Developing principles of physical education teacher education practice through self-study

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Background: The articulation of specific principles of teacher education practice allows teacher educators to make explicit the beliefs, values, and actions that shape their practice. Engaging in processes to articulate the principles that guide practice is beneficial not only for teacher educators and their colleagues but also for students. There are, however, few examples of principles that guide physical education teacher educators' practices. Self-study of teacher education practice (S-STEP) methodology offers one way of examining and articulating principles of practice. In this study, I make connections across several S-STEP research projects I have conducted individually and with colleagues, and share the principles that guide my practice with the physical education teacher education (PETE) community.
Purpose: The purpose of this paper is to articulate my principles of practice using S-STEP. Specifically, I ask: (a) How can the articulation of my principles of practice reflect broad understandings of PETE? and (b) How can sharing principles of practice encourage debate and discussion amongst members of the PETE community? To what extent do the principles articulated have resonance for others?
Participants and data collection: Six published self-studies as well as the raw data from those studies provided the data for this research. The raw data used in those studies consisted of self-generated data and data generated by others. Self-generated data consisted of written reflective journal entries gathered over five years and recorded audio conversations with two critical friends. Data generated by others consisted of semi-structured interviews conducted with two cohorts of pre-service teacher candidates: one consisting of 10 pre-service primary generalist teachers the other of 9 pre-service physical education specialists. Three interviews were conducted with each participant. Exit slips (informal evaluations) were also gathered from the specialist cohort.
Data analysis: First, elements of the previously conducted self-studies were synthesised to identify general themes and outcomes that represented principles of practice. Second, in several instances, the raw data were revisited to verify and contextualise quotes and excerpts, and consider the extent to which the data captured the principles that were being articulated.
Findings: Three central principles were identified that shape my understanding of a pedagogy of PETE: (a) building community is the foundation of practice, (b) not just modelling – explaining and reflecting upon modelling, and (c) identity matters. Identifying these principles has enabled me to better enact social constructivist approaches to learning, make explicit my personal and professional knowledge to myself, students, and colleagues; find meaning in my practice, and; begin sharing my partial understanding of practice with others in the teacher education community to generate debate and discussion.
Conclusions: Self-study encourages teacher educators to share their knowledge so that it may be discussed, challenged, and critiqued to further collective understandings of

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teacher education practice. In this spirit, these principles are not offered as an exhaustive list of all that guides PETE practice, but as suggestive of possibilities that might reflect shared understandings of teacher education and thus have the potential to influence policy.

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. But this reflects quite a transmissive approach, which goes quite strongly against the intentions of articulating reasons behind teaching decisions. Perhaps my desire to feel the flow of the lesson reflects an inner desire to be in control of where the lesson is going. Letting go of that to invite questions, wonderings, and so on really stood out to me today. (*Reflective journal entry, 6 September 2012*)

The quote above is taken from one of the written reflective journal entries that I use as a method of enquiry to create an ongoing archive to question, understand, and articulate my teacher education practices (Ham and Kane 2004). When I re-read the reflection several years after the incident occurred, I can see some emerging insights into teacher education practice; however, feelings of confusion and uncertainty seem to stand out to me as the central features of the reflection. Such tension is not uncommon for teacher educators (Berry 2007); yet, this is not typically because of the inherent messiness and complexity of teaching teachers but rather because teacher educators – both in physical education and in education more broadly – tend to be provided with little, if any, formal preparation to become teacher educators or think about the problematic and complex nature of teaching teachers (MacPhail 2011; Casey and Fletcher 2012; Murray and Male 2005). Some teacher educators have turned to self-study of teacher education practice (S-STEP) methodology to enquire into and express their understandings and knowledge of the complexities of teaching teachers (Loughran 2006). In this way, S-STEP offers a means for teacher educators to engage in a personalised, sustainable form of professional learning (Attard 2014; MacPhail et al. 2014; Ovens and Fletcher 2014b).

Although self-study has a necessary inward focus on the self, there is a clear acknowledgement that an understanding of self and practice can only come through interactions with colleagues, students, texts, and critical friends (Pinnegar and Hamilton 2009). Learning from self-study thus comes from sharing and challenging understandings of teaching and teacher education practice with members of the educational community. This stance embodies a social constructivist approach to learning, which is guided by an assumption that learning is influenced by interactions and the contexts in which one resides personally and professionally (Azzarito and Ennis 2003; Light 2011; Vygotsky 1978). As an extension of constructivism, social constructivism maintains that knowledge is co-constructed by learners as they interpret and make sense of new experiences by relating it to their existing knowledge and by engaging in dialogue with others (Rovegno and Dolly 2006). Teacher educators who use S-STEP and take a social constructivist stance position themselves simultaneously as teachers *and* learners. In this way, teacher educators model for their students a stance that learning to teach is linked to learning to enquire (Borko, Whitcomb, and Byrnes 2008). Importantly, and for the purposes of this paper, social constructivism also

provides a framework for how I think about and approach teacher candidates' learning in physical education.

To this end, the first purpose of this study is to explain how examining my own practice through S-STEP (conducted both individually and in collaboration with others) has enabled me to enact social constructivist approaches to learning in physical education teacher education (PETE) and subsequently identify and make explicit some tentative understandings of PETE practice. These understandings are articulated as principles that guide my practice. The paper's significance rests in the ways it serves as a demonstration of (a) social constructivist approaches to learning in PETE and (b) how making connections across self-studies can indicate directions for improvements in teacher education practice and serve as a useful lens for professional learning for physical education teachers and teacher educators. Further, and in order to have application and meaning that goes beyond the self, a secondary purpose of this paper is to spark debate and discussion amongst members of the PETE community by urging readers to challenge the extent to which my insight and/or understanding resonates with their own.

This research takes a similar approach to Tannehill's (2014) scholar's address to the Physical Education Special Interest Group of the British Educational Research Association. Tannehill (2014) described a 'duty of care' that drove her to share what she has learned about being a physical education teacher educator throughout her career. Part of this drive could be interpreted as stemming from some regret about not sharing what and how she and colleagues learned early in her career. She said it was unfortunate that 'the stages through which [we] progressed, barriers [we] overcame and successes [we] achieved have not been shared with others in physical education teaching or teacher education to assist others in also moving forward' (9). Although Tannehill's (2014) knowledge and experience of PETE practice is far greater than mine, I am hoping to stimulate others to contribute to a wider discussion of PETE practice by sharing insights that have come from systematically examining one's practice. In this way, it becomes possible to turn the inward focus of self-studies outward, by learning from and building knowledge across individual studies and generating greater collective understandings of teacher education (Zeichner 2007).

O'Sullivan (2014) likens the examination of physical education teacher educators' pedagogies to signature pedagogies of the professions. Shulman (2005) describes signature pedagogies as the 'types of teaching that organize the fundamental ways in which future practitioners are educated for their new professions' (52), which enable novices to think, perform, and act with integrity in their professional roles. Shulman (2005) argues that understanding signature pedagogies fosters a deeper understanding of the dispositions and cultures of particular fields and therefore a field's hopes and values. Thus, examining pedagogies of PETE (the signature pedagogies of our field in higher education) can help illuminate and articulate the complexities and challenges of teaching prospective physical education teachers and provide insights into ways to facilitate their development as lifelong learners (O'Sullivan 2014).

Despite the potential value of self-study for physical education, until the recent publication of an edited collection (Ovens and Fletcher 2014a), it could be assumed that the methodology has been seldom used in our field (Tinning 2014). Whilst there are certainly several examples in the literature (cf. Casey 2012; Garbett and Ovens 2012; MacPhail 2011; Casey and Fletcher 2012; Fletcher and Casey 2014; You 2011), self-study remains an approach positioned more on the fringes of PETE research rather than as a central feature. As such, there is a relatively small base from which to generate 'chains of inquiry' (Zeichner 2007) or shared understandings of PETE practice. According to O'Sullivan (2014), this is indicative of a broader trend in physical education research that has veered away from teacher

education. Evidence suggesting stagnation in the research base on the challenges of teaching physical education teachers (Kulinna et al. 2009) led O'Sullivan (2014) to claim 'the physical education teacher education research field is in trouble' (169). Given this relative inattention to examining the practices of physical education teacher educators (using self-study or other methodologies) and the value of such examination, there is some urgency to shed light on current challenges of teaching prospective physical education teachers.

Teaching about teaching, learning about teaching: developing a pedagogy of teacher education

Loughran (2006) defines a pedagogy of teacher education as the theory and practice of teaching and learning about teaching. Pedagogy is defined here as the interdependent relationship between several key educational elements: curriculum, teaching, learning, and context (Armour 2013; Kirk, Macdonald, and O'Sullivan 2006; Tinning 2009). As an extension of signature pedagogies (Shulman 2005), a pedagogy of teacher education not only captures the characteristics of teacher educators' pedagogies, 'it engages with the ways in which a teacher educator's knowledge of practice is developed, shaped, and formed, and how that knowledge might be used [. . .] in ways that genuinely enhance student teachers' learning about teaching' (Loughran 2013). According to Loughran (2014), teaching about teaching in ways that strongly influence teacher candidate learning involves (a) a serious focus on pedagogy, (b) conceptualising teaching as being problematic, (c) making the tacit nature of practice explicit, (d) developing a shared language of teaching and learning, and (e) the ability to articulate principles of practice. This paper then offers examples of ways I have attempted to demonstrate the first four elements Loughran identifies, which culminate in the articulation of principles that guide my practice.

The attention directed towards articulating pedagogies of teacher education can be partially attributed to long-standing claims about the ineffectiveness of teacher education on prospective teachers' beliefs and the ways they enact teaching. According to Loughran (2006), too often teacher educators do not take the time to articulate an understanding of *why* teachers do what they do. When the 'why' of teacher education is removed from the 'what' and 'how', the process of learning to teach physical education becomes reduced to a search for the 'tips and tricks' of teaching which often carry little meaning or connection to student learning (Fletcher and Casey 2014). Research on 'effective' teacher education practices and programmes increasingly supports the value of constructivist approaches to learning. As a part of this approach, teacher educators who articulate their tacit knowledge of teaching and learning make teacher education a site for enquiry (Darling-Hammond 2006; Grossman and McDonald 2008; Korthagen, Loughran, and Russell 2006). When teacher candidates have access to teacher educators' thoughts and knowledge about problems of practice as they engage in their practice, deeper understandings of pedagogy and teaching are more likely to be developed (Lunenberg, Korthagen, and Swennen 2007). Providing access to a teacher educator's thinking might involve, for example, thinking aloud as they engage in their own practice, inviting questions, raising doubts, providing insights into the moments of teaching as they occur, and fostering reflection on the students' experiences and thoughts about learning and teaching in the teacher education classroom (Lunenberg, Korthagen, and Swennen 2007; Ovens 2014). Engaging in these processes and explaining the 'why' of teacher education sounds easier than it is. For example, Berry (2007) and Bullock (2009) have shown that the complex nature of teaching often results in teacher educators becoming easily frustrated and challenged as they try to understand and make explicit their tacit knowledge.

Because of the complexity of teacher education and the difficulties associated with making one's tacit knowledge explicit, teacher educators are required to take considerable personal and professional risks by exposing their confusion and uncertainties. Making oneself vulnerable, stepping out of one's comfort zone, and consistently revisiting or reframing one's beliefs and values thus become key aspects of engaging in rigorous self-study research (Attard 2014; Casey 2014; MacPhail 2011; Tannehill 2014). Not only are deeper understandings of teaching enabled through teacher educators and teacher candidates co-constructing knowledge of teaching, but teacher educators also explicitly model themselves as lifelong learners to future teachers, thus extending their influence and impact (MacPhail 2011; MacPhail et al. 2014).

Articulating principles of practice

In one of the first examples of a teacher educator articulating his principles of practice, Loughran (1997) found that by doing so he was better able to communicate his understanding of the reasons why he taught the ways he did in a pre-service teacher education programme. Thus, one of the key reasons for making explicit those principles was to help him become more conscious of his teaching actions and the ways in which he went about solving pedagogical problems that arose (Loughran 2006). As such, the process of identifying and articulating principles provides a lens through which to critique the congruence between teaching thoughts and actions (Loughran 1997).

Several teacher educators have followed Loughran's example and discovered underlying beliefs, contradictions, tensions, and affirmations present in the ways they thought about and enacted teacher education practice (Bullough 1997; Crowe and Berry 2007; Russell and Bullock 2013). Although examples of principles of practice are typically presented as lists, most authors make clear that this is not done to distinguish a hierarchy. When viewed this way, a common outcome of articulating principles of practice has been the recognition of the intertwined nature of each principle. For instance, Bullough (1997) considered it vital to offer students opportunities to examine their sense of self and identity, which should be couched in examinations of the contexts in which one has experienced teaching (both as school student and prospective teacher). All 11 of his principles of practice were thus informed by an acknowledgement that teacher identity forms the basis upon which teachers make their decisions and find meaning. Similarly, Loughran (1997, 2006) recognised that the principle 'teaching is a relationship' formed the cornerstone of his practice and also informed how his other principles (purpose and modelling) were developed and enacted. Russell and Bullock's (2013) principles were built upon a claim that 'learning to think pedagogically is at the core of learning to teach' (208), a point that emphasises the need for understanding how to develop purposeful teaching processes that lead to student learning. Crowe and Berry's (2007) principles reveal similar insights, highlighting the importance of having students of teaching learn to simultaneously think like students and think like teachers.

In each of the examples provided above, the teacher educator–researchers involved suggest that the process of identifying principles of practice through self-study has enabled them to develop deeper understanding and insights about teacher education and the processes of learning to teach. However, when shared, the articulation of one's principles takes on a far broader significance that extends beyond the self because they can be used to generate discussion and debate, and, when linked to principles articulated by others can create shared understandings of teacher education practice. In this way, self-studies hold the potential to influence teacher education practice and policy (Zeichner 2007).

Methods

S-STEP research places the intersection of a teacher educator–researcher's personal beliefs and practice at the centre of the enquiry (Bullough and Pinnegar 2001). This allows practitioners to better understand practice and share their assertions for their understanding and action in practice (Pinnegar and Hamilton 2009). LaBoskey (2004) argues that self-study is grounded in social constructivist theories because '[teacher educators'] learning is processed through previous experiences so personal history and cultural context must be considered; and learning is enhanced by challenging previously held assumptions through practical experience and the multiple perspectives of present and text-based colleagues' (819). Ovens and Fletcher (2014b) have labelled self-study as a *provisionally rational form of enquiry*, whereby

> self-study becomes more than a set of techniques, or an exercise in patience, or application of intelligence, or accumulation of evidence. It values alongside these qualities the ability to sense, feel, think, and act with imagination in order to open up more useful interpretive possibilities. (13)

One potential outcome of rigorous self-study is that improved understanding and growth occurs on both personal and professional levels.

In conducting this research, I draw from and build upon previous self-studies I have conducted both individually and with critical friends (Bullock and Fletcher 2013; Casey and Fletcher 2012; Fletcher 2012; Fletcher and Baker 2014; Fletcher and Bullock 2012; Fletcher and Casey 2014). As a guide for my enquiry I use LaBoskey's (2004) five characteristics of self-studies: (a) they are self-initiated and self-focused; (b) they are improvement-aimed; (c) they are interactive in terms of the process and potential product(s); (d) they use multiple, primarily qualitative methods, and; (e) they provide exemplar-based validation couched in trustworthiness. In the following sections, I describe how each of these characteristics is represented in the design of the research.

Context

For readers to engage with the insights, Kelchtermans and Hamilton (2004) urge self-study researchers to make clear the contextual features in which the enquiry was conducted. This allows readers to better understand the social and cultural grounding that informs the claims made and more appropriately find value from and apply those claims to their own understandings of practice.

I have been teaching teachers in some capacity since 2008, at which time I was in the second year of my doctoral programme. This came following teaching physical education in high schools for five years in ways that I have described elsewhere as mostly traditional and teacher-centred (Casey and Fletcher 2012). The direction that both my teacher education practice and doctoral research took was due largely to the background and research interests of my supervisor, Clare Kosnik. I had taken several courses with Clare whose field of expertise lay broadly in pre-service teacher education. In the courses she taught I was learning about teacher education theories, policies, and practices – with no particular reference to physical education – and was initially exposed to the value of S-STEP methodology. At the same time, I was offered a contract to teach one section (i.e. one class of approximately 30 students) of a physical education methods course for pre-service primary generalist teachers.

The coalescence of teacher education coursework and initial experience teaching teachers was fortuitous but significant in shaping how I think about and go about teaching

teachers (Casey and Fletcher 2012). Clare suggested I pose my own questions about teaching teachers, write down, and reflect upon the assumptions and experiences I had, the problems and challenges I faced, how I attempted to wrestle with them (without necessarily solving them), and share the insights and understanding I gained from enquiring into those issues. Engagement with these processes coupled with my involvement in the 'Becoming Teacher Educators' or BTE group (see Kosnik et al. 2011) – a non-formal group of doctoral students preparing to become teacher educators – helped foster a commitment to self-study and the never-ending cascade of questions, emotions, dilemmas, and surprises that comes from engaging in that work.

Much of my focus using S-STEP to date has involved the transition from classroom teacher to full-time graduate student to faculty member. This line of enquiry has provided many rich experiences and lines of thought through which to explore the problematic and complex nature of teaching teachers. For instance, Ashley Casey and I (Casey and Fletcher 2012; Fletcher and Casey 2014) used S-STEP to examine the difficulties we had in adapting the pedagogies we used as high school physical education teachers to the university context, whilst Shawn Bullock and I have engaged in studying the connectedness of our respective teacher education pedagogies and identities (Fletcher and Bullock 2012; Bullock and Fletcher 2013).

Data collection

In conducting previous self-studies, my collaborators and I used several qualitative data-gathering methods. The findings presented in this research are drawn from both (a) analysis of six previously published self-studies and (b) (in several instances) re-analysis of the raw data gathered in those self-studies. Table 1 lists each self-study from which the findings are drawn. For each self-study, I have included the reference for the publication, the purpose of the study, the participants, and the data sources.

Provided here is a general summary of the data sources listed in Table 1.

- *Reflective journal entries*. These were comprised mostly of written reflections made prior to and/or following each teacher education class I taught. These entries have been largely open-ended; however, I have tended to focus my reflections on the questions or problems that framed the specific self-study I was engaged in at the time. The final data set for this source consisted of over 100 separate journal entries consisting of approximately 100,000 words.
- *Recorded conversations*. As with the journal entries, most conversations were framed by the questions being explored in the specific self-study we were conducting. The conversations often began by referring to written reflections we shared; however, they would often lead in different directions as the conversation progressed. Conversations were conducted face to face, using the telephone, or video calls (e.g. Skype or FaceTime). Since 2010, 18 conversations have been recorded, yielding more than 20 hours of audio data. Most of these conversations were with Shawn Bullock.

In addition to self-generated data, I have also gathered several forms of qualitative data from teacher candidates,[1] including:

- *Semi-structured interviews*. Interview data were collected from two cohorts of teacher candidates. First, interview data were gathered from a purposive sample of 10 primary generalist teachers enrolled in a Bachelor of Education programme. Three interviews

Table 1. Description of data sources from published self-studies.

Study	Purpose/research question	Participants	Data sources
Fletcher (2012)	How do pre-service primary teachers' prior experiences of physical education shape and influence my beliefs about learning to teach teachers?	Author Shawn Bullock Pre-service primary generalist teachers ($n = 10$)	Reflective journals Recorded audio conversations Three semi-structured interviews with each pre-service teacher
Casey and Fletcher (2012)	What are the socialising processes and experiences of school-based physical education teachers who make the transition to university-based teacher educators?	Author Ashley Casey	Reflective journals
Fletcher and Bullock (2012)	To interpret and understand the meaning of literacy in physical education and science, and to analyse the enactment of teacher education pedagogies in relation to our understanding	Author Shawn Bullock	Reflective journals Recorded audio conversations
Bullock and Fletcher (2013)	How are teacher educators' and teacher candidates' identities shaped by interactions between one another? What role does subject matter play in these interactions?	Author Shawn Bullock Pre-service primary generalist teachers ($n = 10$) Pre-service specialist physical education teachers ($n = 9$)	Reflective journals Recorded audio conversations Three semi-structured interviews with each pre-service teacher Exit slips (from specialists only)
Fletcher and Casey (2014)	What are our experiences as beginning teacher educators who use model-based practice?	Author Ashley Casey	Reflective journals
Fletcher and Baker (2014)	What are pre-service physical education teachers' experiences of learning about classroom community and organisation? (note: this specific paper was not framed as a self-study; however, the larger parent project involved a self-study component)	Pre-service specialist physical education teachers ($n = 9$)	Three semi-structured interviews with each pre-service teacher Exit slips

were conducted with each participant during one year as part of a larger study on the experiences of primary generalists learning to teach physical education. Although many of the interview questions focused on their physical education biographies, several focused on their responses to my teacher education practice. At Memorial University of Newfoundland, a similar design was employed to gather data from nine specialist physical education teacher candidates. A research assistant not affiliated with a physical education methods course I taught conducted three individual interviews and one focus group interview during one academic term. Interview questions were developed to address participants' biographies and socialising experiences as

prospective specialist physical education teachers, and several enquired specifically into their experiences and interpretations of my teacher education practice.

- *Exit slips.* These might be thought of as informal teaching evaluations gathered regularly after classes I taught. I asked teacher candidates to respond anonymously to questions about their learning and about my teaching. For example, I might ask: 'What stood out to you from what you learned this week? Why?' or 'What things remain unclear about what we learned this week? Why?' All students in the class were asked to respond to these slips, however, participants in the research studies were asked to place an asterisk on the top corner of the slip so it could be used as data.

Data analysis

The analysis for this study involved synthesising elements of the previously conducted self-studies to identify principles of practice. The purpose of the analysis was therefore to make interpretations of interpretations (McCormick, Rodney, and Varcoe 2003). I employed the following steps suggested by McCormick, Rodney, and Varcoe (2003) for conducting sytheses of qualitative studies:

(1) Re-read the written studies;
(2) Identify key concepts, themes, or metaphors in each study and determine how they are related across studies;
(3) Raise questions, doubts, or concerns; identify discriminant cases, and return to raw data when necessary in order to verify, contradict, or extend the original interpretations;
(4) Synthesise the interpretations of interpretations;
(5) Express the interpretations of interpretations.

Regarding the second point, concepts were identified and generated that I felt served two purposes, both of which attend to trustworthiness: (a) they accurately reflected my own lived experiences and interpretations of a teaching principle, and (b) they could act as exemplars or 'ring true' for other teacher educators to enable critique (LaBoskey 2004).

To enable readers to make sound judgements on a self-study's trustworthiness, Feldman (2003) urges researchers to make clear and detailed descriptions of data sources and data collections methods, consider multiple ways to represent the data in the self-study (including discrepant cases and alternative points of view), and provide evidence about the ways the self-study has led to changes in ways of being a teacher educator. However, Craig (2009) suggests that trustworthiness in self-study research requires members of the relevant research community to make evaluations about a study's 'truths', to the extent to which they are 'likely' or 'true for now' (Craig 2009, 30). Trustworthiness in self-study is thus a posteriori because the research community who reads the work makes the judgement on trustworthiness based on their experiences. Regardless of the extent to which a self-study is assessed as trustworthy, the assessment remains provisional because it is repeatedly tested against other exemplars as they are shared and their trustworthiness assessed.

Results

The analysis of previously published self-studies led to the identification of three central principles of practice that are framed by social constructivist approaches to learning: (a)

building community is the foundation of practice, (b) not just modelling – *explaining* and *reflecting upon* modelling, and (c) identity matters. These principles are not an exhaustive list of all that guides my teacher education practice, but are offered as suggesting future directions and contextual understanding rather than objective truths (Russell and Bullock 2013). In the following sections, I name the principle, describe issues surrounding its theorising and enactment (including teaching strategies), and provide quotes from participants that allowed me to recognise its significance in terms of my practice.

Principle 1: building community is the foundation of practice

Developing a sense of community in the classroom has become a central principle that grounds my teacher education practice. I conceptualise community here not in terms of communities of practice or communities of enquiry, but in terms of the contextual setting in which teaching and learning take place (e.g. the routines, social patterns, and atmosphere of the class), and the fostering of feelings of comfort, belonging, and attachment that students have in the classroom (Kosnik and Beck 2009). This is based on a social constructivist view of learning (Vygotsky 1978), where productive learning requires the learner to feel comfortable amongst other learners and with the teacher. Similar to Loughran's (2006) foundational principle of relationships, I feel that the principle of community provides a meaningful reference point for me to develop further principles.

My experience in the BTE group was the first time I had learned in a context where a social constructivist approach to fostering a sense of community was made explicit by the teacher (Casey and Fletcher 2012; Kosnik et al. 2011). This aspect of Clare Kosnik's practice was also apparent in several 'official' courses that she taught whilst I was enrolled in my doctoral programme. Although I tacitly knew about the importance of student–student and student–teacher relationships prior to attending BTE, Clare provided me with the language to be able to name and enact this aspect of practice and have it grounded in learning theory. Being able to name elements of practice is important because of the purported links between language (as expressions of feelings and beliefs) and personal meaning (Vygotsky 1978). Thus, it was only once I had the language to describe this aspect of practice that it became personally meaningful to me. Recognising that my experiences in BTE shaped my teacher education practice explicitly highlights the ways in which a pedagogy of teacher education should not be limited to analyses of teaching about teaching, just as central are analyses of learning about teaching (Loughran 2006). That is, experiencing a pedagogical situation as a learner *and* a teacher is often necessary for practitioners to more fully understand and engage with the pedagogies they enact. In several self-studies I have conducted since being in BTE, conversations with teacher candidates showed that their learning about practice was similar to mine; that is, several claimed to have known about the idea of developing a sense of community from well before their teacher education programme, but until it was named and made explicit to them in the pre-service classes I taught, they lacked the language to describe this aspect of practice (Fletcher and Baker 2014).

There are several strategies that inform how I enact developing a sense of community in the teacher education classroom, including explicitly addressing community building as a pedagogical approach; providing many opportunities to experience, participate in, and learn about small group work (which I have been able to do through using pedagogical models such as Cooperative Learning and Teaching Games for Understanding (TGfU), both of which have small group learning as key features or benchmarks); making time/space to share stories of teacher candidate success or news in/out of the class, and; making time/

space for teacher candidates and faculty to interact with one another in a formal and informal manner (e.g. having an instructor participate in small group work or having class social gatherings after class) (Fletcher and Baker 2014). Teacher candidates have also indicated that simply learning *and using* their names has a strong impact on the extent to which they feel valued and comfortable in the class.

Group work poses both opportunities and challenges to facilitating a sense of community. Examples of strategies I use to try to create positive small group situations include outlining expectations and general guidelines for how students will interact with one another (e.g. being respectful, giving people opportunities to speak, listening to others attentively); discussing experiences of group work and enquiring about the roles that group members took and the importance of each (often done as part of the questioning time used in TGfU) – I have found this particularly helpful when a group seems to not be functioning well; asking teacher candidates to introduce themselves to class members they may not have met or worked with before when forming new groups for a class, and; keeping groups intact for the duration of a single class.

Most teacher candidates have responded positively to my attempts to develop (and model how to develop) a sense of community, and I have found that the approach also provides me with satisfaction and meaning in my own teaching. By getting to know my students better, I feel I can relate to how they describe and think about their visions for teaching physical education and respond more sensitively and honestly to their work. Hearing their responses, conversing with colleagues, and questioning my assumptions has helped me move beyond the idea that the student–teacher relationship is based largely on thinking that I am and they are nice people – it hinges upon the extent to which meaningful learning opportunities are enabled (Casey and Fletcher 2012; Fletcher 2012). The impact that relationships and community building has had on teacher candidate learning is evident in the following comment by Brenda:

> We always had a really close-knit class but after this course I feel like everyone is expressing themselves more, and expressing their knowledge on different topics … I think this course more than anything opened up everyone and actually brought everyone together. I'm learning more things – I'm learning just as many things from other individuals in my class than I am from [Tim] and that surprised me.

Comments such as Brenda's indicate that building community did more than enabling teacher candidates to get on well together, it also promoted further learning opportunities by encouraging them to express themselves and to share their understanding with their peers (Fletcher and Baker, 2014). Whilst the conditions I was able to foster proved appealing and comfortable for the learning of many teacher candidates, I am, however, still navigating ways to foster debate and (respectful) disagreement within this environment. Farr Darling (2001) describes this predicament as balancing a community of compassion with a community of enquiry, with the latter being identified as a powerful context in which teacher candidates can challenge their beliefs and assumptions.

Although the individual self-studies I have conducted have led me to become more convinced in the belief that developing a sense of community is of prime importance for student learning, enacting community building has not been without its challenges. In particular, I have been challenged to make explicit ways to develop a sense of community in addition to having teacher candidates experience it for themselves. The second principle thus acknowledges the importance of being explicit about how and why I model certain teaching practices in the classes I teach.

Principle 2: not just modelling: explaining and reflecting on modelling

That a teacher educator should model the practices they describe always made some sense to me; I did not see any reason why someone would lecture about using, for example, the jigsaw approach to cooperative learning without providing teacher candidates with the opportunity to experience learning it for themselves. Principles of constructivism (and by extension social constructivism) advocate learning by doing and so in my first two years of teaching teachers, I tried to model the practices I described. However, Loughran (2006) and Lunenberg, Korthagen, and Swennen (2007) explain that modelling in this way is not enough: effective modelling of teaching involves unpacking the teaching practice or strategy, describing the thoughts and reasons that underpin the actions in situ, and providing teacher candidates with an opportunity to discuss their experiences of the practice and think about how they might make that meaningful for themselves. This unpacking and communicating of thoughts, beliefs, challenges, and situations thus adds a distinctive social element to the processes of learning to teach by doing. Briefly stated, teacher candidates will not learn about teaching practices by merely observing a teacher educator enact that practice. After all, they have likely experienced the practice as school students, and, as such, the 'simple' version of modelling will do little to disrupt their seeking of familiar approaches to apply (Russell and Bullock 2013).

Despite recognising the shortcomings of the 'simple' approach to modelling I continue to identify many moments in my current teaching practice when I could improve how I provide teacher candidates with access to my thoughts and decisions as I teach, and opportunities to question those thoughts. A moment that made the shortcomings readily apparent occurred when I felt I was becoming proficient about the ways I developed a sense of community. Although I was becoming confident in how I enacted developing a sense of community, the data I collected and analysed from teacher candidates made me aware that I was not always making my intentions explicit, nor was I pausing in the moment to publicly reflect on or invite questions about what I was doing to build a sense of community. I was assuming that teacher candidates would learn by osmosis how I was modelling the enactment of community building. The need to be explicit about my practice came in my first year at Memorial University of Newfoundland. I wrote in my journal:

> I have tried to place building community at the front and centre of my practice, acknowledging its importance from the very first class and continually discussing its importance during our first week together. I thought I had made efforts to be explicit in why I was including some of the activities I did when it came to community building ... yet, several [exit slips] revealed: 'I know that building community is important but I am still unsure how you do it'.

Since that time, I have made more conscious efforts to explain most of my teaching actions by asking myself and my students the following question: this is what I would like to do and this is why I would like to do it: so how might we go about doing it? In this way, teacher candidates are encouraged to draw from their own experiences and consider the experiences of others to identify possible approaches. As an illustrative example, in a TGfU unit on net/wall games I might inform a class that I would like to focus on the concept of creating space in the front and rear of the court. Rather than simply instructing the class to go to areas of the gym and perform a task I had already planned and set up, I would first ask the class to think about how teachers could go about teaching this concept. Guided by social constructivist ideas I would encourage small groups of teacher candidates to select from a range of equipment, set up their own space in the gym, and experiment with approaches and strategies consistent with the principles of TGfU. During this process, teacher candidates can engage with

members of their group to problem solve, modify their approach (such as changing the boundaries or using different pieces of equipment), and generate a list of questions that foster tactical understanding related to the lesson focus. In this way, teacher candidates are being simultaneously positioned as teachers and learners. Of this approach Spike said:

> I thought that was great for the reason that you get to see TGfU in action and experience it, and that will make you more capable to teach it … I think it's definitely a different understanding where we were in the learner's shoes and experiencing what they are experiencing when we go out and teach it to them using those models. So I think it definitely gave us a deeper understanding of the [TGfU] model.

Whilst it is important to provide opportunities for teacher candidates with opportunities to think about pedagogical situations based on their own experiences, I am also conscious of providing teacher candidates students with opportunities to hear the reasons that inform my actions as I enact practice. In addition, I allow them time to reflect upon how my actions influenced their learning experience and their understanding of how the practice contributes to student learning. For example, following a typical activity-based task (e.g. a small-sided striking and fielding game), I now prompt teacher candidates to describe (in small groups) how they felt during the activity, discuss how it contributed to their learning (or not), how it might be improved, and how they might use something similar in their own practice. We then discuss in a large group the problems associated with the activity and learning approach that was just experienced, and consider ways to overcome those challenges when teaching. I am also aiming to model myself as a learner by acknowledging how I might change my approach to the same task in the future based on teacher candidates' responses (MacPhail 2011; MacPhail et al. 2014).

Principle 3: identity matters

Bullough (1997) believes that identity provides the basis for teacher education because it provides a frame for understanding how a teacher makes decisions and finds meaning in her or his work. I take a similar view that examining identity has profound implications for how teachers and teacher educators think about themselves, their role, and their practice, and as such, there becomes a strong connection between the first and third principles of practice I have identified. The initial impetus that led me to consider the importance of identity for teaching was studying primary classroom teacher's socialising experiences of physical education (Fletcher, Mandigo, and Kosnik, 2013). It became clear to me that many prospective classroom teachers did not feel comfortable with the idea of teaching physical education because they (a) did not see themselves as 'athletic' people who fit stereotypical views of physical education teachers, and (b) did not believe that others saw themselves in that role. Such views tended to stand in contrast to most prospective specialist physical education teachers (Stroot and Ko 2006).

Based on this understanding and through engaging in self-study with Shawn Bullock (Bullock and Fletcher 2013), I came to realise that I had to be careful and somewhat strategic about how teacher candidates' identities interacted with my own, particularly if I was to enact practices that reflected a commitment to developing a safe, caring sense of community that I had come to value so strongly (see Principle 1). I felt I had to position myself as a physical education teacher educator in such a way that I could develop positive relationships with both prospective classroom teachers *and* specialist physical education teachers to get them to feel comfortable with the environment in which they were learning and with me as their teacher. This understanding could be explained by Goffman's (1959)

metaphor of a theatrical performance to illustrate the interactional nature of identification. That is, the development of identity in teacher education may not be as simple as 'being oneself'; it is a socially constructed process that involves negotiations between the actor (teacher educator) trying to play a certain role and the necessary adjustments and refinements in that role that occur based upon the audience (teacher candidate) reaction. Although the relationship between actor and audience might appear to be one way, Goffman (1959) suggests that there is always an interaction occurring:

> When we allow that the [actor] projects a definition of the situation when he [*sic*] appears before others, we must also see that the [audience], however passive their role may seem to be, will themselves effectively project a definition of the situation by virtue of their response to the individual. (9)

In extending the metaphor to teacher education, the expressions teacher educators make and impressions that they may try to convey are those that they hope their audience can relate to and possibly see themselves assuming. These performances will be played out through the teacher educator's practices and teacher candidates' responses to those practices (Bullock and Fletcher 2013; Fletcher 2012). This is exemplified in a conversation I had with Shawn Bullock about my consciousness of how I projected my professional identity with prospective classroom teachers:

> … It's not a false identity but I have to project a different identity because I am not working with specialist physical education students. If I were [teaching specialists], that street credibility might be the 'jock', whereas the classroom teachers typically don't identify with that … With this group I have to tread a fine line – I don't think I am a jock sort of person anyway – but I have to say to them: 'I am a bit uncoordinated in doing this' or 'I'm not this super athlete'.

Re-analysis of this reflection several years later demonstrated that my 'realisation' of how I might project my identities in order to develop a sense of community with classroom teachers would not necessarily apply so readily when working with specialist physical education teacher candidates. That is, portraying the 'jock' image with those students would do little to disrupt ingrained and stereotypical notions of who physical education teachers are, and what look they like or can do. At the same time, I also felt that demonstrating some competence and/or background in terms of athletic accomplishments, interests, and hobbies would garner some credibility in the short term. Regardless of how I project my identities in the teacher education classroom in ways that help to foster a sense of community, self-study highlighted the necessity for me to be keenly aware of my own identities and the identities of those who I am teaching. In addition, it has led to a commitment to further enquire into connections between identities and learning, and feeling a sense of belonging or community in the classroom.

Conclusions

Through synthesising several self-studies of my teacher education practices, the main purpose of this paper was to explain how examining my own practice using S-STEP has enabled me to identify and articulate principles of my PETE practice, and to better understand the ways in which I enact social constructivism. Tied to this, I have sought to share and make public what I claim to know about teaching prospective teachers of physical education, how I have developed that knowledge, and why I think it is important. I have done so with the intention of sharing that knowledge to spur debate and conversations about ways to teach teachers, and thus shift the emphasis of self-study from an inner to an outer

perspective (O'Sullivan 2014; Tannehill 2014). Zeichner (2007) argues that connections between and accumulation of knowledge across self-studies are crucial if self-study researchers are to have their work move beyond themselves and influence policy.

Guided by social constructivist theories of learning, I have interpreted and articulated three principles by building upon my previous knowledge of teacher education practice, and engaging in dialogue with others. Some of the principles I have described may not be particularly revelatory to experienced teacher educators – they may have been engaged in these and other more innovative practices for many years – however, this is speculative because there is little in the literature that describes physical education teacher educators' practices, novice or veteran (O'Sullivan 2014). Whilst I acknowledge that there are other important and relevant principles that inform PETE practice, the principles I have identified build upon and support claims by others about their particular relevance and import. For example, the first principle I identified (building a sense of community is the foundation of learning to teach) is similar to several principles based on the primacy of relationships in teaching and teacher education practice (Crowe and Berry 2007; Loughran 2006; Russell and Bullock 2013). The second principle (not just modelling – explaining and reflecting upon modelling) links with others' principles related to teacher educators being explicit about their practice (Bullough 1997; Loughran 2006; Russell and Bullock 2013). Finally, the principle 'identity matters' echoes Bullough's (1997) principle that 'teacher identity [. . .] is of vital concern to teacher education because it is the basis for meaning making and decision making . . . Teacher education must begin, then, by exploring the teaching-self' (21).

Due to diversity in local and global contexts, it is difficult to find general agreement about what constitutes 'effective' teacher education, either in physical education or in education more broadly. Despite this difficulty, it is possible to make several connections between the identified principles of practice and elements of teacher education programmes and practices that are thought to be more beneficial to teacher candidate learning. For example, the importance of attending specifically to building relationships has been identified as central in the processes of learning to teach (Azzarito and Ennis 2003; Grossman and McDonald 2008). In particular, this aspect of practice can have profound implications for how prospective teachers learn to teach students who differ in terms of race, gender, socioeconomic status, and so on (Darling-Hammond 2006; Fernandez-Balboa 1997). The acknowledgement of community building and developing relationships as central to teaching and learning also implicates the identities of teachers and learners. As such, having prospective teachers consider and develop their own personal and professional identities also requires them to address, confront, and reflect upon their experiences and beliefs (Bullough 1997; Collier 2006; Fletcher, Mandigo, and Kosnik 2013; Stroot and Ko 2006). In terms of modelling, it is not so much the modelling of teaching strategies that has been identified as powerful for teacher candidate learning, but the modelling of an enquiry stance (Borko, Whitcomb, and Byrnes 2008; Cochran-Smith 2003; Lunenberg, Korthagen, and Swennen 2007; MacPhail et al. 2014). Thus, open reflection by teacher educators *with* teacher candidates that exposes doubts and uncertainty frames the processes of learning to teach as being inherently problematic and uncertain and not something that can be learned in a pre-service programme.

Whilst I am not suggesting that these principles are established and fixed truths, it may be argued that they reflect *some* shared understandings of how current and future teacher educators might frame their practices and pedagogies. What remains to be determined, however, is the extent to which the principles I have offered are generative for others in PETE. Similar to others who have articulated the principles that guide their practice, I have done so guided by a social view of learning and not with the intent to assert that

these are 'correct' principles; rather, they represent one way of demonstrating insights and understandings that have developed from shared dialogue and the systematic study of one's practice. As Russell and Bullock (2013) suggest, 'studying our own practice is not an end in itself but a driving force for reframing how we think about our practice in order to develop new, more engaging and productive practices' (216). To this end, I invite readers to question and critique the principles that I have proposed and apply them to the contexts in which they work. In turn, sharing the understandings that have developed from enquiring into their own practice and comparing them to the principles of others may lead to a better collective understanding of powerful and meaningful ways to teach prospective teachers of physical education.

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