

New Perspectives for Teaching Physical Education: Preservice Teachers' Reflections on Outdoor and Adventure Education

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The purpose of this study was to gauge preservice physical education teachers' perspectives during one physical activity pedagogy course, teaching outdoor and adventure education. Teacher belief, occupational socialization and experiential learning theories overlaid this work. Over three years 57 students (37 males; 20 females) participated in the course. Each student wrote four reflections during their term of enrollment based on semistructured questions regarding their own participation, thoughts on K-12 students, and teaching and learning in physical education. Reflections were analyzed using constant comparative methods. Three main themes emerged from the data: 1) fear, risk and challenge, (subthemes of skill and motivation; self-awareness); 2) lifetime activity; and 3) teaching physical education (subthemes of K-12 students; curriculum). Implications for physical education teacher education suggest the inclusion of novel physical activities that elicit strong emotional responses due to challenges with perceived and/or actual risk as a viable method for inducing belief change.

Keywords: physical education teacher education, physical education, preservice teachers' beliefs, outdoor education, adventure education

It is well established that preservice teachers' (PTs; those in teacher education programs and not yet licensed) beliefs mediate the process of teacher education and their teaching, largely due to several years of personal experiences—as students of teachers, as athletes of coaches, and as participants in various contextual and cultural experiences (Goodman, 1988; Hollingsworth, 1989; Lortie, 1975). These acculturation experiences, termed “apprenticeship of observation” (Lortie, 1975)

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or occupational or professional socialization (Curtner-Smith, Hastie & Kinchin, 2008; Lawson, 1983a; Lawson, 1983b; Schempp & Graber, 1992), can result in emotionally charged beliefs (Morine-Dersheimer & Corrigan, 1997), leading to tacit or unconscious assumptions about teaching, learning, students, content and curriculum. These assumptions are not always compatible with the work of teaching (Kagan, 1992), and when not challenged in teacher education programs and experiences, more readily determine the degree to which new information is assimilated into teaching practices (Doolittle, Dodds & Placek, 1993; Goodman, 1988; Hollingsworth, 1989; Placek et al., 1995). However, the professional socialization that occurs within a teacher education program can also lead to similarly inappropriate and misaligned unconscious assumptions about teaching and learning (Lawson, 1988), particularly if not challenged in ways that serve to engender new ideas and beliefs (Pajares, 1992).

Future physical education teachers come to Physical Education Teacher Education (PETE) after having been relatively successful movers in sport and physical activity during their formative years (Dodds et al., 1992). Their socialization into and via sport (Lawson, 1988) coupled with their success in movement-based environments likely impacts their belief system about sport, physical activity, and physical education content and curriculum (O'Sullivan, MacPhail & Tannehill, 2009; Placek et al., 1995; Stran & Curtner-Smith, 2009), leading to potentially incompatible beliefs for teaching children and youth in physical activity settings. This can be particularly true for those PTs more oriented toward coaching and/or working with the more elite level student. The typical sport related coursework in PETE courses may reinforce beliefs rather than expose, challenge and/or change them, perhaps due to familiarity with the sport or sporting culture, perhaps due to a lack of programmatic focus on belief change, or both (Tannehill, 2005; Timken & van der Mars, 2009). For example, how many PETE programs continue to deliver traditional physical education content (e.g., volleyball, basketball, tennis, etc.) to their majors regardless of *how* it is delivered (i.e., models-based approach, Metzler, 2005)? Carlson and McKenna (2000), Hastie (1994), Jenkins (2004), Oslin, Collier, and Mitchell (2001), and Tannehill (2005) report how their PTs "live the curriculum", in that they participate in at least one model (e.g., Tactical Games / Teaching Games for Understanding, Sport Education, Fitness Education, and/or outdoor and adventure education) in an effort to be "better equipped to offer programs that are challenging, relevant, and meaningful to the children and youth with whom they will work" (Tannehill, 2005; p. 298). Unfortunately only 50% of respondents to a PETE survey included at least one curriculum model in their program (Ayers & Housner, 2008). Therefore we can surmise that many PETE programs continue to operate in a traditional manner, which potentially serves to reinforce instead of challenge beliefs.

Further, might it be plausible that even unconsciously, PETE programs and/or faculty actually reinforce and sustain focus on the conservative agenda of traditional sport and physical activity even when, for example, taught via a Sport Education season (see Penney, Clarke & Kinchin, 2002 for a thoughtful analysis of Sport Education)? Collier and Hebert (2004) suggest undergraduate PETE programs more closely examine their curricula within the basic "sports skills" and/or "teaching of. . ." courses, to move beyond the traditional team and individual activities to those more lifetime oriented, to those activities having a higher "cool" factor (McCaughtry, Tischler & Flory, 2008) for youth, including youth within PETE.

However, simply including more lifetime activities, increasing the “cool” factor, or teaching curricular and instructional models does not guarantee a positive change in beliefs and subsequent teaching decisions and actions. So what will it take, especially when PTs come to PETE more successful and skilled in many activities? Is there an activity, or selection of activities that could place them in the position of a novice learner? Might novel activities, or that of being a novice learner, provide impetus for positive movement and growth in beliefs about teaching and learning in physical education, or better connect PTs with the physical, mental, emotional and social aspects of learning and motivation of a K-12 student?

Two examples of an innovative approach using novel activities to intentionally challenge and/or stimulate shift of preservice physical education teachers’ beliefs include studies by Hastie (1994) and Carlson and McKenna (2000). In both studies PTs were asked to write reflections of their experiences and connect those experiences with teaching and learning experiences in K-12 physical education. Using novel adventure education activities, Hastie (1994) sought to shift PTs’ focus to the K-12 student via a weekend experience in which resided a physical challenge and an element of uncertainty (i.e., mental and emotional challenge). Reflection themes included ideas about enjoyment, suggestions for physical education, and the role of the teacher, and PTs came to see the learner as the central feature in educational experiences. Carlson and McKenna (2000) created a similar scenario using a weekend program of adventure-based activities in recognition of the need for teacher educators to help PTs deconstruct and then reconstruct their notions of teaching and learning to create supportive learning environments for K-12 students. Ten categories emerged from the qualitative data, including among others fear, support, and professional outcomes. Carlson and McKenna (2000) describe the weekend experience as powerful and destabilizing, exposing PTs to alternative ways of thinking. The following quote is from Carlson and McKenna (2000), but also appears to capture Hastie’s work as well: “By placing the [PTs] outside their comfort zones, some of them reported that they discovered for themselves the importance of a supportive environment, the impact of their peers, and how less confident, lower skilled students must feel every time they attend physical education classes” (p. 24). Both studies suggest adventure education, and novel activities situated within a supportive environment, as a catalyst for change, largely due to a perceived increased risk in novel challenges faced by these otherwise skilled future teachers.

The purpose of this study was to gauge PTs’ perspectives about teaching and learning in physical education while engaged in a 10-week outdoor and adventure education experience. Adventure education and outdoor education are characterized separately even though there can be some crossover (Steffen & Stiehl, 2010; see Table 1 for a description of the unique characteristics). Adventure education is well known for engaging participants in both personal and professional reflection and includes experiences that focus on the inter- and intrapersonal development of individuals and/or groups engaged in activities that require guided reflection or processing with a trained facilitator (Brown, 2006; Prouty, Panicucci & Collinson, 2007). While adventure education can and does occur in the natural environment, that environment is developed specifically for activities such as low and high element challenge courses, but can also include team building and group initiative activities that could occur in a gym setting. There is an element of risk, but that risk is fabricated to highlight situations to elicit particular social and/or emotional

Table 1 Unique Characteristics of Outdoor Education and Adventure Education

	Outdoor Education / Outdoor Pursuits	Adventure Education
Primary Focus	Skill development (e.g., wet exit in kayaking);	Personal / group development (e.g., team building, group initiatives)
Primary Setting	Occurs in the natural environment (e.g., forest, lake, river, mountains)	Can occur in a natural environment, but the area is developed specifically for AE (e.g., challenge course)
Risk	Actual, not invented—little to no control over the natural environment (e.g., weather, animals, insects)	Perceived and created (physical, emotional, and social)—controlled environment in which risk is sometimes fabricated to encourage participants to confront an issue (e.g., activities occur in a predetermined order with requisite safety equipment)
Teachers	Requires both skill and safety training and expertise to teach many activities, particularly those that venture into the back country (e.g., overnight backpacking trip; mountaineering; mountain biking)	Requires both safety and facilitation training and expertise (e.g., front loading; facilitating group processing postactivity)

responses of participants. The actual risk is lessened due to the required training and expertise of facilitators. In this study, activities in the adventure category included group initiatives and team building, games built on the themes of trust, cooperation and communication. Outdoor education has also been termed outdoor pursuits or outdoor adventure pursuits (Stiehl & Parker, 2010), and according to Prouty, Panucci and Collinson (2007) includes physical, nonmechanized activities that may result in “long-lasting physical benefits”, or lifetime physical activity habits (p. 232). Outdoor education focuses more on skill development and most often occurs in the natural environment (mountain biking in the forest). The risk in outdoor education activities tends to be real given the limited control over the natural environment (weather, animals, insects). As with adventure education, a high level of expertise is required to reduce risk potential. Outdoor pursuit activities included in this study were mountain biking, orienteering and kayaking, among others.

Methods

Course

At a regional state university in the northwestern part of the U.S., preservice teachers in PETE were required to take one three-credit course specific to teaching outdoor and adventure education as part of the required physical activity pedagogical core

(i.e., “teaching of . . .” courses). Other required physical activity pedagogical core courses included dance, aerobic/group fitness, strength training and conditioning, Sport Education, and Tactical Games. The structure of the 10-week course was specific to the seven activities listed, in order, in Table 2.

This class was grounded in John Dewey’s (1938) theory of experiential education. The course design considered *how* PTs learn to be just as important as *what* was to be learned, the premise that engaging in novel physical activity experiences could be helpful in connecting PTs with previous (e.g., their own K-12 physical education) and future (i.e., teaching physical education) experiences that influenced their belief system (Panicucci, 2007). Kolb’s (1984) experiential learning cycle of reflection was threaded throughout the course; students were continuously asked to reflect on their in-class experiences and connect both personal and professional experiences with their future career as a teacher of K-12 physical education.

Morine-Dersheimer and Corrigan (1997) suggested creating four conditions by which to facilitate change in beliefs: time, dialogue, practice and support. These four conditions were present in this course in that PTs spent 10 weeks engaged specifically in novel outdoor and adventure education activities in which there was both written and verbal dialogue about teaching and learning, and outdoor and

Table 2 Course Activities and Reflection Paper Topics

Reflection	Course Activities	Reflection Topic/Focus
1	Team building/group initiatives & white water rafting	What has been learned thus far in class activities; Challenge by Choice; Full Value Contract; Trust, cooperation, communication; Disenfranchised student; PT thinking about their future as a teacher relative to teaching outdoor and adventure education
2	Mountain biking (on-campus skills course & then off-campus mountain bike ride on logging / fire roads)	What has been learned thus far in class activities; Personal risks; Full Value Contract; Disenfranchised student; PT thinking about their future as a teacher relative to teaching outdoor and adventure education; Professional risks
3	Fly casting & orienteering	What has been learned thus far in class activities; Skill and/or lack of skill; Motivation or lack of motivation; Fear, risk, challenge; in the context of social, emotional, mental and physical; PT thinking about their future as a teacher relative to teaching outdoor and adventure education
4	Kayaking (pool based in white water kayaks) & rock climbing (indoor gym-based)	Tying together the previous reflection topics and thinking about the teaching and learning of K-12 students in school physical education

adventure education. PTs were able to engage in (i.e., practice) these activities in a supportive environment, whereby two core concepts of adventure education, “challenge by choice” and the “full value contract” (i.e., support; Project Adventure), were continuously integrated. Challenge by choice is akin to asking participants to be responsible for their own level of participation, whatever that level happens to be at the moment, without fear of judgment from others. The full value contract asks all group members to create and maintain a mentally, emotionally, socially, and physically safe and respectful learning environment, staying committed to the activities and group at all times (Henton, 1996).

Participants

Over three consecutive fall terms (Fall 2004, 2005, 2006), 57 PTs participated in the course. The majority ($n = 57$; 20 females, 37 males) of PTs declared their major as Physical Education Teacher Education; two were Physical Education minors, with one focused on teaching health and the other a psychology major. Fifty-six PTs were Caucasian and one was Asian-Pacific Islander. Their age range was 19–38 years ($M = 20.7$; $SD = 2.6$). At the time of manuscript preparation, at least 19 (34%) PTs from the study were known to be teaching physical education, at minimum part-time, in a K-12 setting. Several completed the degree program but did not advance into a student teaching program, and the current whereabouts and work life of many remain unknown. A large majority indicated having very limited, if any, experience with course activities.

Human subjects review board approved the study and appropriate procedures were used to obtain consent. At the end of their respective term, PTs were asked to participate in the study by allowing the instructor to keep the four reflections they had written as part of the course requirement. PTs, who are identified by pseudonyms, were told that their decision to participate would have no impact on their final grade, and three of the four reflections were graded by this point in the term. The main instructor for the course was also the researcher for this study. Teachers/outfitters were hired for their specific expertise for a few activities, and had no formal role in the study.

Data Collection and Analysis

At the initial class meeting, each PT completed a demographic survey, rating their experience (beginner, intermediate, advanced) in each of the course activities. As part of the class requirements, each PT wrote four reflections during their 10-week term of enrollment in the course, resulting in a total of 228 reflections for analysis. Each reflection assignment was semistructured, in that guiding questions were provided relative to the activities and specific topics (e.g., trust, cooperation and communication; the disenfranchised student in K-12 physical education; teaching and learning in physical education, skill development, challenge, fear, risk and motivation; see Table 2). Reflection question development was guided by the reflective processing that occurs in adventure education as outlined by Kolb (1984), research on teacher beliefs, research on student learning and motivation, and topics, discussion and events from class (i.e., comments and behaviors witnessed in class).

The format and questions of the reflection paper assignments remained the same over the three-year period. Reflection papers tended to average around two pages in length. Each reflection was assigned a point value and letter grade for the course and it is not known if PTs' reflections were an attempt at "studentship" (Graber, 1991) due to the grading process or more of an accurate description of their own perspectives on outdoor and adventure education, and on teaching and learning in K-12 physical education.

All reflections were typed and turned in as a hard copy. Qualitative analysis of reflections did not occur until the end of the three-year data collection period even though the instructor/researcher had read each reflection at least once as part of the course evaluation process. Reflections, numbered one through four for each year, were analyzed by the instructor/researcher in the following manner: reflection number by year of enrollment (i.e., all first reflections from 2004, all second reflections from 2004, etc.); reflection number across years (i.e., all first reflections across all three years—2004, 2005, 2006, etc). Reflections were read multiple times, and the initial patterns and categories were extracted by reflection phase (reflection 1, reflection 2, etc.) using open coding. Each reflection phase was coded before moving to the next phase. After the initial coding of each phase, axial coding was used to more intensively code around a category, and allowed the researcher to identify subcategories and examine relationships among categories within and across phases (Strauss & Corbin, 1998). Data were then analyzed for negative and/or contradictory cases to determine if students made contradictory statements within any of their four reflections. Trustworthiness was established via an audit trail that included raw data, a coding map/matrix and decision log, and researcher notes about personal bias. Researcher field notes were logged after class and noted various situations, interactions and comments with and between PTs regarding the class and/or activities. The field notes yielded a degree of useful information (e.g., student comments on personal feelings or new ideas about teaching physical education; behavior during fly casting and orienteering). Coding processes, theme development and potential researcher bias were all shared with a peer debriefer. A second analysis by the instructor/researcher took place over a year after the first analysis, and found the themes initially developed to be an accurate depiction. As a measure of ensuring dependability, an external auditor reviewed approximately 20% of the raw data, the coding matrix and decision log. Upon review there occurred discussion of the process and product, interpretations and conclusions. No new themes emerged during the second analysis or as a result of the audit.

Results and Discussion

Three main themes emerged from the data: 1) fear, risk and challenge, with sub-themes of skill and motivation, and self-awareness; 2) lifetime activity; and 3) teaching physical education, with the subthemes of K-12 students and curriculum. Given the similarity in course purpose, design and experiences, the themes from this study parallel many of the categories from Carlson and McKenna (2000) and Hastie (1994).

Fear, Risk and Challenge

Similar to Carlson and McKenna, the theme of fear, risk and challenge emerged, likely a result of the guiding questions asked on reflection assignments. One goal of this reflection topic was to help PTs get in touch with their own experiences with fear, risk and challenge, particularly as they engaged in the novel activities. Fear, risk and/or challenge during mountain biking, rafting and/or kayaking was common and at times resulted from a self-reported lack of skill (i.e., lack of perceived competence). A second goal of this specific topic was to help students get in touch with how some K-12 students might feel while participating in traditional sport-oriented physical education activities (e.g., soccer or badminton), a similar goal for both Carlson and McKenna (2000) and Hastie (1994).

Skill and Motivation. Within the theme of fear, risk and challenge was the subtheme of skill and motivation, or lack thereof. If it is true that PETE PTs are typically successful movers (Dodds et al., 1992), the following quotes seem to capture personal struggle with a novel skill. Some transferred their personal struggle, connecting their own experience with that of a K-12 student, similar to what Carlson and McKenna found. Josh had visions of grandeur, imagining himself looking like Brad Pitt in the movie *A River Runs Through It*:

...so I have had desires of fishing mid stream with my line whipping rhythmically back and forth...I couldn't quite mimic what I saw in the movie. There was a lot more to fly casting than I previously thought. Initially I struggled physically but after casting for a while I started to struggle mentally as well. (Josh)

For one who loved a challenge, Nick found frustration with mountain biking (skills course in particular), frustration to the point of quitting.

I saw some people getting both tires off the ground and over the logs, I saw some other people picking the water bottles off the ground when still riding their bikes. These were things I wanted to do, but struggled with it severely. I honestly tried picking up that darn water bottle off the ground about thirty times and got it on my last try. This was a situation that students can have, where they are unskilled in something and they just can't do that task. They don't lose their motivation though, they keep trying and trying until they complete that task as I did. Then there are some students that will lose that motivation and just give up....I found myself doing this when I was unskilled to lift my back tire over the logs. I saw someone else do it and I wanted to do it, but I couldn't so I sat there until the next task. (Nick)

This may have been the first time Nick could recognize and juxtapose situations related to student motivation through his own experience—he kept trying at the water bottle pick-up station but quit at the bunny hop (log hop) station. Todd had a similar realization, noticing his lack of success and resultant lack of motivation during an initial orienteering activity in the gym.

When I was doing the activities in the gym, I was not successful at all. I like to feel successful and I wasn't and as a result of that my motivation decreased....I was always a step or two or three off from my polyspot and I became frustrated

that I wasn't getting it. The students around me were laughing and so was I because it was funny, but at the same time some students will feel threatened when students are poking fun at you and that can be demoralizing. (Todd)

The fly casting instructor (a hired expert) observed how PTs became off-task during the fly casting portion of class. Occasionally this occurred in other activities (specifically orienteering and mountain biking skills course), but not to the extent of fly casting. Interestingly, this pattern was typical across all three years of data collection. Both fly casting and orienteering require precision and fine motor coordination, and are relatively low in intensity; the mountain bike skills course required particular technical ability (e.g., riding slowly and picking up a water bottle off a cone or ground; riding a slalom course) and was of lesser intensity as well. The requisite technical skill and lack of intensity, coupled with the expectation of success (relative to their past successes in physical education / physical activity; Dodds et al., 1992) may have decreased motivation and increased off-task behavior. While commenting on her lack of skill, Natasha also reported her off-task coping behavior (coping mechanism; Carlson & McKenna, 2000).

I noticed when I could not get the hang of a skill in either mountain biking or fly casting I would start to get off task. ...before long we were standing around and talking. Once I stopped...I had three to four people off task with me...I found other things to entertain myself by either whipping other people with my line or throwing rocks into the river. Knowing that I was not going to be good at it...I didn't really listen to the instructors in the beginning. (Natasha)

Mark's perception of personal ability illustrates how many PTs saw themselves as "athletic" or skilled, but he, as with Nick and others, connected personal experience and emotions with those of future students.

I feel that I am as or more athletic than any one person in class. I was a college baseball player for 3 years and could have gotten full scholarships across the country for wrestling. So when you told us in the first class that we would be challenging ourselves in each activity I kind of laughed inside. Yet it all came to a reality when we went kayaking. I admit I was scared at first. Yet I knew I had to try and see if I could do it...I would feel personally guilty trying to get my students to do a task they were scared to perform. (Mark)

Many PETE programs include at least one course on the sociological and/ or psychological dimensions of physical activity, or on exercise motivation and adherence, and these courses and corresponding material and concepts are important. However, the personal connection the majority of these PTs made between perceived competence and motivation and the resultant impact on physical activity behavior may provide them more insight into aspects of student motivation than any isolated reading and/or lecture. Coupling personal experience in novel activities with the study of a theoretical framework on motivation (Weiss, 2000, was used in the course) could possibly be a more powerful learning experience within PETE, and majors in related fields of study.

Self-Awareness. Self-awareness was an important component to this class and is the second subtheme under fear, risk and challenge. Virtually every PT learned

something new and different as a result of participating in the course activities. Similar to the experiences set by Hastie (1994) and Carlson and McKenna's (2000), one goal of this class was to "push" students beyond their comfort zone physically, mentally and emotionally, but within the context of group safety and support, and this was accomplished through the use of challenge by choice and the full value contract. If it is true that some beliefs are emotionally charged (Morine-Dershimer & Corrigan, 1997), then placing PTs in situations that stir emotion (but maintain a high level of safety at all levels) may elicit the change we in teacher education so desire. For some, like Drew, the team building and group initiative activities, all low element and low intensity, were especially difficult.

...took a lot of nerve not to quit when we got into groups and had to communicate and work together with the helium stick. After five minutes with the activity I wanted to break the thing in half and yell at everyone, it took a lot of patience that I guess I just didn't have that day. (Drew)

Josie had to face multiple fears such as trust, heights, fear of failure and the perceptions of others. Her quote crosses at least three categories found in Carlson and McKenna (2000): fear, subjective perceptions, and coping mechanisms.

I realized my fear of what others thought of me...I was scared of what my classmates thought of me, and if they were judging me, because I wasn't catching on as quickly...[and] of what the rock climbing instructors thought of me. Being involved in these activities where I was very unskilled and had a very low ability level was hard for me, and I noticed myself kind of being a "baby" about it all, and my fear of failure was constantly around. . . .Because of this class, and the activities we have participated in, I have begun to notice that I took my physical skills and abilities for granted. (Josie)

For Sam, it was water:

I did not realize the hold that my fear of water had on me until the moment I got into the boat to go white water rafting. I knew it would be fun, but there was a part of me screaming to get out of the boat....I noticed that when it came time to go kayaking, I was more at ease with the water even though I knew the fear was still there inside. (Sam)

Judy had an interesting experience throughout the term, but particularly in mountain biking (forest ride) and kayaking. While mountain biking immediately put her in a state of overexertion, the white water kayaking experience truly intimidated, to the point of tears, this excellent swimmer and water polo player. Executing a wet exit (i.e., getting out of an overturned kayak) was difficult; hanging upside down in a kayak waiting for a rescue (T-rescue; not exiting the boat but waiting for partner rescue) was out of the question. Within the realm of challenge by choice, Judy never wore the spray skirt while executing the wet exit or various strokes and maneuvers, and she remained in the water an engaged member of the class.

From day one of this class I knew I was going to have to step out of my comfort box. Now that this class is over I have learned so much about myself that I never knew was in me. At the beginning I saw myself as shy, not real vocal

in large groups and not really willing to speak out with people I didn't know. After the first week there was no turning back. I was nervous at first but after being welcomed by everyone in the class I knew this was the place to be. (Judy)

Nearly every PT made at least one comment about overcoming fear or dealing with the risks and/or challenges presented in this course. A few reported feeling more enthralled than fearful, but maybe they were unable and/or willing to acknowledge their fears. Carlson and McKenna (2000) also had PTs who stated they did not experience fear, but were able to witness and acknowledge the fear and feelings of others. It may take more extreme measures, such as executing a wet exit in a kayak, using fine motor control while fly casting, navigating with map and compass, or participating in high element adventure activities (Carlson & McKenna, 2000; Hastie, 1994) to nudge PTs' thoughts and beliefs about teaching and learning in new directions. That many could connect their feelings surrounding fear, risk, challenge, skill level and motivation to those a K-12 student might experience may signify a new level of empathy. Capturing that level of empathy and the impact of that empathy on student learning and motivation could become a useful line of research.

Lifetime Activity

Lifetime activity was considered an independent theme given the number of references and the way in which PTs referred to lifetime activity. Many in the public health and physical activity research field have called for change to the dominant, traditional, team sport oriented physical education curriculum (Fairclough & Stratton, 2005; McCaughtry et al., 2008; Trost, 2006). Without reflection prompts, many PTs came to realize the potential that outdoor pursuits activities provide for lifetime activity, and how K-12 physical education is often oriented more toward competitive team sport. It seemed as if this newfound realization was profound, as if for the first time they realized some of the traditional competitive team sport activities in physical education do not engender and/or fail to result in lifetime activity habits. It was while mountain biking with the 40-something instructor/researcher that one student shared his realization of coming to understand the notion of lifetime activity. This may be a reasonable reaction given their youth, the lack of experience in outdoor pursuit activities in family life or K-12 physical education experiences, and for many, extensive experience in competitive sport. The following quotes capture the essence of PTs' comments.

I think it is also important to introduce students to activities that they can do for the rest of their lives. They do not need nine others to go mountain biking... It helps the kids that do not like team sports [know] that there are more options and gives them a chance to be physically active and like what they are doing. (Makiah)

These activities are also more individual based so your skill level doesn't really matter. You don't compete with others, you are trying to better yourself... your skill level does not affect anyone else like traditional sports. These individual activities are also valuable because you don't need anyone else to participate which makes it much easier to become and stay physically active. (Kory)

Brad's comments echo those of many; "One concept that I will take with me is the fact that PE does not have to always be about competing and seeing who's better. PE should be about learning how to be physically active and valuing physical activity." Tyson mentioned that

...anyone can participate in these activities [because they] are challenging, fun, and different than the same old traditional physical activities...Non-traditional activities provide those that don't like the traditional physical activities with ways that they can stay active...outside of school as well. Non-traditional activities are great because any type of population can participate in them. (Tyson)

Conversations did occur during class about including nontraditional activities that might encourage lifetime activity, but the class never delved into Healthy People 2010 or physical activity guidelines. That said, it would be remiss to not consider "studentship", in that students may have responded in reflections in such a way to meet instructor expectations (Graber, 1991). To distinguish between studies, Hastie (1994) and Carlson and McKenna (2000) used adventure education activities, and with the exception of rock climbing, did not include outdoor pursuit activities as in this study. To more fully engage in the conversation surrounding various public health and lifetime activity messages, PTs may need to experience, firsthand, lifetime activities in their PETE program to be prepared to meet the most current and pressing demands (Collier and Hebert, 2004; Fairclough & Stratton, 2005; Prusak et al., 2011).

Teaching Physical Education

Teaching physical education was the third theme to emerge from the data; subthemes were K-12 students and curriculum. A focus of this class was helping future teachers think differently about teaching, learning and students (Hastie, 1994; Carlson & McKenna, 2000), and about what activities can be included in a K-12 physical education curriculum. A goal was to connect PTs with one sad reality of their chosen profession—that traditional physical education fails to be meaningful and relevant to at least some K-12 students (Ennis, 2000; McCaughtry et al., 2008). The least favorite activity was, for three years running, fly casting. A close second was orienteering, as not being able to "muscle" their way with a compass, much like with a fly rod, may have decreased motivation. So why keep fly casting in the course? Besides the fact that fly casting and fly fishing can be included in a physical education curriculum (see the National Fly Fishing in Schools Program; www.flyfishinginschools.org), this single activity provoked more off-task behavior than any other activity. Fly casting prompted different conversations, both on paper and in person, about what it is that K-12 students experience in many physical education classes and about what teachers can do to implement curricular and instructional change. Regardless, PTs were not terribly enthralled with the idea of including fly casting/fishing in their curriculum, which could serve as a catalyst for exploring both personal and professional bias around curriculum development.

K-12 Students. The subtheme of K-12 students demonstrates the sensitivity these PTs were developing for the K-12 student in physical education. PTs in Hastie (1994) and Carlson and McKenna (2000) made similar connections, from

their personal experience to that of the K-12 student, coming to understand at a different level the role of the teacher, the need to help students find success, the need to create an environment of empowerment. Even with the small numbers (Hastie = 25; Carlson & McKenna = 40; this study = 57), these three studies seem to demonstrate the need for PTs within PETE to engage in novel, “destabilizing” physical experiences to trigger the physical, mental and emotional reactions akin to what many K-12 students experience in “traditional” physical education. Merely theorizing, reading about and/or discussing the K-12 student experience may not be enough; personal experience may be requisite to engage PTs more thoroughly and/or perhaps instinctually at a core level. Though noteworthy that not all PTs had such realizations, the following quotes illustrate the connections of many.

...I now understand that kids don't necessarily want to be off task but they just feel embarrassed by their skills so they find other ways to entertain themselves. This class has helped me understand a lot about how it feels to be unskilled and unmotivated. (Natasha)

...the more I realized that I was inexperienced, and a “step behind” my classmates, the more I wanted an excuse not to participate. . . for the first time, I experienced what it was like to be the kid who is “left out” or not as good as the other kids. . . I think that if I wouldn't have been put in these situations, I would have still had the same view on kids who are unwilling or unmotivated to participate. . . I would have carried that view with me. . . when I become a teacher. (Jessica)

Kayaking really opened my eyes. . . It made me realize that everyone is not comfortable with activities that are done in physical education. It does not have to be something as complex as kayaking, it could be the very basic things in physical education that [we] as educators do not realize students may feel like I did with the kayaking. It could be something as basic as playing a game with and in front of their peers. (Randall)

Though not a discussion or reflection topic, Ruby's in class experiences revealed to her the bias she carried toward some students, particularly the disenfranchised and/or lesser skilled. Including both teacher and curricular bias, if not institutional bias, in the PETE curriculum is more than worthwhile (Timken & Watson, 2010). However, similar to including theories on motivation or stories of K-12 physical education, merely introducing the topics of stereotypes and bias without some form of personal and professional contextualization may bring about little change.

...made me think a lot about how I view kids that don't participate....I realize now that I used to judge those individuals [who never participated]. I always thought “They are just too lazy to dress down, or they think they are too cool to participate in PE.” I never really took time to think about the fact that they might have had a fear holding them back, or that they were scared to participate. I guess that it wasn't until this class, that I “wore the shoes” of the disenfranchised student that was unskilled, unmotivated or unwilling to participate. . . . I have learned so much and now will be able as a teacher to “think deeper” and really try to understand what is going on in my future students minds and heads. (Ruby)

Curriculum. There have been professional calls over the years to reorient, reconstruct or reconceive K-12 physical education from Locke (1992), Siedentop (1987), Griffey (1987) and most recently from Trost (2006) and Doolittle (2007). One intentional message of this class was the need for curricular change in physical education so of little surprise was the emergence of curriculum as a subtheme. However, what emerged were two separate concepts related to curriculum—implementing the full value contract (Project Adventure) to instill a sense of safety for students, and content/activity selection.

...the FVC almost becomes an instant guideline for me to follow...I hope to implement this into my classroom. I believe it will make teaching easier, especially when your class understands and respects the Full Value Contract. Children should feel safe at school, and will be more willing to try greater challenges in a classroom that follows the FVC. (Casey)

...I will put the full value contract into my class. I believe it allows students who are not the so called “athletes” to play a big part in the class. Probably the main aspect of the full value contract that I like the most is the community it creates. But you cannot create that community until students feel safe. (Jaxon)

Of surprise, challenge by choice did not emerge as a theme, which may be cause for concern. Is the “go hard or go home” mentality alive and well in these future teachers despite experiences in this class (e.g., option of hike or mountain bike; participate to *your* fullest extent)? Was the instructor/researcher perceived as a “go hard or go home” type of person and/or was there failure in making clear and/or fully reinforcing the idea of challenge by choice? Just as conservatism can be preserved in Sport Education when the teacher is less “enlightened” (Penney et al., 2002), so too can outdoor and adventure education experiences cement preestablished beliefs.

Due to their own socialization into and via sport (Lawson, 1988), it may have never occurred to these PTs how activities beyond the traditional could be part of the physical education curriculum.

This class succeeded in opening our eyes to a new perspective of teaching PE. This class also made me realize that traditional PE wasn’t focusing on the right concepts. The main focus of Physical Education should be on things like communicating, teamwork, trust and valuing physical activity for the rest of the student’s life, instead of worrying about who’s winning and who’s losing. (Brad)

Though already an outdoor enthusiast, Lewis had not thought about including outdoor activities in physical education.

I hadn’t been exposed to anything but the old style physical education. ...Outdoor education gives the students a breath of fresh air when it comes to physical education. Outdoor activities in my opinion are going to affect them later in life and they will be more likely to continue participating in them. (Lewis)

Darren made a similar comment;

This class has really helped me look “outside the box” in physical education. Before this class I would never have thought about including outdoor education in my curriculum. My views on what physical education should look like have been completely changed. . . I have learned that there is no one way to teach physical education. (Darren)

Unlike the studies by Hastie (1994) and Carlson and McKenna (2000), the activities in this study fit within both adventure education and outdoor education, so statements about physical education content (specifically teaching outdoor pursuit activities) seems a logical consequence. It is not known if PTs thought that outdoor and adventure activities should be used to supplement or supplant the traditional physical education curriculum, however, a message about using various models (Metzler, 2005) was intentional throughout the PETE program. Some PTs questioned the liability associated with delivering such a curriculum, and a few were not completely convinced that administrators and/or school boards would allow students to participate in outdoor and adventure education activities. Anecdotally speaking, some of these PTs, who were all required to take the Sport Education and Tactical Games classes from the same instructor/researcher, tended to display more resistance toward these curricular models than for outdoor and adventure education, which speaks to the impact (or lack thereof) of and professional socialization within a PETE program (Lawson, 1988). Again, a research line begging for answers; which model(s) capture the interest of future and inservice teachers and why, and which are more readily implemented?

Conclusion and Practical Implications

This study was an attempt to gauge PTs’ perspectives during a course purposefully designed to elicit strong emotional and personal responses while engaging in challenging novel and nontraditional physical activities (Morine-Dershimer & Corrigan, 1997) which might lead to the “thawing of preconceived notions” about physical education (Carlson & McKenna, 2000; p. 24). In support of earlier work by Hastie (1994) and Carlson and McKenna (2000), it would seem, at least for some PTs, that this outdoor and adventure education course did elicit such emotional responses and broadened ideas of teaching and learning in physical education. As Pajares (1992) recognized, for any change to occur existing beliefs must be challenged and found faulty relative to new information, and it would seem that in this study, new information was juxtaposed with original beliefs and “socialization” experiences. It is possible that before they are able to reconsider the traditional physical education curriculum, PTs must first experience or “feel” firsthand what many K-12 students feel in today’s physical education classes—fear, risk, challenge, lack of motivation—as well as “live” a *new* curriculum in and through PETE (Carlson & McKenna, 2000; Collier & Hebert, 2004; Hastie, 1994; Jenkins, 2004; Lawson, 1988; Oslin et al., 2001; Prusak et al., 2011; Tannehill, 2005). Maybe experiences in these outdoor and adventure activities coupled with both personal and professional reflections was enough of a challenge to inspire at least a few new thoughts

and ideas. Of course actions speak louder than words, so the truth of the matter is that what and how these PTs teach their future physical education students is the necessary evidence of the long-lasting changes in beliefs and practices for which we in teacher education strive. Follow-up research is necessary in this area. What are the “wash-in” (if any) and “wash-out” effects as a result of such an intervention (Blankenship & Coleman, 2009)?

Though there is an extensive body of literature that illustrates the need to counteract the apprenticeship of observation process of K-12 schooling and other personal experiences (e.g., sport and physical activity experience), an equally difficult obstacle may reside within PETE itself (Ayers & Housner, 2008; Lawson, 1988; Prusak et al., 2011; Siedentop & Locke, 1997). Undeniably, PETE may indeed reinforce and subsequently stabilize the masculine, conservative agenda of sport and physical activity (Penney et al., 2002) through the perpetual use of more traditional content and experiences rather than prompt change through explicitly novel experiences coupled with thoughtful analysis and reflection. One implication from a study of PTs by O’Sullivan et al. (2009) encourages the analysis of teacher education program design and how to “engage teacher candidates in learning new sports/physical activities...and use it as a platform from which to engage them in learning about the teaching of physical education” (p. 189). Through a careful analysis of literature on beliefs and thoughtful planning and implementation of curriculum designed to alter beliefs, this outdoor and adventure education course, along with the studies by Hastie (1994) and Carlson and McKenna (2000), seems a plausible platform from which to jump. PETE faculty need to (re)consider the professional socialization process of PETE, lest we find ourselves (un)intentionally reinforcing preestablished beliefs (Lawson, 1988), thereby continuing down a similar path. We cannot continue to deliver the same PETE curriculum and expect different results, in our preservice teachers or in K-12 physical education. Isn’t that the definition of insanity?

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