

Professional development experiences of physical education teachers in Botswana: epistemological implications

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Studies conducted outside Africa show that professional development experiences of physical education (PE) teachers are shaped by the manner in which PE is situated (and stereotyped) in the school system. Given the contested nature of teacher development, it is important to continually explore the phenomenon in different national contexts. Accordingly, this study examines the contextual issues impinging on the professional development experiences of PE teachers in Botswana, and how the teachers interpret these experiences in relation to their professional identity. Data were generated through focus groups and semi-structured interviews with 35 secondary school PE teachers and 12 college lecturers. Findings reveal a number of themes connected to inequities in teacher development. The paper concludes by highlighting the importance of epistemology in shaping teacher development interventions.

Keywords: Botswana; physical education teacher; professional development

Introduction

Two issues are usually noted in the literature on the status or state of physical education (PE) in the contemporary school curriculum. The first is the widespread view that PE is non-academic and therefore non-essential as a school subject because its pedagogies commonly embody physical activities and outdoor pursuits. Thinking of PE as a non-intellectual rather than a constructionist academic subject (Hardman and Marshall 1999; Light and Fawns 2003; Grehaigne, Richard, and Griffin 2005) has led to inadequate funding and chronic deficiency of essential pedagogic resources needed to support quality PE teaching and learning (Hardman 2002; van Deventer 2004; McCaughy et al. 2006; Kirk 2007). Deficiency of resources has also been implicated in the discriminatory opportunities for students across social lines to participate in sustained, substantial and differentiated physical activities (Kirk, Macdonald, and O'Sullivan 2003; Rovegno 2008).

The second issue relates to the ways in which school cultures tend to isolate PE teachers, cutting them off from meaningful and coherent support systems for professional learning (Evans 1988; Lawrence, Murdoch, and Parker 1995; Penney and Evans 1997; Chen 1999; Macdonald 1999; Armour and Yelling 2004; Keay 2006; Stroot and Ko 2006; Henniger 2007). These issues reveal how the odds are stacked against physical education in the school system and how such ostensibly holistic

nomenclature as ‘physical education’ can become a basis for undervaluation. They also underscore the importance of exploring how PE teachers experience professional development pathways that run smack through unsympathetic structures, with the realities of academic norms standing so hugely in the way as to keep teachers of subsidiary subjects in their marginal place.

The received wisdom in Botswana is that physical education cannot be a core subject. At the primary school level, PE is not offered as a discrete subject in the curriculum. Rather, it is contained in Creative and Performing Arts – an integrated subject introduced in 2002, comprising music, dance, art and craft, design and technology, home economics and physical education. At the Botswana colleges of education PE is offered as a minor subject. Characteristically, the subject is optional in Botswana secondary schools. The allocation of a relatively subsidiary status to PE has indirectly placed it in a somewhat precarious position in terms of scope, scale and substance of learning opportunities afforded the pupils (Mokgwathi 1999). The subsidiary status of PE relative to core subjects in the Botswana school curriculum raises questions about the value placed on professional development of PE teachers, the breadth of exposure of these teachers to developmental experiences and the extent to which these experiences help the teachers cope with the nuanced challenges they face in their situations.

It is axiomatic that without professional learning and development, practices become moribund and retrograde, as the practitioners become disconnected from new values and ideas. Accordingly, all categories of teachers need ample opportunities to continually and substantively engage in the process of learning, analysing, reflecting, innovating and sharing in order to fundamentally improve educational quality and student outcomes (Joyce and Showers 1988; Stigler and Hiebert 1999; Polk 2006; Harrison et al. 2008; Heck et al. 2008).

One of the pedagogic efforts to support teachers’ professional growth is the use of new technologies. New technologies, including multimedia such as websites, podcasts, blogs, and video, not only offer teachers ample resources for professional learning and connecting with their techno-literate students, they also empower them to participate in the construction of knowledge about learning and teaching through interactions and collaborations that transcend geographical and social spaces (Oblinger and Rush 1997; Council of Chief State School Officers 2006; McIntosh 2007). However, the issues of relations of production, affordability, access, utilization, and sustainability of digital technology facilities remain a challenge in many countries (New London Group 1996).

Guided by research on the role of professional interaction and relationships in the development and enrichment of teachers’ pedagogical content knowledge and practices (Shulman 1987; Levin 2003), professional development efforts are increasingly focusing on a host of collaborative approaches, including case methods, structured lesson observations, peer coaching, team teaching, fieldwork, peer supervision, mentoring models and networking. These approaches have been shown to foster social construction of insightful classroom practices informed by diverse experiences, perspectives, shared vision and dialogic interpretations (Levin 1995; Wenger 1998; Clair and Adger 1999; Stigler and Hiebert 1999; Weaver and Chelladurai 1999; Hoover et al. 2000; Lang 2000; Lieberman and Wood 2002; Watanabe 2002; Regan de Bere 2003; Dell’Angella 2007).

Such practices as face-to-face and online conferences, university courses, workshops, training-of-trainers, distance learning and other in-service activities that

encourage professional conversations, shared leadership and collegial inquiries have also become a standard part of the teacher professional development repertoire for creating a learning community and community of practice (Johnson 1990; Lave and Wenger 1991; Fullan 1993; Davis 1998; Orzech 1998; Sergiovanni 1998; Garet et al. 2001; Johnson and Kardos 2002; Routman 2002; Levin 2003; Champion 2005; Douglas 2005; Keller 2007).

Induction of beginning teachers has also received considerable attention from researchers (Darling-Hammond 1995; Odell and Huling 2000; Breaux and Wong 2002; Consortium on Chicago School Research 2007; Wang, Odell, and Schville 2008). Given that teachers advance through stages (Conway and Clark 2003), induction helps beginning teachers to reflect on their prior knowledge and negotiate the contextual influences on their teaching practices and student learning. It is also a risk management tactic that can help prevent festering worries and minimize costly mistakes. However, the diversity of school settings and teacher profiles requires that new teacher induction be contextually scripted rather generalized across situations to better meet the real needs of target participants (Jaramillo 1998; Day 2000; Peery 2004; Schleicher 2006; Wang, Odell, and Schville 2008).

Research in various educational settings has demonstrated that reflection and reflective practice have a vital role to play in the professional development process. Reflective practice empowers teachers to make sense of what has happened, why it has happened and to what effect (Costa and Garmston 2006). Processes and products used to help teachers reflect on their pedagogical conceptions and practices include action research, portfolio, narrative inquiries, learning logs, dialogue journals, curriculum writing, student outcomes and contributions to the learning community (Champion 2000; Conle 2001; Spilkova 2001; Diaz-Maggioli 2004; Copland and Knapp 2006; Hopkins 2008; Peine 2008).

The need to rise to new curriculum standards and key stages of compulsory education has increasingly given weight to standards-based teacher development initiatives linked to school accountability and assessment practices intended to guide formative, differentiated, dialectical and equitable instruction (Laws 1996; Lipman 1997; Beasley 2000; Davis 2005; Timperley and Alton-Lee 2008). Professional development schools have also become a growing part of teacher training and development support structures rooted in partnership, research, needs assessment and pragmatism (Darling-Hammond 1994; Tietel 2001; Levine 2002).

Clearly, teacher development today is characterized by a rich variety of methodologies, due partly to the fragmentizing influence of the post-modern condition on education cultures and goals (Broadfoot 1995; Cochran-Smith 2000; Linne and Tarrou 2001; Darling-Hammond 2002; Gorodetsky et al. 2003), and partly to the social constructionist perspective (Burr 1995; Gergen 1999) that imaginative efforts and contextualized procedures are necessary for effective practice.

Teacher development in Botswana

In Botswana, the key agency for teacher professional development is the Department of Teacher Training and Development, commonly known as TT&D. Established in 1989, TT&D is charged with directing teacher education at the pre-service and in-service levels, especially the development of teachers in the primary and secondary schools and in the colleges of education. TT&D has responsibility for maintaining the six Botswana colleges of education and it also runs an open and distance learning

programme in collaborations with the colleges of education and the Centre for Continuing Education of the University of Botswana. The open and distance learning programme is specifically aimed at upgrading holders of the Primary School Teachers' Certificate to the diploma level. Additionally, TT&D supports teachers' professional development through a Media Centre, a National Learning Resource Centre, and a network of strategically located Education Centres (Department of Teacher Training and Development 2007). Generally, the professional development options that TT&D currently provides for Botswana teachers and college lecturers are: residential in-service courses at the Education Centres, school-based and off-site staff development workshops, training of trainers, college and distance education courses for upgrading teachers with certificates to the diploma level, training of teachers in the use of emerging information and communications technologies for the development of teaching-learning resources, institution of school and college subject panels, placement of teachers for undergraduate and postgraduate courses, and teacher evaluation and promotion based on performance contracts. Although the benefits of these official structures and efforts to facilitate teachers' ongoing learning in Botswana cannot be underestimated, it is important in light of the low status of physical education in the school hierarchy of academic subjects to explore the developmental needs, experiences and challenges of PE teachers in the country. The two research questions that guided this study were:

- (1) When reconstructing their professional development experiences and concerns, what key themes do school and college PE teachers in Botswana highlight?
- (2) What are the parallels and differences in the perceptions of these two categories of PE teachers regarding professional development experiences within their institutional contexts?

Methods

This was a qualitative study designed to gain phenomenological insight into PE teachers' experiences of participation in professional development, their perceptions of whether and how they were empowered and the impact on their identity. Participants were recruited from 20 junior secondary schools and three colleges of education located in the North, Central and Southern parts of Botswana. The study was conducted between May 2006 and January 2007. The samples were chosen to represent a range of experiences, qualifications and gender. Participants were 19 females and 28 males ranging in age from 26 to 48 years, with 4–25 years of teaching experience. Fifteen per cent of the participants had a Diploma; 53% had a BEd degree and 32% were Master's degree holders. Following informed consent and reassurance of confidentiality and anonymity, nine focus groups of four people (involving eight college lecturers and 28 school teachers) and 11 semi-structured individual interviews (involving seven school teachers and four college teachers) were conducted. Data collection lasted 40–75 minutes and the interviews and discussions were audio-taped and transcribed with the participants' permission.

The research process began with focus groups to stimulate discussions about the role of professional development in the ongoing construction and positioning of the participants as PE teachers, and to uncover the spectrum and structure of shared and contested issues regarding the phenomenon of interest. The approach to the focus groups was open-ended, interactional and developmental. A semi-structured thematic interview schedule was used to explore how 11 other participants understood these

issues. The schedule was constructed after re-reading and reflecting on the key issues arising from the focus groups, such as the teachers' notions of professional development, motivations for participation, perceived barriers to PE teacher development and how the teachers interpret their experiences in relation to their professional identity. However, deviations from the schedule were anticipated and permitted; hence during the interviews, emergent themes were explored alongside the ones generated from the focus groups in order to uncover similarities, differences and contradictions.

Complementing the focus groups with interviews provided the researcher a much deeper and nuanced understanding of individual perceptions as well as collective constructions of professional development experiences among the participants (Alasuutari 1995; Denzin 1997; Devine and Heath 1999). The focus groups and individual interviews were conducted in multiple school sites to situate data generation in representative social contexts. Data analysis was thematic and recursive, using codes, memos and categories derived from notes and transcripts to situate and differentiate the professional development experiences of the PE teachers within their context (Strauss and Corbin 1998; Bryman 2004) and selecting quotes that appear to be most representative and insightful on specific themes. Participants were offered the chance to review the texts generated from the study before they were submitted for publication. One limitation of this study is that it offers perspectives only from the vantage points of PE teachers. Taking into account and combining the views of policy makers, school administrators and other categories of teachers might have yielded textured insights into other sub-texts of teacher development narratives, including values, politics, gender and geography.

Findings

The 12 themes generated from the PE teachers' accounts of their professional development experiences were: professional development expectations; technology of regulations; programmatic aberrations; political marginalization; professional debilitation; inappropriate jurisdiction; subject matter devaluation; weak research tradition; curricular contradictions; monopoly of state action; vanishing induction relations; and identity articulations. In order to address the second research question, these themes are presented below in terms of the contrasting narratives produced by school and college PE teachers. The themes of professional development expectations; vanishing induction relations; subject matter devaluation; political marginalization; programmatic aberrations; curricular contradictions; identity articulations and technology of regulations regularly emerge from the experiences of both groups of PE teachers. While the themes of professional debilitation and inappropriate jurisdiction appear to be more salient to the secondary school PE teachers, their college counterparts were particularly sensitive about monopoly of state action and marginalization of scholarly research in their institutions. College PE teachers see themselves as disadvantaged and disconnected from supportive research networks and ongoing research engagement necessary for their professional duties.

Professional development expectations

Most participants used images and metaphors of enlightenment, expansion, renewal and progression to describe their professional development expectations and motivations.

I expect professional development activities to expand my capacity to teach well, to give purpose and direction to my growth as a PE teacher.

When I think of professional development, I imagine new tools, new skills, new clues and new light to enhance my teaching.

In my view, professional development is supposed to yield special insights that will help me refocus my career and secure my occupational goals.

Technology of regulations

Participants described factors that they perceived as blocking their access to continuing education and training. Importantly, they alluded to complicated eligibility rules for accessing further and higher education. As a matter of policy, public school teachers in Botswana need a minimum of two years of successful teaching service to qualify for study leave. In reality, eligibility is tied to a host of other regulations such as staffing situation, regional quotas, support of school principals, backlog of eligible candidates and so on.

After 10 years and numerous applications to the Teaching Service Management, I am still waiting and stuck in this school due to selectivity that is devoid of merit. Some of my classmates have either completed or about to complete their degrees. It seems to me that access to funding to further training is tied to official whims.

The government should revisit in-service training for secondary school teachers to ensure greater fairness. There is a widespread belief among those of us on the waiting list that there is no consistency and equity. It is especially hard for PE teachers to be selected for further studies because PE is not a core school subject.

I joined the college with a bachelor's degree and after two years of service I was funded to study for a master's degree at the University of Botswana. But that's where the opportunity ends. PhD training is currently out of the question because a doctorate is not seen as being essential to teach in a college of education.

Programmatic aberrations

When reflecting on the structure and frameworks of professional development programmes at their schools or colleges, participants generally felt shortchanged by the slap-dash, disjointed, and reductionist approaches to these programmes.

There is a tradition to workshop teachers once in a while. But these workshops are often talk shops. They seldom entail hands-on activities focusing on curriculum content and strategies to improve student outcomes.

Six months ago, I attended a workshop on video shooting to help PE teachers capture and assess students' performance during physical activity. The instructors were themselves fresh from a training-of-trainer workshop. They practically muddled through the workshop. The camcorders were not enough and the sessions were rushed because of time constraints. Worse still, my school has not been able to procure a camcorder that I could use for ongoing, on-site video shooting practice.

I have been teaching at this college of education for more than a decade and I have never participated in any internal or external coaching assistance to enhance my

professional effectiveness. Moreover, colleges of education have no budgets for conference funding.

It's only recently that a few computers were installed for staff at our college. The professional development we got consisted of the basics of word processing and email.

The government has recently introduced the Performance Management System (PMS) across its institutions of learning. I have attended two in-school workshops on the PMS requirements. Sadly, these PMS workshops were about staff appraisal, control and consequences rather than improvement of curriculum and instruction.

Political marginalization

Issues of professional networking and associations were also salient to participants in this study. They believe that a vibrant association of PE professionals in Botswana schools, colleges and universities will help organize collective action towards expanding professional development opportunities for members.

We are currently underdeveloped professionally due to lack of a powerful association to provide networking support through conferences, publications and other continuing education initiatives.

At the moment there is a national PE panel constituted by the curriculum department for syllabus review and textbook selection. This panel cannot be expected to upset the status quo by pushing for greater professional development for PE teachers. We need a vibrant Botswana Association of Physical Education Professionals to take up this issue with the government and institutions of learning.

In this era of globalization we need to learn from successful professional associations elsewhere by analysing and adapting their strategies regarding professional development of members.

Professional debilitation

Participants were worried about professional debilitation arising from being saddled with abnormal curricular and co-curricular responsibilities, without the respite needed for reflection and personal development.

It doesn't matter whether you are a novice teacher or nursing mother; it doesn't matter that you are not a Jack or Jane of all the games and sport in the syllabus; it doesn't matter that you did a minor in PE some 10 years ago; if you are the only PE teacher in the school they simply throw all the classes at you. In such a situation, professional development opportunities are few, infrequent and hurried to ensure teaching and extra-curricular activities do not suffer.

There are two of us teaching PE in this secondary school. We handle about 220 students, teach 36 lessons a week, organize sporting activities and do other chores assigned by the administration. Our tasks are arduous and fatiguing. We are both women with kids and this means trying to maintain the rhythms of home and the work place. We have been overworked like this for so long that we have become disillusioned with teaching career. We need support services and connection with our peers to boost our knowledge on how to improve our PE classes.

Inappropriate jurisdiction

Participants from the secondary schools spoke of administrative arrangements that put the supervision of PE teachers, PE units or programmes under a senior teacher or regional education officer without requisite qualifications in PE – a condition known in Botswana education lexicon as ‘babysitting’. From the participants’ perspectives, being a ‘foster baby’ correlates negatively with prestige, funding and professional development opportunities for teachers in the field.

Putting PE under the oversight of an Agriculture or Home economics teacher has led to tensions in my school, as resources have to be shared and the needs of the foster baby are often considered untenable by the foster parent.

Our professional needs get lost in the gap between PE and other foster subjects that do not have playground, outdoor or gym requirements. Most of the suggestions we receive from our babysitters are simplistic and do not respond to our peculiar professional needs.

Subject matter devaluation

In addition to subtle marginalization arising from the structural location, participants also said they acutely suffer from the way their field is variously regarded as ‘non-academic’, ‘recreational’ and ‘non-exacting’ – notions that create isolation, disrespect, regressive funding, reduced opportunities and lack of meaningful professional support services crucial for advancing PE teachers’ careers and improving student outcomes.

The attitude that PE is merely physical and not intellectual is pervasive. Subsequently, teachers of subjects considered intellectual or core are privileged professionally through resource allocation, nominations for workshops and recognition.

I have observed that the relative value attached to a subject can affect the professional fortunes of teachers of that subject. Teachers of core subjects like math and science, for example, are judged as having legitimate claim to professional development. For teachers of other subjects like PE and religious knowledge, opportunities for furthering their careers are sporadic and mere window-dressing.

My school principal loves sports, and so he supports my efforts with respect to preparing school athletes. As far as he is concerned, PE is valuable in so far as the school is doing well athletically. Thus his support for my sport trips is not tied to my growth as a teacher but to my utility as a sport organizer.

Weak research tradition

Respondents from the colleges of education were particularly concerned that research is at the periphery of their work, foreclosing windows of opportunities to collaborate and attend professional meetings to share research findings and applications with other physical educators.

In our colleges, there is the assumption that research is for those teaching at the university. Our job is defined in terms of teaching, grading and supervision.

Our libraries rarely subscribe to academic journals since our colleges are structured as anything but a place for teachers to be academically challenged and to grow.

Research is almost non-existent in the colleges of education because the necessary resources are never allocated. Teaching is considered top priority. TT&D and college administrators do not seem to appreciate the importance of research and reflection to effective teaching and teacher development.

To be fair, college principals readily approve travels related to PE panel meetings to set and moderate exam questions. However, funds for engaging in research and educational conferences are lacking. Research and conference activities are not even part of our performance contracts. We are supposed to be teachers, presumably expert, equipped with content and without the need to generate knowledge or partake of current research findings.

Curricular contradictions

Furthering PE in schools requires indoor and outdoor instructional facilities. The PE curriculum should be enacted in context, with hands-on experiences, as does any other subject with theory and practical components. Lack of equipment and facilities undermines PE teachers' efforts to be creative about their subject matter. Although a few schools have got extensive facilities for PE and sport, quite a large number were planned without PE in mind.

In this school we have only a small patch of grass to teach practical PE lessons. How can one meaningfully teach field or track events to 20 students in a space the size of a tennis court surrounded by classrooms, staff quarters, and the school kitchen? Such situation leaves us PE teachers feeling handicapped as practitioners.

I know that a few schools like mine have the necessary facilities to teach PE effectively but I know that the situation in most schools is appalling. Teaching theory of practice in the classroom is not going to help us hone our skills and it makes a mockery of our profession.

I am not so sure whether PE is not a contradiction in terms in this country given that in most schools the subject is mostly taught with lectures, note taking and homework due to inadequacy of instructional materials and facilities for practical classes.

Monopoly of state action

Participants differentiated the role of the state and their institutions in staff development initiatives. The Department of Teacher Training and Development is seen as crucial to whether schools and colleges can act to meet the developmental needs of teachers. TT&D sets limits to what can and cannot be done with respect to teacher development. It defines the timing, tactics and criteria of access to professional support services for teachers. Funding for all forms of professional development activities comes from TT&D. Schools and colleges have no autonomy, and hence no significant role in fostering staff development to give them leverage in ensuring equitable access and support.

The propensity to refer and defer to TT&D robs our schools of the incentives to commit to setting stretch goals for teachers' professional development.

We need the cover of the college to participate in professional development programmes and the college needs the cover of TT&D to guarantee our participation. TT&D in turn needs the cover of some regulations and funding formula. With too many

covers to negotiate it is not surprising that we miss out on many avenues to learn new practices.

In a democracy, I think our colleges need their own grants to make possible autonomous decisions about supporting the career development of their teachers. But I also think the TT&D is needed for overall policy direction and facilitation. Right now TT&D is too powerful and the colleges are too vulnerable to shortchanging.

Vanishing induction relations

When describing their experiences of induction into teaching, many participants recalled that they had to hit the ground running, with little or no initial forms of socialization necessary to address gaps in their procedural, conceptual and constructivist knowledge.

I was the first PE teacher to be posted to my school. I had to kick-start the programme. I had no credible mentor to guide me. To be frank, I literally hobbled and stumbled into my initial teaching assignments.

My supervisor holds a diploma with a major in home economics and a minor in PE. Since I joined the school with a degree in PE I was expected to have a good grasp of the syllabus. Whenever I asked for direction, the response I got was, 'You mean you don't know what to do? You are supposed to be a university graduate, for crying out loud.'

Most of the older teachers have never been mentored. So they don't know how to mentor novice teachers. You are shown the storeroom and where to obtain stationery and that's it. To ask many questions is taken to mean that you are not smart.

In this school, student teachers get a week to observe the cooperating teachers and new teachers are expected to start teaching immediately, considering that those on the ground are terribly overworked and need immediate relief. Teaching practice experiences are taken as offering sufficient insight into initial teaching.

Identity articulations

In talking about their professional identities, participants describe how their institutions, colleagues, students and social settings perceive PE teachers and how they see themselves in relation to other professionals. Disciplinary discourses in the school system differentiate teachers of hard and core subjects and those of easy and optional subjects. PE is associated with games and sporting activities and therefore seen as easy. PE teachers are liked but do not necessarily command respect from students and parents like teachers of core subjects like math and science do.

Students enrol for PE expecting to be on the playground all the time. They resent class work dealing with theoretical bases of physical activity and sport. It is like theory classes are organized by PE teachers who cannot perform.

People conflate PE with school sport and tend to judge us PE teachers unfairly when a school team loses a match.

Wearing of track suits or t-shirts by PE teachers is seen as too casual by some principals who insist that PE teachers must change into a more formal dress between practical lessons. These principals mischaracterize us as players and undignified when we walk around the school in sportswear.

Parents are more concerned about their children's performance in core subjects than in PE. Therefore they don't encourage their kids to choose PE or excel in it.

Students do PE in their school uniforms and formal shoes. PE dress codes cannot be enforced because school uniforms have come to embody the proper way to dress for academic work. Taking off the school uniform is seen as a signal to engage in frivolity.

At the university we had a professional identity associated with sport science, leisure studies, health and wellness, youth development and promotion of healthy lifestyles. In schools, we are underrated and our subject is undervalued. As such, we keep striving to be visible and to project identities of being academic, rigorous, athletic, professional and valuable.

I think PE needs to become a core subject at the primary and secondary schools for us PE teachers to be regarded as professionals with the holistic educational agenda deserving of support and adequate resources.

Discussion

Participants in this study acknowledge that there are policies and structures in place to build teachers' capacity, but these policies and structures lack internal consistency, and are rarely matched with resources or to the requirements of specific school subjects. Many of them spoke of disciplinary hierarchy in the school system, embodied in subject classification and expressed in differential nomination for professional development programmes. They typically found the challenge of negotiating and balancing multiple professional identities psychosocially frustrating. Moreover, they noted with chagrin the increasingly pervasive and uncomplimentary image of their subject matter as easy and cheap. From the perspectives of the school teachers, the ideology of 'babysitting' needs to be discarded. Not only does it reinforce the marginalization of PE, it also carries the sub-text that PE teachers cannot take control of their departments and assume responsibility for self-directed learning.

The marginal situation of PE in the school system has been identified as one of the challenges of pursuing a career in the field (Sparkes, Templing, and Schempp 1990; Alexander, Taggart, and Thorpe 1996). Evidence from previous literature suggests that professional development opportunities for PE teachers are often limited, fragmented, de-contextualized, and predicated on the conflicted identities of PE teachers and the notion of PE as a non-academic subject (Schempp and Graber 1992; Macdonald 1995; Green 2002; O'Connor and Macdonald 2002; Light and Fawns 2003; Keay 2006). To the extent that PE is widely devalued and under-resourced, to that same extent will PE teachers experience systemic barriers to professional growth and upward mobility.

Participants generally agreed that ongoing support from experienced teachers is indispensable to novice teachers to avoid a steep learning curve as they struggle to rise to daunting professional challenges. In this context, new teacher induction programmes (Breux and Wong 2002; Consortium on Chicago School Research 2007), school-based collaboration (Garet et al. 2001; Johnson and Kardos 2002; Routman 2002) as well as lesson study, case method, and visits to model programmes (Levin 1995; Stigler and Hiebert 1999; Watanabe 2002) can help PE teachers overcome pedagogical isolation while honing the professional skills they need to become effective and fulfilled practitioners.

On this issue of experiential learning, participants complained that existing professional development programmes are commonly generic and often fail to mesh

with the subtleties and nuances of PE learning and teaching. They typically indicated that approaches and pedagogies that exist for teacher development needed to be deconstructed to establish connections with PE teachers' lived experiences in the gym, swimming pool, laboratory, classroom, playground, and adventure education settings. The overriding view of participants is that PE teacher development in Botswana must move beyond functionalist, linear and state-centric in-service training models (Torstendahl and Burrage 1990; Abbott 1991).

Promoting and supporting deskwork and bookwork at the expense of experimental learning in PE was perceived by participants as creating contradictions between the goals of enriching students' procedural, constructionist and declarative knowledge (Vickers 1990; Rink 2002). Professional development programmes can help PE teachers improve educational outcomes to the extent that they are linked to what the teachers do in the classrooms. Thus, the policy challenge is to create conducive contexts for coherent and relevant professional learning experiences.

Another issue that surfaced repeatedly was the irony of saddling PE teachers with intensive extracurricular tasks that fundamentally constrain their teaching roles and in the end dilute their effectiveness and efficiency. The participants' perception of being overburdened with curricular and co-curricular activities means that face-to-face professional development programmes need to be supplemented with high-quality online training that PE teachers can adapt to their needs, schedules, pace and location (Oblinger and Rush 1997; Douglas 2005; Keller 2007). Virtual training is not only flexible and adaptable, but also provides opportunities for social collaboration through media such as podcasts, blogs, and video conferencing (McIntosh 2007).

College PE teachers were particularly distressed about lack of opportunities to contribute to the professional knowledge base and exchange through research and networking. They also find problematic the heavy regulatory power wielded by TT&D on behalf of the colleges, which creates bureaucratic roadblocks to collaborative learning, professional conversations and shared leadership (Sergiovanni 1998). The notion of PE teachers as just consumers of research undermines their agency as reflective and informed professionals, capable of engaging in social inquiries, action research and inter-professional collaboration to transform their pedagogical practices (Crum 1993; Hoover et al. 2000; Conle 2001; Spilkova 2001; Regan de Bere 2003; Diaz-Maggioli 2004).

Conclusion and epistemological implications

The professional development experiences of participants in this study can be partly attributed to the way PE is situated (and stereotyped) in the Botswana school system and partly to the kind of teacher development discourses and models that are endorsed by the teacher development policy makers. The findings from this preliminary study support the importance of exploring the developmental needs, experiences and challenges that this specific category of teachers face within their contexts since the meanings and perceptions of these experiences are significant for teachers' identity, empowerment, effectiveness and sense of efficacy (Darling-Hammond, Chung, and Frelow 2002).

Research into the professional development processes associated with teacher quality, effective teaching and student academic success increasingly supports complementary approaches characterized by situated learning; disciplinary focus; holistic reflection and inquiry; constructive, continual and collaborative engagements;

alignment with student outcomes and gaps in teachers' competencies; active agency; self-direction and ownership; strategic coherence, contingency and integration; ample time and resource allocation; sustained approach to research and dissemination of evidence to guide teachers' professionalization (Good 1990; Valli 1992; Hatton and Smith 1995; Darling-Hammond 1997; Hopkins and Levin 2000; Roberts-Holmes 2003; Gambell and Hunter 2004; Tinning 2004; Levine 2006; Wright and Grenier 2007). Such multiplicity of conditions for fostering meaningful teacher development are grounded in the epistemological assumption that working theories, practices and categories of professional learning are contingent, generative, iterative and affirmative. Indeed, epistemology is that which puts teacher development into question. It requires and enables inquiry and discovery of contextually relevant and empowering teacher development interventions. It encourages multiple meanings rather than a static view of knowledge or the normalization of specific assumptions (Castells and Ipola 1976; Sleeter 2001; Biesta 2007).

From an epistemological perspective, the contingent and changing nature of conceptual categories within professional development literature provides pragmatic clues, criteria or frames of reference for PE teacher development. A critical stance by the constitutive stakeholders towards authorized and prescribed professional development programmes for PE teachers will ensure that the complexities and contexts of PE teachers' roles are sensitively taken into account. The experiences narrated by participants in this study warrant further explorations in future studies. Through comparative studies, further light can be shed on the variability of PE teacher development experiences in different countries and the attendant implications for policy.

Notes on contributor

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