords: teacher educators, pre-service teacher education, cooperative learning, practitioner research, pedagogy
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The need for physical education to undergo pedagogical and curricular reform has led some to suggest that unless radical change occurs the subject may have a short future; with “futures talk” involving drastic reconceptualizing of the subject (Jewett, Bain, & Ennis, 1995; Lawson, 2009; Penney & Chandler, 2000; Tinning, 2009). For example, Kirk’s (2010) contemplation of the prospects for physical education led him to identify three potential futures: more of the same, extinction, or radical reform. While Kirk felt that more of the same was most likely, he suggested this was little more than a stay of execution from the inevitable slide into extinction. In order to avoid extinction, there has been a significant and growing voice calling for radical reform that centers on a number of empirically researched and theoretically informed pedagogical models (Metzler, 2011; Haerens, Kirk, Cardon, & de Bourdeaudhuij, 2011).

The integration of multiple pedagogical models into a models-based practice (MBP) has been acknowledged as one avenue for the type of pedagogical and curricular reform desired by physical education “futurists” (Gurvitch, Lund, & Metzler, 2008; Haerens, et al., 2011; Kirk, 2010). Specifically, MBP has been recognized as an alternative to the “current and traditional ‘one-size-fits-all’, sport technique-based, multi-activity form” (Kirk, 2013, p. 2) that pervades many physical education programs. The benefits of a models-based approach lie in the provision of opportunities for students to learn subject matter in some depth through student-centered approaches, which address outcomes in multiple domains (i.e. psychomotor, affective, and cognitive) (Metzler & McCullick, 2008). Evidence suggests that attending to these diverse outcomes strongly influences the likelihood that students will engage in a physically active lifestyle (Bailey, Armour, Kirk, Jess, Pickup, & Sandford, 2009).
However, if MBP is to become a sustainable means to pedagogical and curricular reform, examination of the innovation needs to extend beyond school contexts. For example, although research on the challenges of implementing MBP in schools has recently expanded (Dyson & Casey, 2012; Harvey & Jarrett, 2013; Hastie, 2012), little attention has been paid to the challenges of MBP in pre-service teacher education. Researchers at Georgia State University (GSU) recognized this matter and conducted a large-scale study of how physical education teachers learned “about and made decisions to adopt models-based instruction” (Gurvitch et al., 2008, p. 454). They considered the influence of the university physical education teacher education (PETE) program at three stages of teachers’ development: pre-service (Gurvitch, Tjeerdsma Blankenship, Metzler, & Lund, 2008; Lund & Veal, 2008; Metzler & McCullick, 2008), induction (Gurvitch & Tjeerdsma Blankenship, 2008), and veteran (Lund, Gurvitch, & Metzler, 2008). Although there was general support for MBP across all three stages of teachers’ development, a key finding concerned the powerful role of PETE faculty as change agents in pre-service and veteran teachers’ decision-making processes to adopt MBP (Metzler, Lund, & Gurvitch, 2008). While these findings hold promise, the voice of the PETE faculty was largely silent. As such, while the GSU researchers claim that their approach was impactful on the pre-service teachers who completed the program, there was not a clear sense of how teacher educators made their impact or the challenges they faced in doing so. When PETE programs have been identified as perpetuating more of the same (Kirk, 2010), understanding the processes that lead to successful implementation of MBP in the university setting is crucial. It is our belief that if MBP is to become a preferred approach for physical education teachers, pre-service teacher educators must similarly change how they teach. To this end, we used collaborative self-

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1 Gurvitch and colleagues prefer to use the term models-based instruction, while we prefer models-based practice (MBP). This term has gained increased significance on the field (c.f. Armour’s (2011) book “Sport Pedagogy”). However it is beyond the scope of this paper to discuss this decision in detail and we direct the reader to Haerens et al. (2012) for a thorough discussion of the semantics behind the choice to use certain terms when referring to models in physical education.
study to examine the challenges we faced as two teacher educators who taught using MBP in PETE programs.

A unique feature of our study is the examination of physical education teacher education practices through collaborative self-study. While several teacher educator-researchers have demonstrated the benefits of using collaborative self-study to unpack the complexities involved in teaching teachers (Bullock & Ritter, 2011; Kitchen, Ciuffetelli Parker, & Gallagher, 2008; Petrarca & Bullock, 2013), there are few examples in the physical education literature. The examination of teacher education practices is being increasingly recognized as a powerful way to both understand and communicate the problematic and challenging circumstances of learning to teach (Zeichner, 1999). As Loughran (2013) suggests, teacher education is a key location where deep understandings of pedagogy can be developed, and so the work of teacher educators as inquirers of pedagogy becomes central to the mission of developing a commitment to strong and innovative teaching practice. Teacher educators thus have a responsibility to provide a glimpse inside their own teaching, articulating the reasoning and assumptions behind the decisions they make while teaching, thus making teaching a site of inquiry (Loughran, 2007). However, as Berry (2007) and Bullock (2009) have shown, the complex nature of teaching sometimes means that teacher educators are challenged or frustrated by trying to understand and explain their practice. Although this task may prove difficult, it is worth undertaking because when pre-service teachers are provided with access to thoughts and knowledge about problems of practice, they are more likely to develop deeper understandings of pedagogy and teaching (Grossman & McDonald, 2008).

Theoretical Framework

Models-based practice. The work of Metzler (2011) has been central to articulating a practical and theoretical understanding of models in physical education. Metzler’s definition
of a “model” includes three aspects: (a) the foundations, (b) teaching and learning features, and (c) implementation needs. Metzler (2011) identified eight models that have been used in physical education: Cooperative Learning (CL) (Dyson & Casey, 2012; Dyson, Linehan, & Hastie, 2010), Sport Education (SE) (Siedentop, 1994), Teaching Games for Understanding (TGfU) (Bunker & Thorpe, 1982), Direct Instruction, Personal and Social Responsibility (TPSR) (Hellison, 2011), Peer Teaching, Inquiry Teaching, and the Personalized System of Instruction. We advocate and apply a multi-model approach in our respective PETE programs. For example, Tim regularly teaches about and through CL, TGfU, and TPSR while Ashley uses CL, SE, and TGfU; however, providing a coherent analysis of the challenges of implementing multiple models is beyond the scope of this paper. We will therefore use Metzler’s defining aspects to talk generally about models but make specific reference to CL as an analytic example. We chose CL for several reasons: (a) its ability to be implemented in the classroom and gymnasium, (b) despite its existence for more than 30 years there are relatively few examples of the use of CL in physical education when compared with some other models (Dyson & Casey, 2012), and (c) it is a model that we have both had experience implementing in our programs and practice.

**Foundations of a pedagogical model.** Metzler (2011) argued that each model is based on learning theory, providing the philosophy and rationale for its use and offering concrete examples of the most effective conditions in which it might be used. For example, CL emerged in the 1920s following research into the effects of cooperation on performance and drawing from studies in social relationships, group dynamics, learning, and instruction (Antil, Jenkins, Wayne, & Vadasy, 1998). In the 1970s cooperation was used as a pedagogical foundation for learning, focusing on two-way processes in which the outputs of each participant become inputs for their peers in an exchange of ideas (Bishop & Mahajan, 2005).
Teaching and learning features. Stemming from each model’s theoretical base, Metzler held that there are several features that separate each model from the others. This includes a “set of managerial plans, decisions, operations, learning activities, and assessments”, and descriptions of the “roles and responsibilities for the teacher and students” (Metzler, 2011, p. 23). For example, in CL these features include positive interdependence, individual accountability, face-to-face interaction, small group skills, and group processing (Dyson & Casey, 2012; Johnson & Johnson, 2009). In CL interdependence between teacher-student and student-student is used to deliberately challenge traditional notions around who should be in charge of classroom dialogue. Furthermore, small, structured, heterogeneous groups are used to support learning in the affective, cognitive, and psychomotor domains (Dyson & Casey, 2012). Other decisions around content selection, managerial control, task presentation, engagement patterns, instructional interactions, pacing, and task progression are also key parts of teaching and learning using models (Metzler, 2011).

Implementation needs and modifications. Each model represents a “plan of action” that, when faithfully implemented, leads to achievement of the desired learning outcomes. Teachers are expected to understand the different knowledge, skills, and abilities required of learners so a model’s full potential can be reached. As with any pedagogical approach, teachers must understand the contextual requirements in which the model will be used (i.e. student characteristics, facilities, equipment, time, and learning materials) and modify their implementation to fit their students’ needs (Metzler, 2011). In CL, a key pedagogical implication is that the role of the teacher and student(s) needs to be changed with the teacher acting as facilitator. Furthermore, features such as face-to-face interaction or small group skills need to be learnt and this takes time; however, it is the combination of features of the model, modifications, and contextual requirements that help define the model and its learning outcomes.
In order for MBP to appeal to prospective teachers in a meaningful way and thus be placed as a feasible means for reform, it seems imperative that teacher educators provide their students with a transparent look at all parts of their teaching using MBP. As such, the purpose of this study is to examine our experiences as teacher educators who teach using MBP. We do so in an attempt to make “concerted efforts to develop, portray, and disseminate [our] pedagogical insights” using teacher education as “a springboard for action and source of knowledge to support educational change” (Loughran, 2013, p. 135). Furthermore, we highlight the personal and professional benefits of engaging in collaborative self-study for those who work in PETE.

Method

Self-study of teacher education practice (SSTEP) research enables practitioners “to understand practice better, share the assertions for understanding and action in practice, and create more vibrant living educational theory” (Pinnegar & Hamilton, 2009, p. 5). SSTEP research aims to share insights into the complexities of teaching and teacher education practice from the perspectives of those who engage in that practice in order to improve both personally and professionally (Samaras & Freese, 2006). A key element in SSTEP therefore involves considerations of the intertwined nature of self and practice. Kelchtermans (2009) suggests that in order to understand what teachers do we also need to understand who teachers are. Examining self-understanding through practice therefore constitutes a crucial aspect of teaching. It is for this reason that collaborative self-studies can be particularly beneficial for teacher educators, as new understandings of self and practice are made possible through discussion, debate, and analysis with critical friends (Bullough & Pinnegar, 2001). In this sense, collaborative self-studies can provide teacher educators with heightened self-awareness, both intellectually and emotionally. For example, Petrarca and Bullock (2013)
stated that their “collaborative self-study became not only a source of critical friendship, but also a way for us to name, interpret, and critique our pedagogical approaches” (p. 13).

In undertaking our inquiry we have sought to deliberately align our work with LaBoskey’s (2004) five characteristics of self-study. Specifically, our design:

(a) was self-initiated and self-focused. Based on informal conversations we had with each other about our respective teacher education practice, we identified specific and salient aspects that provided us with challenging moments, dilemmas, and frustrations. A common theme for both of us was the challenges we faced teaching teachers about and through MBP;

(b) was improvement-aimed. We conducted the inquiry with the intention of improving our own understanding and enactment of MBP. Further, through sharing our experiences, understandings, and insights that we gained through the collaborative self-study, we hoped that others could draw upon that information to improve their own practice;

(c) was interactive in terms of its process. We used each other’s experiences, questions, challenges, and analyses to better understand our own. For example, upon reading passages from Ashley’s reflective diaries, Tim was often stimulated to apply what he had read and interpreted from Ashley’s experience to “map onto” his own reflections, gaining new and previously unforeseen insights (and vice versa). Also, we both acted as independent observers of each other’s initial reflections and analyses;

(d) used multiple qualitative methods. As described later in the methods section, we gathered and analyzed qualitative data from reflective diaries and journals, field notes, and lesson plans;
(e) provides exemplar-based validation. That is, we rely on others in our community of teachers and teacher educators to determine whether our findings are trustworthy and meaningful.

In the following sections we describe the respective contexts in which our collaborative self-study was conducted, and outline the methods we used to gather and analyze data.

**Context of the Study**

For readers to engage with our insights we have made efforts to highlight specific details about the contextual features in which we taught and conducted our inquiry (Kelchtermans & Hamilton, 2004). Both authors teach in university-based pre-service PETE programs, having had prior experience as secondary school physical education teachers. Tim taught in schools for five years and during his PhD taught physical education methods to primary generalists in a pre-service teacher education program. At the time of writing he was in his second year teaching pre-service physical education teachers at Memorial University of Newfoundland in Canada. Ashley taught for fifteen years in schools and at the time of writing was in his fifth year at the University of Bedfordshire in the United Kingdom.

Examining our socializing experiences as teachers who became teacher educators (Casey & Fletcher, 2012) provided us with important insights about how we identified and addressed the different challenges of teaching in school and pre-service contexts. Like others who have studied their own transitional experiences into teacher education (e.g., Bullock, 2009), we find the different pedagogical requirements of teaching teachers challenging and complex and believe that our school teaching experiences alone could not have prepared us to perform the role effectively. Further, we continue to be challenged by adjusting (or indeed abandoning) our school-based pedagogies to suit the needs of prospective teachers, rather than of children and youth. These enduring dilemmas provide a necessary impetus for us to continue to study our practice in order to improve how we go about teaching teachers.
Drawing on the work of Hastie and Casey (in review), we feel it necessary to articulate the extent to which we considered the fidelity of our teaching practices to the CL model. We do this to show how our teaching practices were (or were not) congruent with benchmarks described in the CL model and not simply our own versions of CL. Hastie and Casey (in review) identified the following features as being salient in any description of researchers’ use of pedagogical models: (a) rich description of the curricular elements of the unit, (b) a detailed validation of the model implementation, and (c) a detailed description of the program context (including previous experiences of the teacher and students with the model or with models-based practice).

**Unit descriptions.** The unit that provided the context for Tim’s data was a double-credit elementary physical education curriculum and methods course carried out during a 13-week term. There were 22 students in the class, all of whom were in their third or fourth year of an undergraduate degree in physical education. The first six weeks of the course involved intensive campus-based coursework where students learned about physical education content and pedagogies. Thematic topics addressed throughout the term included: becoming a teacher, classroom community and organization, program planning, developing a vision for teaching, assessment, and teaching inclusively. In each of the first six weeks, students attended two 1-hour classes in a “traditional” classroom environment (that is, a lecture-type class) and two 2-hour classes in the gymnasium. CL was the main approach through which the thematic units were taught in the classroom and gymnasium. The second seven weeks was a blend of on-campus coursework (maintaining the two 1-hour classes) and a supervised field experience, where students spent three mornings a week in a primary/elementary school (K-6) with a specialist physical education teacher. Students were paired with peers for their placements and encouraged to collaborate, team-teach, share planning, reflect together, and so on.
For Ashley, the unit of significance for the incidences reported in this study was taught to a group of 25 undergraduate students in their second year of a four-year PETE program. The track and field component of the unit ran for twelve weeks and was delivered practically (that is, in a gymnasium or on playing fields) in weekly two-hour sessions. To ensure model fidelity Ashley used materials that had been previously validated (see Casey, Dyson, & Campbell, 2009) as (a) appropriate for the 11-14 year old students that PETE students were expected to teach, and (b) prioritizing the five elements of CL.

**Validation of model implementation.** To consider the extent to which our teacher education practice reflected the benchmarks of CL, we used Metzler’s (2011) recommendations both as we developed our respective units and after we had taught the units. As such we conducted document analysis on our unit and lesson plans to understand the extent to which we were being faithful to the features of CL. We analyzed each of our lesson plans to consider the extent to which we applied the following essential elements: positive interdependence among student; face-to-face interaction; individual accountability; interpersonal and small group skills, and; group processing (Metzler, 2011).

Ashley has devoted considerable time and energy (both in his scholarship and teaching) to understanding the extent to which his teaching faithfully aligns with the tenets of the CL model, both in this study and elsewhere (cf. Casey, 2013; Casey, et al., 2009; Dyson & Casey, 2012). Analysis of Ashley’s lesson plans showed a more complete faithfulness to the essential elements of CL than Tim’s. As we show in the results of this study, it was Tim’s inexperience with using CL in schools and universities that may partially explain why the version of CL that he employed might fit somewhere between what Curtner-Smith, Hastie, and Kinchin (2008) described as “full” and “watered down” versions of model implementation. For example, he regularly mixed small group membership rather than maintaining the same groups throughout a unit or task.
Program context. An important contextual feature of this study is the extent and nature of our respective school and university teaching experiences using CL. While Tim had not implemented CL (or indeed any other pedagogical model) as a secondary teacher, Ashley examined his use of MBP, including CL, in his teaching over a seven-year period for his PhD. For Ashley, this knowledge and experience of using CL was drawn upon extensively to inform his teacher education practice. This contrasted with Tim’s more limited school teaching experience where he did not use MBP and implemented practice that might be described as traditional (for example, short units consisting of primarily team sports using direct instruction). Although he had a basic awareness of pedagogical models, Tim had never seen a colleague use MBP, nor did he know where to begin if he ever wanted to implement this in his own program. It was not until he took courses during his PhD that he came to realize the potential of MBP and began to use the TPSR and TGfU models in a pre-service program. When he took on a faculty position in 2011, he was interested in learning more about and teaching through CL. As a result, Tim had no practical experience of CL or any other models to draw from, and he could only imagine how this approach to teaching might work in either schools or universities.

In the units of work that provide the main source of data gathering and analysis for this study, neither Tim nor his students had any experience with CL. This was a significant point for Tim, providing much of the focus for the challenges he faced. Similarly, while Ashley had over a decade of experience of using CL, his students had no experience with the model. Therefore, while he did not face the need to learn to teach in a new way (as Tim had to do), he was required to teach his students not only about track and field, but also about CL.

Data Sources and Analysis

We drew from three qualitative data sources, relying mostly upon open-ended reflective diaries and fieldnotes. As we have outlined in previous collaborative self-studies
that we have conducted together (Casey and Fletcher, 2012) our views of reflective practice and the purposes of reflecting draw heavily from Schön’s (1983) concepts of reflecting-on-action and in-action. According to Russell (2005), reflection-on-action typically involves thinking back on previous events, while reflection-in-action involves thinking about how an unexpected event in teaching led to a reframing of practice, and consequently, a new view or perspective. Ashley’s reflective diaries have been written daily since 5th September 2009 (his first day in teacher education), providing a written narrative of his experiences working in the university environment. His diaries have been written as personal reflections on-action with the intent of aiding Ashley in better understanding how the contextual elements of high school and university settings have influenced his teaching. Tim’s written reflections have had a slightly different focus to Ashley and are certainly logged less frequently: he has compiled reflections from every PETE class he has taught since 2008. Although Tim’s reflections have been largely open-ended he has tended to focus on the extent to which he was able to: identify instances where his teaching visions, planning, and actions have connected coherently (or seemed disconnected); make explicit his tacit knowledge of teaching to student teachers, and identify challenges and ways forward for future practice.

Our reflective diaries were supplemented by fieldnotes written during teaching or planning PETE classes. Cumulatively, there were over 1500 diary entries containing more than 300 000 words. Elsewhere (Casey & Fletcher, 2012), we have outlined how we used our reflective diaries and fieldnotes as “literature of place” (Kelly, 2005) to situate ourselves back at the time of our written experiences. Similarly, Ham and Kane (2004) refer to such data as an archive “that serves as an ongoing stimulus to even more data” (p. 114). Thus, re-reading our reflections (at times several years after they were written) as artifacts provided a third data source, giving us new perspectives and insights into our use of pedagogical models in PETE.
Analysis involved four steps. First, we read all components of our own data set independently and using content analysis and constant comparison (Corbin & Strauss, 2008) recorded instances where critical incidents, challenges, contradictions, and “aha moments” in our practices were found. We used an inductive approach to analyzing the data where we let our identification of concepts, themes, and ideas be guided by the extent to which our research question/purpose was evident, rather than by pre-existing theories. Second, with our independently coded data, we shared the instances we had identified that we individually felt represented pressing challenges in teaching about and through MBP. Each example was offered, and then questioned and critiqued by the other author in an attempt to tease out key elements of the problem related to teaching practice. By engaging in this step we attempted to act as external analysts of each other’s reflections, seeking clarity by asking questions and probing for deeper meaning where appropriate. We did this as a way of holding each other accountable for interpreting the data to ensure some sense of trustworthiness. As teacher educators in physical education we felt we were able to relate to and find individual meaning from the scenarios each other has described, validating one another’s analyses (LaBoskey, 2004). Third, once we identified examples that both of us found meaningful, insightful, or that highlighted a particularly problematic aspect of practice, we collated those examples into themes. We sought to identify themes that we felt would act as exemplars (LaBoskey, 2004) or “ring true” for readers situated in PETE contexts. In some instances data were moved based on discussion until agreement was reached. We repeated this step until we were satisfied that analysis of the data had reached some level of theoretical saturation (Corbin & Strauss, 2008). Finally, Ashley engaged in member checking with a colleague who was external to the research. Ashley did this because a specific interaction that took place with Kieran (pseudonym) provided a salient moment in the analysis that highlighted a discrepancy
between theoretical and practical understandings of implementing CL. In this way, Ashley wanted to ensure that his interpretation of the events “meshed” with Kieran’s interpretation.

**Results**

Soon after we began our roles as teacher educators, we both experienced disruptions of our respective school practices and were quick to learn that what worked when teaching secondary school students would not necessarily work in pre-service teacher education. Thus, one of the first tensions we had to address involved the crucial element of context and its role in shaping our teaching decisions and practices.

**In transition: Opportunities gained and lost**

Tim found teaching in a new context to be liberating and he eschewed many of the outdated, teacher-centered approaches he had come to realize had dominated his practice. He committed to adopting a fresh approach to teaching in PETE in the form of MBP. While this approach might be considered research-informed, innovative and cutting edge, it should also be considered new from the practitioner’s perspective. For Tim this meant it was grounded in theory but not yet in practice. He liked the ideas of MBP but initially could not draw from experience to understand how those ideas might “look, sound, and feel” in a gymnasium with pre-service teachers, let alone with school students. In contrast, Ashley’s approach was old: it had been developed over many years of intensive planning and research, was couched in MBP, and it formed the heart of an innovative school practice that had garnered him accolades and admiration. Yet – as he would quickly learn – it would have to be thought about in an entirely different way when working with a different group of learners with different needs.

A major difference between our early experiences using MBP in pre-service settings was therefore based on the extent of our theoretical and practical understandings of the challenges of using MBP. We both felt we were using innovative practice but it is how we
handled the challenges we faced in doing so that serves to differentiate our experiences. For example, in adopting MBP in school settings Ashley had already taken the risks necessary to have his innovative practice challenged, recognized and validated, both personally and publicly. This certainly provided confidence in how he faced and overcame the challenges of teaching using MBP in the pre-service program. However, for Tim, the anxiety, risk, and fear of the unknown posed significant challenges to the likelihood that he would persevere with MBP. Both Ashley and Tim were therefore vulnerable in using MBP in the pre-service context but for different reasons: Ashley had expectations attached to his implementation of MBP, and both he and his colleagues held those expectations. In contrast, Tim had few expectations of his implementation of MBP; yet, fear of appearing to be incompetent to students and a constant voice asking: “Am I doing this right?” were significant features of his initial foray into MBP.

**Juggling the “hows” and “whys” of teaching**

Loughran (2006) explains that for pre-service teachers to develop complex understandings of teaching practice it is crucial that the tacit knowledge of teaching be made explicit by teacher educators in order to articulate the “why” of practice and not just to demonstrate the “how”. Importantly, we realized that if we intended to provide strong learning experiences for our students we had to move beyond simply modeling teaching of MBP by having them experience a model as learners. However, this was a challenging prospect because in our school practice there was no need or expectation from students or colleagues to explain the pedagogical reasoning behind our actions; we simply implemented what we felt was appropriate for the outcomes we wanted our students to achieve. We also understood that we could not be satisfied with having pre-service teachers “merely reading or being told about the model during classroom-based lectures” (Curtner-Smith, et al., 2008, p. 98) and had to articulate to students how we were teaching using MBP while we also taught
about MBP. This involved explicitly describing how each of our teaching actions aligned, for example, with CL, and explaining why we were doing things as we taught. This start-stop-start feeling conflicted with much of what we believed reflected strong practice in schools, where we relied upon a sense of flow and were conscious of transitions within and between classrooms. For example, Tim wrote:

> Coming away from today’s class I am left feeling a tension between articulating the reasons behind my teaching and disrupting the flow of my lessons. I tried to justify this to myself by acknowledging that teaching is messy and often veers off the intended path. This led me to wonder if, in order to be most effective, whether articulating reasons behind teaching decisions needs to be quite tightly scripted and anticipated if it is to seem as a coherent lesson.

Attempting to strike a balance between articulating and modeling the “hows” and “whys” of teaching required significant intellectual and practical demands in terms of: (a) teaching about the principles of MBP, (b) actually teaching and demonstrating how to teach using MBP, and (c) unpacking reasons why we made the pedagogical decisions we did in situ. The following passage from Ashley’s reflective diary shows the difficulties he faced in teaching about and through CL:

> What do I want student teachers to learn about [CL]? Continuing to look at the prior learning disaster², what can I glean from it? I had a difficult group whose prior learning in [track and field] had generally been poor. I wanted to showcase an alternative approach but I didn’t consider that the session, as planned, was asking too much of both the students and me. Furthermore, I didn’t take into account my prior learning about CL. I should really have known that there was too much to do.

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² Caused by trying to fit too much practical content into a 2-hour session.
In Ashley’s terms, he felt that he was able to “show-case” CL by modeling the approach, using small groups and asking students to learn with, by, and for one another. However, in order to move beyond the “disaster” of the previous session, he realized the need to be more explicit in teaching about the model as he taught through it, explaining the “hows” and “whys” as he was teaching.

Alternatively, the tensions Tim faced hinged upon the nature of his own learning about, and implementation of, CL which was driven by theory rather than practice. Initially he felt he had a fairly strong grasp of the “whys” of CL but was less sure about the “hows”. While he used the opportunity for teaching renewal to reframe his practice he found more problems than solutions in adjusting to a new approach. Not only was he teaching different types of learners in a new setting, he was attempting to implement an innovative approach without the benefits of observing experienced, skilled teachers use CL. As such, his decisions and thoughts about CL (and MBP more broadly) were entirely researcher-centered – assumptions about what worked, what didn’t, and the reasons why were made purely from his own reading. Even though he was able to draw from the theoretical guidelines of CL, when it came to their implementation he was constantly questioning his actions due to doubts about whether he was staying true to the model’s principles. While he was initially positive about his first few classes, Tim wrote: “I wish I had come across [MBP] sooner so that I could see how it worked in [my secondary classes], rather than relying on written research done by other teachers”.

While Ashley had the benefit of understanding CL from both theoretical and practical perspectives his teacher educator colleagues had experiences similar to Tim, with few having any practical experience of CL to draw from. This meant that Ashley not only faced the challenge of articulating “how and why” to pre-service teachers but also to his colleagues. Many of the classes he taught involved a team approach where several faculty members were
responsible for teaching individual units that made up a parent course. While his colleagues were responsive to his suggestions that they introduce CL into the teacher education curriculum as a conceptual framework, he had not fully anticipated the disparity in his colleagues’ knowledge and practical understandings. For example, Kieran, a colleague of Ashley’s, had an opportunity to use CL for the first time and, like Tim (in another time and place) set about learning the theory behind the model from a widely used text. But when it came to co-planning their lessons, Kieran’s reliance on the theoretical aspects of teaching using CL led to a disparity in understanding between he and Ashley:

Part of the problem is that Kieran does the thinking first, and this is where we diverge. His expertise is in [track and field] while mine is in CL yet we are both trying to fit that into each other’s expertise. Kieran has the first call [as unit leader], however, and I am struggling to fit his model of athletics [as a sub-elite athlete] into his perception of CL [as an academic].

As the situation transpired, the value of Ashley’s experience using CL in secondary teaching still held. However, it led him to realize that simply transferring knowledge of CL from school practice into the university setting was not tenable. In the past, he had been solely responsible for planning and teaching his own classes and was somewhat free to do so in whatever way he liked, as long as the curriculum outcomes were being met. He knew the “hows” and “whys” of teaching using MBP but he had never had to articulate this knowledge to students or peers. Now he had to work with colleagues to ensure that, in each of the individual units, pre-service teachers were not only observing a coherent set of CL practices but also that they heard coherent messages about CL. The combination of teaching teachers and teaching teacher educators about MBP was difficult; by his own admission Ashley was a little intimidated by his initial university teaching experiences:
The second [lesson] was just ... well ... flat. The students weren’t great, the subject was out of my comfort zone but the pedagogy was just not where I wanted it to be. I guess that this is the problem with teaching someone else’s lessons.

The highs and lows of teaching in a new context

Ashley found that the contextual differences in teaching using MBP in school and university were significant aspects in shaping the doubts he had about his teaching. Even though the students he taught in school mostly valued their experiences of MBP (Casey, 2013; Casey, et al., 2009), it was clear that the pre-service teachers whom he was now teaching had different learning priorities. For example, as is so often reported in teacher education research, students took on a “‘hunter-gatherer’ approach to accumulating teaching procedures” (Loughran, 2006, p. 45) and started to complain about the lack of practical “tips and tricks” that they were learning. As Ashley reflected, they wanted more “drills […] that they can replicate or adopt wholesale in their teaching” or to learn “more about behavior management [and] timings in a lesson”.

These comments show a disconnection between the pedagogical aspirations of the teacher educators (including Ashley) and the pre-service teachers, highlighting an enduring problem at the root of the theory-practice divide in teacher education (Korthagen & Kessels, 1999). However, rather than being confident that MBP was a positive direction for new teachers’ practice and physical education as a subject, Ashley sometimes gave in to students’ expectations around teaching. Due to the new context in which he was working, he approached his teaching more cautiously and put aside his previous innovative practices, seeking instead to match the practice stereotypes he remembered from his own undergraduate experience.
For Ashley finding solutions to this challenge proved difficult, involving negotiations around the teacher educators’ and pre-service teachers’ respective expectations. Further, there was an acknowledgement from both parties that it would take time to arrive at a mutually agreed upon pedagogical direction. To echo Lundgren (1983), the difference for Ashley was between the hope and the happening.

Some [students] hadn’t read the chapter but not many. What was more significant was the number who just didn’t get it. It was too difficult or maybe too clever, or maybe it was them who just weren’t clever enough. Wait on. I’m the teacher here. It’s not about learning it wrong, but about teaching it right. So it’s my fault. Well, our fault [including other colleagues]. Confusion reigns because we got it wrong. Then they [students] tried to explain, but they couldn’t; they didn’t understand. Then I tried to explain, but to be honest I was only a couple of steps ahead of them. I’d found the reading a challenge too, but I was better placed to re-consider the words and compare them to a deeper understanding. We moved the idea forwards, but it wasn’t an easy journey as we had many misunderstandings to overcome and repair.

In contrast, although doubt still loomed large in Tim’s implementation of CL, he felt somewhat more comfortable in the murkiness. This may be partially due to the expectations and experiences of the pre-service elementary generalist teachers he taught when he first experimented with MBP through TPSR and TGfU. This is significant because, unlike prospective specialist physical education teachers, many were unsatisfied with their prior learning in physical education and were keen to learn about new approaches (Fletcher, 2012). So in the initial stages of his implementing MBP it was necessary for Tim to engage in a lot of reading about the models and planning for his classes, he found he was learning about content and pedagogy along with his students as he was teaching. Those students came to the
PETE setting with few prior assumptions about how MBP would “look” and play out. As his confidence and willingness to adopt MBP grew, Tim used his own background and experiences as an example to challenge pre-service teachers to think of themselves as learners while teaching:

I think I am one of those people that Siedentop (2002) might have thought of as “unskilled” when it comes to content knowledge. I am hoping to draw on students’ content knowledge quite a lot then and I hope that I can keep this commitment. It might also be a good way to model learning from students, i.e., disrupting the “teacher as expert” point of view.

Despite the uncertainties Tim felt in his new approach, he found that sharing his doubts in his knowledge of teaching using MBP had led him to become more intentional in the ways he unpacked the “hows” and “whys” of teaching with his students. In his third year of using MBP Tim found that he was being more consistent in:

…stopping and thinking about what and why I am doing things, and inviting students to stop and think about their learning and the effectiveness of [MBP].

While I have felt vulnerable in stopping and inviting critique (and many times it has been forthcoming), I feel that… I am thinking more deliberately about my actions.

These examples provide evidence that is contrary to what we had expected would lead to a commitment to teach using MBP in pre-service teacher education. Specifically, because Ashley had extensive experience and was committed to using MBP in schools, it would have been fair to assume that he would have similarly committed to adopting the practice in pre-service contexts. However, the different role that Ashley now assumed and the different institutional context in which he worked led him to doubt whether innovative practice carried the same currency in the university as it did in schools – at least with the students whom he
was teaching. Further, because Tim had no experience implementing MBP in schools, it was perhaps more likely that he would have abandoned MBP in the face of barriers. This is because he was faced with the demands of learning about a completely new approach to teaching while simultaneously teaching about that new type of teaching.

**Discussion**

The purposes of our paper were (a) to examine the challenges we faced in using MBP in our respective programs, and (b) to highlight how collaborative self-study could be used to identify and understand those challenges. Although we used the example of CL as an analytic case in this study, our experiences teaching about and through other models such as TGfU or Sport Education reveal similar challenges and uncertainties. We concurred with the views of some in physical education that MBP is an approach through which radical reform might occur (Kirk, 2013), however, we felt that a crucial element of reform was missing. Specifically, for prospective teachers to learn about the problematic and complex nature of innovative teaching practice (in the form of MBP), those charged with the task of teaching teachers should understand the problematic and complex nature of adopting innovative practice themselves. Yet, prior to our research little was known about the challenges that physical education teacher educators themselves face in learning about and implementing MBP in university programs: in essence, the who (Kelchtermans, 2009) was missing from any discussions of MBP in the context of PETE. Although our findings are highly personal and contextual, our collaborative self-study provides a first step toward addressing this gap. We hope that sharing our vulnerabilities and personal challenges encourages others in PETE to similarly share their struggles and successes in adopting innovative pedagogical practice. If, as Zeichner (1999) suggests, teacher educators are uniquely placed to understand, analyze, and overcome the challenges of teacher education, such sharing is imperative.
Despite the challenges we faced, we remained committed to adopting MBP throughout our first years of university teaching. Metzler’s (2011) claims that implementing MBP is hard work for schoolteachers resonated with our experiences teaching in universities. Despite our diverse experiences learning about and teaching using MBP, through using the example of CL our research has demonstrated that it is not as easy as learning about teaching practices from a book, nor is it as simple as transferring practices that were effective in schools to universities. There was an extensive commitment of time, energy, and emotion in trying to make MBP work. Ashley had already experienced such a commitment as he adopted MBP in schools, but he had to persevere through this for a second time in adapting his practice to the university context. Much like his school experiences, there were moments when he questioned the value of what he was trying to do; however, reflection and inquiry into the purposes and outcomes of both MBP and his own teaching values served to reinforce to him that such commitments were worthwhile. In contrast, Tim had no idea what to expect in terms of committing to a new approach. His commitment was required on two fronts: (a) learning about the models and (b) implementing what he was learning in his practice. While there were times when Tim questioned the value of committing to these new ways, like Ashley, self-study provided him with evidence that such commitment was needed if change were to occur in his pre-service classroom and beyond. In common for both of us were regular feelings of frustration, vulnerability, and doubt; however, we also experienced feelings of satisfaction in finding new pedagogical insights or by seeing “seeds planted” and assumptions about teaching and learning disrupted in pre-service teachers whom we taught.

Our collaborative self-study also highlighted how we were coming to know our respective teaching selves and practices in more nuanced and refined ways. For example, Tim showed evidence that he was becoming better at articulating the tacit knowledge behind the teaching decisions he was making. In this way, he felt that he was learning more about
teaching in a broad sense but he was also learning more about priorities for his practice. Alternatively, Ashley was challenged more by the contexts in which he was teaching rather than in what he was teaching. In particular, he was challenged by the expectations of pre-service teachers to amass “tips and tricks” of teaching in order to “do teaching”. They appeared less interested in the broader justifications for a pedagogical approach and what it could achieve in the long-term but were instead looking for ways to survive in schools. This is not to be critical of pre-service teachers for their feelings; indeed, Ashley also found himself doing what he needed to survive in the university. But through Ashley sharing the difficulties in his teacher education practice with his colleagues and students, he was able to articulate how MBP represented a meaningful, student-centered approach to teaching that required skills far beyond the technical that were desired by most of his students.

These findings also highlight how beneficial engaging in a scholarship of teaching (Kelchtermans, 2009) can be for teachers – regardless of their teaching context. Through engaging in the study of our practice we became better able to make explicit our tacit knowledge of teaching. Our analytic frame of attending to the “hows and whys” of teaching using MBP proved especially useful in enabling us to understand and articulate tacit knowledge to students. When teacher educators are able to make their tacit knowledge of teaching practice explicit to students, more powerful influences on students’ understandings of the complexities of teaching are likely (Grossman & McDonald, 2008; Loughran, 2006). As such, we feel that teacher educators have a responsibility to engage in the study and sharing of the pedagogical challenges they face. Indeed, if innovative approaches are to gain a foothold in university PETE programs and school physical education teachers’ practices, communication of the complexities, problems, and strategies used to overcome them are required. Despite Zeichner’s (1999) acknowledgement almost 15 years ago that self-study represented one of the most significant advances in the field of teacher education, there
remain few examples of how physical education teacher educators have used self-study to improve understandings of the complexity of teaching, or that demonstrate how PETE scholars have gone about developing and articulating a pedagogy of teacher education. Our study shows that the sharing that comes from engaging in discussion and debate with critical friends led us to question our assumptions and practices about MBP. In turn, we are more deliberate in our actions of using MBP in pre-service teacher education but are, at the same time, open to the uncertainties that arise from trying to understand teacher education practice.

Such have been the findings of MBP in schools that Casey (2014) suggested that the time to ask if these approaches work has passed; we must now seek to better understand how they can work in the long-term. To do this teacher educators need to challenge not only students’ expectations around what it means to teach but also their own pedagogies of teacher education. We need to better understand both what MBP is and how those of us charged with teacher education can teach teachers – theoretically and practically – to become skillful proponents of robust and innovative approaches to teaching. Through self-study we were able to articulate the “hows and whys” of teaching, which certainly aided in our own understanding of teaching using MBP. We call upon other teacher educators involved in PETE to not only articulate their knowledge and understanding of PETE practice but to share how they developed that knowledge.

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