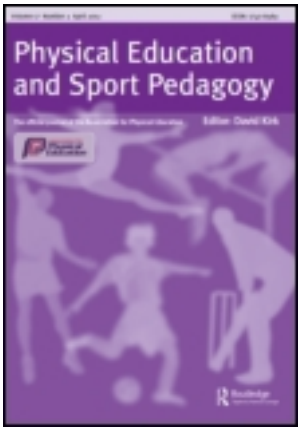

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Student teacher experiences in a service-learning project for children with attention-deficit hyperactivity disorder

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Background: Service learning (SL) is a collaborative relationship between university professors, their students, and community partners who combine academic learning and active participation to address community issues. Previous studies in SL and physical education teacher education (PETE) found SL projects increased opportunities for learning and applying pedagogical methods, prepared PETE students to teach children from diverse backgrounds, and promoted an understanding of individual teaching responsibilities. Given the number of PETE university programs in SL emerged over the past decade, minimal research has supported the specific use of SL in PETE. It was suggested that PETE programs provided content knowledge and pedagogical strategies to deal effectively with immediate instructional challenges but paid less attention to anticipate future challenges through student teaching experiences. A SL project for children with attention-deficit hyperactivity disorder (ADHD) was designed which enabled PETE students to learn how to manage behavior while teaching physical education.
Purpose: To explore the experiences of PETE students in a SL project for children with ADHD.
Participants and setting: Four female and two male PETE students were the participants in this study which investigated their project experiences in SL at a major mental health institute in a large urban Canadian city.
Research design: A phenomenological approach was used to describe the lived experiences of PETE students in the SL project.
Data gathering: Individual semi-structured interviews were conducted and videotaped to acquire rich and deep knowledge of PETE students' SL experience. Each student was requested to bring unit plans, lesson plans, written reflections, and final term papers to enhance the interview process.
Data analysis: Each interview was transcribed verbatim and a line-by-line thematic analysis was performed.
Findings: Three higher-order themes emerged from thematic analysis. The 'where have I been' theme suggested past teaching and community work experiences shaped decisions to become physical educators. The 'it's all about caring' theme involved reduction of stigma linked to teaching children with ADHD and merging theory and practice through application of instructional models and deliberate lesson plans. The 'teaching to play' theme revealed various benefits linked to PETE student participation in SL and challenges inherent with team teaching.
Conclusions: Future research recommendations include capturing the experiences of other participants in the SL project for children with ADHD to gain much greater insight into the whole SL experience and help to shape future projects. Much research

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remains to be performed in SL and adapted physical education (APE) or local community recreation centers where students from allied health disciplines could participate together. A variety of different qualitative research approaches were also recommended to explore participant experiences in SL projects. Similar SL projects, conducted in multidisciplinary environments, may also be exciting new venues for PETE programs. Finally, the participants' stories led us to suggest that SL is a contemporary pedagogy that addresses calls for the development of caring pedagogies that prepare future teachers for the realities and challenges of a changing world.

Keywords: special educational needs; teacher training; community service; behavioral problems

Introduction

Service learning (SL) is a unique pedagogical method that provides higher education students and university professors with opportunities to link theory and practice by developing and refining instructional strategies and new teaching approaches (Hellison et al. 2000). Historically, SL can be traced back to the twelfth century mendicant friars of the Franciscan and Dominican orders who learned and reflected about their service to the poor (Levine 2006). The modern conceptualization of SL was rooted in the philosophy of experiential learning (Domangue and Carson 2008) and can be linked to John Dewey, William James, and the University of Cincinnati's Cooperative Education Movement (Cashman and Seifer 2008). SL has been used in a wide range of professions including medicine, health science, law, and education. Current conceptualizations of SL are a collaborative relationship between university professors, their students, and community partners who combine academic learning and active participation to address community issues. The benefits of SL include the provision of community human resources, an opportunity to learn and apply standard pedagogical methods, and the development of critical thinking, communication skills, and service-based research (Chabot and Holben 2003). Empirical evidence suggests SL can have a positive effect on the personal, social, career, and academic outcomes of higher education students in various disciplines (Markus, Howard, and King 1993).

Physical education teacher education (PETE) programs in SL have been emerging over the past decade (Collier 2006). For example, in professional physical education (PE) journal articles, SL has been described as beneficial for the delivery of physical activity (Cutforth 2000) and fitness programs (Galvan 2010) to underserved youth. While Watson et al. (2002) described strategies to incorporate SL into a PETE program, few research studies have been conducted on SL and PETE (Collier 2006). For example, there have been three major benefits, for the professional development of PETE students in SL, identified through five research studies. First, SL increased opportunities for learning and applying pedagogical methods with PETE students (Kahan 1998; Abourezk and Patterson 2003; Culp, Chepyator-Thomson, and Hsu 2009). Next, SL prepared PETE students to teach children from diverse backgrounds in a variety of school settings (LaMaster 2001; Domangue and Carson 2008; Culp, Chepyator-Thomson, and Hsu 2009). Finally, SL promoted an understanding of individual teaching responsibilities and skills for the PETE students (Kahan 1998; Abourezk and Patterson 2003).

One of the largest teaching responsibilities, facing PETE students and PE professionals, is behavior management where much instructional time is spent trying to manage inappropriate student behavior (Rink 2010). For example, PE teachers find it challenging to include children with special educational needs (i.e. behavioral problems) in their

classes (Morley et al. 2005). These challenges are of tremendous importance since there has been an increase of children with behavioral problems in education (Stanley, Canham, and Cureton 2006). For instance, children with attention-deficit hyperactivity disorder (ADHD) represent a substantial number, approximately 3–5%, of school-aged children in North America (American Psychiatric Association [APA] 2000). While the three hallmark symptoms of ADHD, which include hyperactivity, impulsivity, and inattention, are well-known (APA 2000),[1] numerous myths surround children with ADHD (Barkley 2006). For example, there has been a commonly held assumption that children with ADHD possess strong movement-related skills and, thus, learn better through movement and their physical bodies (Anderson and Rumsey 2002). However, research has demonstrated children with ADHD may experience significant problems in fundamental movement skill performance (Harvey et al. 2007; Verret, Gardiner, and Beliveau 2010), with up to 50% of the children affected by developmental coordination disorder (Harvey and Reid 2003; Sergeant, Piek, and Oosterlaan 2006), obesity-related problems (Kim et al. 2011), and a lack of participation in physical activities (Harvey et al. 2009; Shimoni, Engel-Yeger, and Tirosh 2010). Perhaps these challenges represent underlying rationale for the exclusion of children with ADHD from PE classes because exclusionary practices may be based on professional perceptions of not having the requisite knowledge to intervene successfully with the children (Morley et al. 2005). This information should not be surprising because there is a lack of ADHD-specific knowledge for many general education teachers in the USA as well as other countries worldwide (Pfiffner, Barkley, and DuPaul 2006). Thus, there seems to be limited pre- and in-service PE teacher understanding of children with behavioral problems.

The rationale for conducting this study was to document PETE student perceptions about their experiences in a SL project for children with ADHD. This study will contribute to the adapted physical education (APE) and PETE literature by investigating how PETE students view SL and how direct social contact may contribute to PETE student perceptions about children with ADHD. Thus, an exploration of student teacher instructional experiences with children with ADHD was deemed important for the future development of PETE programs in an APE context. Furthermore, this study could also address the lack of systematic analyses (i.e. quantitative and qualitative studies) in PETE to explore SL in pre-service teacher training. Thus, the central research question which guided this study is: what are the experiences of PETE students in a SL project for children with ADHD?

Method

SL program and setting

The SL project is a unique collaboration between a Kinesiology and Physical Education department at a Canadian University and an ADHD clinic of a Mental Health Institute. The institute is located in a large Canadian city and provides specialized care that contributes to the de-stigmatization of mental illness through research, the advancement of knowledge, and clinical practices. A three-credit special topics course on SL in APE at the institute was designed for PETE students by a local university professor with more than 20 years of clinical experience at the institute. His areas of expertise included pedagogy, APE, and persons with ADHD. He was aware that undergraduate students could obtain direct contact and quality experiences with students with disabilities in authentic

field-based settings through the use of practicums in required APE course offerings (Romack and Tsu 2011). Unfortunately, he did not have the option of teaching the required APE course at the university. However, he designed a special topics elective course to support a SL project that could address the (1) perceived lack of knowledge about children with behavioral problems (Morley et al. 2005), (2) need for positive behavior management strategies in physical activity (Lavay, French, and Henderson 2006), and (3) need for PETE students to anticipate future teaching challenges through their student teaching experiences (Meldrum 2011). For example, there has been a willingness of PETE students to include children with ADHD in PE if provided more professional preparation about children with ADHD (Oh et al. 2009).

Two SL courses were delivered each year (i.e. one in fall, one in winter semester). A total of four courses had been conducted over a two-year period. Approximately three university students per semester self-selected to participate in the course. A two-week on-site training session was provided to acquire knowledge about the course, ADHD, and SL program expectations. There were five course expectations once training was completed. First, all PETE students were expected to plan for and teach activities to 7–10 children with ADHD, between 6 and 12 years, every Saturday morning for two hours over an eight-week period at the institute's gymnasium. Team teaching was incorporated as a strategy to involve more PETE students in the SL project so (1) more undergraduate students would obtain experience teaching children with behavioral problems, and (2) we could ensure there would be at least one PETE student to teach PE in case of an absence(s) due to illness. Furthermore, each PETE student had already performed two separate student teaching practicum experiences where they co-taught PE in elementary and high schools. A graduate student and the university professor provided supervision during each APE session. Second, sessions were structured within the context of a social skills training model in PE (Harvey, Fagan, and Kassis 2003). Briefly, the model is a metacognitive strategy that suggests if children and teachers act responsibly and respectfully, then they should be in self-control of their own behavior which, in turn, should lead to participation in activities. The children learned about the model and took responsibility for themselves and their actions. Third, the PETE students were required to develop and submit a logbook containing a unit plan, associated lesson plans, and reflections. Fourth, they also wrote a final paper related to the SL project. Finally, the PETE students were required to attend all program meetings.

Each child with ADHD was an out-patient of the institute, under the care and supervision of a licensed child psychiatrist. The parents of the children received psychoeducation about ADHD from a social worker and a nurse from the ADHD clinic at the same time as their child was learning in APE. Parents discussed the effects of ADHD on family functioning in small groups. Prior to the development of our SL project, psychoeducation sessions were provided on week days during after school and after work hours. However, the therapists found children and parents were extremely tired in the early evening which led to a lack of attendance, a main reason for combining APE and psychoeducation. Each PETE student was required to attend at least one of these psychoeducation meetings during the final month of the SL project.

Each PETE student also participated in a one- to two-hour formal multidisciplinary team meeting with their university peers and hospital professionals to share knowledge about the children and their families after each APE and parent psychoeducation session. For example, PETE students discussed their lesson plans and provided feedback on the movement skills and behavior of the children in the program to the social worker, nurse, graduate student, and program coordinator. The social worker and nurse then provided feedback to PETE students about the psychoeducation sessions with the parents. More complete observations of

families usually resulted. The SL project is an example of learning in a multidisciplinary context where students, university professors, and hospital staff are placed together to situate theory and practice in a constructivist learning environment (Korthagen 2010).

Phenomenological inquiry

A phenomenological approach was used to describe the lived experiences of PETE students in the SL project (Creswell 2007). As a qualitative research method, phenomenology seeks to capture the meaning or essence of an event through the examination of individual experiences (Starks and Trinidad 2007). The approach focused on gathering individual interview data to develop a composite description of the experience (Moustakas 1994). The following qualitative procedures were used: participants and procedures, data gathering, data analysis, and trustworthiness (Creswell 2007).

Participants and procedures

Prior to the start of each academic semester, the PE pedagogy university professor (i.e. program coordinator) recruited interested junior and senior PETE students to take part in the special topics course on SL in APE. Ten PETE students had participated in one of four SL in APE projects to date. Since these PETE students would be contacted for the study, approval from the Institute Research Ethics Board was obtained before any communication was established with potential study participants. All PETE students, who completed the SL in APE special topics course and received a final grade on their university transcript, were contacted via email by a research assistant. This person served as an impartial third party to inquire if the PETE students wished to be contacted to participate in the study. These study selection criteria and contact process were developed so that participation in the study was not coerced. Ten PETE students were contacted by the research assistant. Six PETE students agreed to participate in the study. They had been asked via email to review their unit plan, lesson plans, logbook, and final paper before meeting the lead author and prior to any interviews. They were also asked to bring these artifacts to the interview. Four female and two male PETE students met the lead author to learn more about the study (M_{age} = 24.8 years; M_{gpa} = 3.5). They signed an informed consent form and were interviewed immediately. All PETE students were in the final year of their undergraduate degree when the interviews took place. Table 1 provides specific demographic information about each participant.

Data gathering

Semi-structured interviews were conducted on-site at the institute. The interview process was similar to an everyday conversation, enabling for flexibility in participant responses

Table 1. Participant demographics.

Participant	Alice	Sue	Billy	Gord	Betty	Helen
Age	22	23	25	25	26	28
Sex	F	F	M	M	F	F
GPA	3.3	3.34	3.28	3.43	3.88	3.79

Note: GPA – grade point average on a 4.0 scale.

(Jackson, Drummond, and Camara 2007). The lead author used PETE student-friendly terminology to develop a list of interview questions. They were placed in an interview guide that, in turn, was reviewed by a committee consisting of the lead author, two university professors with training in qualitative research, and a recent graduate of the PETE program. The participants were asked the following questions. Could you please describe your teaching career experience thus far? What were the benefits to participating in the SL project? What were the barriers to participating in the SL project? What were your initial thoughts about teaching in the project? How has the project affected your learning? How did teaching in the project affect your professional development? How would third and fourth year undergraduate PETE students benefit from participating in an APE-SL project? Why did you choose to participate in the SL project? Thus, participants responded to a series of questions to provide rich and deep knowledge of their SL experience. An average of 15 months lapsed between the time that PETE students participated in one of the four SL projects and when interviews were conducted (range = 6–21 months). Each PETE student was asked to bring unit plans, lesson plans, written reflections, and final papers to the interview to stimulate their memory. Each PETE student was interviewed separately and the interviews ranged from 30–45 minutes in length. Interviews were videotape-recorded with a JVC digital camcorder and transcribed verbatim. The lead author kept a journal to document reflections about each interview.

Data analysis

Data analysis consisted of phenomenological reduction, coding of data, summarizing each interview, and identifying themes to make a composite summary (Groenewald 2004). First, the researcher watched each participant interview several times to become familiar with the language of each interviewee. Next, each interview was transcribed verbatim. The researcher read entire transcripts twice for increased data familiarity. Transcribed interviews underwent a free-coding process. Meaning units were identified, tagged, and grouped together to form properties (Côté, Salmela, and Russell 1995). Each property was reviewed and placed into central themes that expressed the essence of the experience. Thus, a line-by-line thematic analysis of participant interviews was performed. Finally, the first author summarized the findings and wrote a composite summary of participant experiences (Moustakas 1994).

Trustworthiness

Member checking, audit trail, peer review, and researcher reflexivity were adopted to promote trustworthiness (Jackson, Drummond, and Camara 2007). Interview data were member checked as each participant was encouraged to read through the original transcript and summarized document to suggest whether or not the interview had been captured accurately (Groenewald 2004). Modifications were made if participants wished to add to or did not agree with the transcript or summary text. An audit trail was also employed so external auditors could track the relationship between individual statements and meaning units (Lincoln and Guba 1985). Next, a graduate student, trained in qualitative research methods, reviewed 30% of randomly selected data to confirm meaning unit, property, and thematic consistency. The purpose of this peer review was to determine the credibility of the research findings (Jackson, Drummond, and Camara 2007). There was 93.2% agreement reached for the peer review. Finally, researcher reflexivity was used for the lead author to be aware of his instructional, political, social, and cultural assumptions which may have influenced the results and he bracketed these assumptions during the analysis (Sparks 2002).

Results

A total of 737 meaning units were identified in the transcribed interview data. The 'where have I been,' 'it's all about caring,' and 'teaching to play' themes emerged from 546 meaning units. There were 191 meaning units that fell into the 'other' category, defined as clarification statements, and were discarded from further analysis. Each theme is described in detail below with references made to each specific property (see Table 2 for audit trail). Please note that pseudonyms for names and places were used to protect participant confidentiality.

Where have I been

The 'where have I been?' theme highlighted the stories of PETE students who took a business-like approach to share teaching experiences about their career to date. Two properties emerged to form this theme. The first property was school context. All six PETE students simply referred to the grade levels they had taught when asked to describe their teaching experiences thus far. 'I've just been substitute teaching and more with elementary because I want to try and work in elementary for the first couple of years of my career and then see where it goes' (Billy). The second property was community context. All of the participants spoke about unique teaching experiences in the community which shaped their decisions to become physical educators. For example, Alice mentioned,

> So um I guess what got me into teaching was working at a summer camp. I worked there for eight years since I was 15. I worked on the beach so I taught a lot of swimming, sailing, and kayaking and that is what made me decide I wanted to be in physical education. I was always teaching sports and I really enjoyed that a lot. So then from there I worked at a ski school and from there I just went into physical education. (Alice)

Participants also discussed prior attempts to gain work experiences with persons with disabilities. 'I worked as an integration aid because I wanted to work specifically with special needs and see how they were in a classroom after I saw how they were specifically in a gym setting (Billy).'

It's all about caring

PETE student discussions about personal motives for participating in the SL project emerged in the 'it's all about caring' theme. The PETE students also suggested the SL

Table 2. Emergent themes and properties of PETE student experiences.

Themes and properties	Alice	Sue	Billy	Gord	Betty	Helen	Total
'Where have I been' theme							
School context	3	4	11	12	4	2	36
Community context	6	9	6	5	12	5	43
Total	9	13	17	17	16	7	79
'It's all about caring' theme							
Project outlook	11	13	16	17	20	8	85
Patience	9	18	20	18	35	7	107
Professional development	21	37	24	30	12	19	143
Total	41	68	60	65	67	34	335
'Teaching to play' theme							
Potential PETE benefits	14	10	13	13	4	4	58
Challenges	12	26	17	13	3	3	74
Total	26	36	30	26	7	7	132

experience led them to carefully put theory into practice by applying instructional models and creating deliberate lesson plans in their day-to-day teaching. Three properties emerged to form this theme: project outlook, professional development, and patience gained.

The first property, project outlook, indicated the motivation and anticipation related to PETE student decisions to participate in the SL project. Statements included both intrinsic and extrinsic motivation for participation. Intrinsic motivation to participate was associated with a rewarding, personal challenge while extrinsic motivation to participate was often linked to gaining a competitive edge for future professional endeavors or current financial reasons. For example, Billy suggested that intrinsic factors led to his participation,

> I was motivated mostly cause . . . I really . . . It's my Mother Theresa thing. I really want to help. I want to help as many students that are otherwise having difficulties in a classroom or in a physical activity setting to belong. To feel like they have a sense of belonging to something. (Billy)

The participants also spoke about extrinsic motivational factors.

> My one motivation in life now is to get as much experience in any kind of community service or any type of health care I can give to anyone. I always keep my future career in mind. I definitely try to collect those experiences that will make me a better doctor. (Helen)

Sue stated, 'It's kind of an area I am interested in to do my Masters so I figured it was a good opportunity to get those last three credits.' Similarly, Betty mentioned, 'Initially Dr. Nick said that it was credited and we needed it. We needed to fill those credits for the year to get our loan so that's the first thing.'

Positive and negative forms of anticipation also emerged where the participants reflected on their feelings prior to teaching in the project. Positive anticipation was similar for most participants because it centered on optimism. For example, Sue said 'I think I am pretty good at working with people with all different abilities and different strengths so it felt like this was something I could contribute well to.' Helen mentioned 'I initially thought, hey, this is great for the Moms and Dads. It is a great opportunity for them and for us to learn. That was the first thought that it would be a great learning experience for everyone.'

Negative anticipation centered on pessimism. It was slightly different among participants because they raised various concerns related to their own personal safety and child misbehavior.

> Initially I had a lot of questions on how the project was done and everything cause it is a little bit out of my environment. It's at the institute and you hear things about the institute. I've never been here before so it was something that I was worried about. Are there any like huge problems? Are there any safety risks or anything like that? (Billy)

> Actually just concerns like, here . . . ok you are going to teach a class with kids only with ADHD. Like that was kind of freaky at first. I was like . . . Oh My God. Like not really knowing what to expect you know. When I got here all the kids were so great but beforehand you just have in your head like . . . I thought they were going to be burning down the walls and just going crazy. (Gord)

The second property of the 'it's all about caring' theme was professional development because participants learned how to merge theory and teaching methods into practice. They explained how the project impacted their professional development by engaging in

applied learning, working in a multidisciplinary environment, and helping others by providing community service. The participants spoke about being placed in learning situations that helped them to discuss the practical knowledge acquired in planning, preparation, applying models, multidisciplinary environments, and the value of SL. Some participants suggested the project allowed for refinement of planning skills.

> I guess this experience made us put a lot more thought into our planning you know. Like not just assuming that everything was going to go to plan but to actually be ready for anything. Like planning plan b's you know in case. In case this doesn't work out so good. (Gord)

> Well, the lesson plans that I did took me a while because I wanted them to be good. We spent a lot of time actually coming up with what we were going to do each week. We actually came up with a plan ahead of time. I think teaching is sometimes all over the place so it's good to have a structured plan. (Alice)

Participants also spoke about how the project helped them to be more prepared.

> It definitely helped me to think quick on my feet and be a problem solver no matter what comes at you . . . you know. I feel a lot more prepared. (Betty)

> On any given day your whole group could be working well together and everything can be great but then the next time you don't know how one person's mood could affect everybody else and could make it very difficult to teach the activities you have planned. You have to be able to fly by the seat of your pants and so I've definitely learned to do that better. (Sue)

The participants suggested they learned how to apply models during their teaching.

> Actually, what I really liked, what really opened my mind, was actually using models in my teaching and now I want to try to use them. So that's why after I used this one then I used Sport Education, and Teaching Games For Understanding and I started using all these different models because I guess I saw that using a model actually works. (Gord)

They further stated the multidisciplinary discussions added to their professional development.

> I really liked the wrap-up sessions. I found it was multidisciplinary. We could hear from a social worker and a nurse and you and other teachers. It was a good experience from that point of view . . . the multidisciplinary point . . . cause I envision myself working in a multidisciplinary field so it's good to learn about other fields. (Helen)

Participants shared how the multidisciplinary meetings provided a more complete picture of each child's family life and a deeper understanding of each child.

> A benefit too was . . . getting to see the whole other side when we would have our meetings afterwards and we would hear what was going on . . . on the parent's side and learning more about the kids that way. Like learning about what the kids' lives were outside of our gym you know. (Gord)

Finally, the participants discussed the importance of university-community SL projects to their professional development. Billy stated, 'I enjoyed doing it because it was something I felt that I was helping someone rather than just, you know, teaching them everyday.' When asked to clarify what he meant by 'helping' he said,

> A lot of them are either taken out of their programs or they are having trouble in school. So this was something that they were never taken out of the program. They were always in it and they were always somewhat benefiting from it. (Billy)

Participants observed many child benefits associated with their teaching in the SL project.

> That was great to like see the students that were here throughout the whole time that we were here . . . seeing how much they actually learnt from the beginning to the end. They actually learned a lot about what we were actually trying to teach them. (Gord)

The third and final property was patience gained. The participants stated that the SL project helped them to become patient. For example, Betty stated 'the experience has helped me to keep my cool in very interesting situations.' When asked to elaborate, she said, 'It sort of reminded me that everyone is different and they all learn differently and sometimes, if there is a little hiccup, it might be because I am not responding to them right.' Sue also shared similar insight. 'Well, it definitely worked on my patience. I've been subbing in the resource room now so I am able to better relate to those kids.' Gord suggested his newly found patience guided student interaction in a new way.

> Because of the situation that we were in . . . we were so much more patient with students. I guess because we were more patient with the students, it made us instead of just getting frustrated and being like roar (yelling) or pushing them away, we were more like . . . ok let's find a solution for this. So we would actually try and think of things in that way. (Gord)

Teaching to play

The third theme was called 'teaching to play' because the participants identified how future PETE students could use the SL project to gain tremendous teaching experiences while learning about the challenges inherent with professional collaboration. Two properties, potential benefits and challenges to participation, emerged to form this theme. The first property highlighted the potential benefits to participation in a SL-APE project. Participants spoke about how third and fourth year undergraduate PETE students might gain fresh perspectives about alternative career choices from teaching children with behavioral problems. Gord spoke about alternative career choices.

> It could give people other ideas of what they could be doing with a degree in phys ed. aside from actually teaching in a school board. Like working in situations like this where you are part of a program like on Saturday mornings. (Gord)

Alice also mentioned that the project could potentially lead to new career paths. 'Some people may have really enjoyed their experience here and would want to go into like a special needs school afterwards.'

Participants stressed the level of personal responsibility, placed on them, to do the work.

> Well I think it takes responsibility to a whole other level you know. Friday night you go out and you have fun but then you have to be ready for Saturday morning. (Sue)

> Even just being part of a program like this. Like I said the little things like having to schedule meetings when we are going to lesson plan our Saturday sessions and planning the materials and everything. It was such a different side of phys ed., that's what I really liked. (Gord)

Participants discussed potential benefits for PETE students who may teach children with clinically identified behavioral problems. For example, Helen said, 'It would be a good experience for them too if they get those kids in a class of a hundred. Maybe they can use this experience to maybe not give up on those children.' Betty expressed how the SL teaching experience may enable PETE students to focus on individuals rather than misbehavior.

> It could remind those students, hey you know, just remember that some kids don't learn the same way and some kids have some issues that are quite disturbing. Sometimes it could disturb their behavior and it's really not their fault. (Betty)

Helen suggested interactions with the parents may provide an opportunity for PETE students to gain deeper understandings of children with behavioral problems.

> Being able to work with, or getting to hear like I said, how the parents are dealing with it . . . getting the parents side of the story too and seeing what or how things are at home. It just gives you a really better understanding of what it's like to have or to be a child with ADHD. (Helen)

The second property, potential challenges to participation in a SL project, identified the difficulties related to team teaching and teaching diverse groups. Participants suggested one of the most challenging aspects of the project was teaching in teams.

> I also felt like our group was a bit divided between the other two teachers and myself and my friend. I just felt like maybe our differences, in teaching styles and what have you and our differences in how to do lesson plans, kind of got in the way. (Sue)

The participants also suggested team teaching was more of a barrier than a benefit. For example, Alice said, 'Well, we had a group to work with so, um, so sometimes I don't know . . . it was hard to work with them.' When asked what she thought was 'hard' about working with other student teachers, she elaborated,

> It was a little stressful because you never knew who was going to be organized when you got there even though you would be calling and calling and not get answers. So that could be stressful and then when we arrived sometimes it would be a disaster. (Alice)

The participants still talked about how team teaching was difficult even when it worked well. For instance, Gord discussed how group planning was challenging. 'Well as much as we really got along, we do definitely have different styles of teaching and when it came down to planning sometimes that would be tricky. I guess it wasn't as productive as possible.'

Participants also spoke about how teaching a diverse group of children often posed challenges. They had relatively no experience teaching groups of children who varied in age and skill level the way that these groups did.

> The experience as a whole was beneficial because we ranged with students that I think were six years old to twelve years old and doing a class like that was . . . I mean there are a lot of challenges. There are many different things that came up during it like how to plan something fun for a seven year old and also make it fun for a 12 year old. (Billy)

Sue also discussed how the diversity of groups lent to her experience.

> The group was really quite varied. There were differences in age, in sex, and ability levels both behavior wise and also just with motor abilities but we were able to put the things we learned in motor development into practice. (Sue)

Discussion

This study explored the experiences of PETE students who taught PE in a SL project for children with ADHD. The four major implications of the research, reflected in the three emergent themes (i.e. 'where have I been,' 'it's all about caring,' and 'teaching to play'), are discussed along with limitations of the study and recommendations for future research.

First, the PETE students discussed how their prior student teaching experiences influenced their decisions to become PE teachers through the 'where have I been' theme. These experiences also provided them with knowledge and work experience for children with disabilities. They further discussed alternative career paths and community service as important to professional training. Perhaps similar SL projects may help PETE students to actively explore their emerging teacher identities upon entry into the teaching profession (Stroot and Ko 2006). This point is especially important, given the many challenges that new PE teachers perceived in their professional work duties (Macdonald 1999).

Second, PETE programs generally face many challenges in the professional development of their students (Rink 2010). Two challenges, the importance of planning and merging theory with practice, emerged in our study. PETE programs often emphasize on planning as an important professional teacher behavior (Rink 2010), as beginner teachers tend to spend less time in planning than experienced teachers (Berliner 1994). Our study participants reported substantially more time planning individual lessons in this project compared to their previous student teaching experiences. These findings are similar to past PETE research in SL (Abourezk and Patterson 2003; Kahan 1998; LaMaster 2001). Our study participants were challenged to develop activities for groups of children with ADHD, with wide age range variability and differing ability levels over a two-hour period for each week.

Educators may experience difficulties when trying to combine theory and teaching practice because teacher education programs and unique school contexts do not always match (Korthagen 2010). Our study participants spoke about the influence of learning a model (i.e. the cognitive strategy – Harvey, Fagan, and Kassis 2003) and its immediate application in teaching. They were introduced to curriculum models during their PETE program but they reported a lack of ability to directly apply formal instructional models in prior student teaching practicums (i.e. Teaching Games For Understanding, Sport Education). Our findings support Stran and Curtner-Smith (2010) who emphasized the importance of developing thorough understandings of pedagogical content knowledge, learner-specific knowledge, and curricular models (i.e. Sport Education) with PETE students. Thus, the instruction of models and their direct application in supervised PETE student learning experiences may provide unique opportunities to better merge theory and practice (i.e. Collier 2006; Korthagen 2010).

Third, the study participants also rationalized their participation in the SL project. These findings are unique in comparison to other PETE studies in SL (e.g., Abourezk and Patterson 2003; Domangue and Carson 2008; Kahan 1998; LaMaster 2001). For example, Domangue and Carson (2008) suggested participation in SL may not necessarily lead to increased civic engagement. Our findings suggested decisions to participate were complex as indicated by discussions about motivation, anticipation, and the perceived needs and outcomes in current or future SL projects. Some of our participants suggested altruistic reasons (i.e. intrinsic motivation) for becoming involved in the project. For example, they wished to help others or contribute to society in a meaningful way. Other

participants were clearly interested in personal financial gains and future career benefits (i.e. extrinsic motivation).

Fourth, the PETE students changed their preconceptions about children with ADHD and gained a more complete picture of each child's family life. They suggested that, as a result, their level of teaching confidence increased. In fact, they suggested being more patient, confident, and prepared to teach children with ADHD. Oh et al. (2009) also found PETE students often rated themselves as feeling more competent to teach students with behavioral problems after acquiring more disability-specific teaching experience. Furthermore, children with behavioral problems have been identified as very challenging students to include in PE because of lack of support and disability-specific knowledge at both the pre- and in-service teacher levels (Morley et al. 2005). Our participants reframed their approach for addressing child misbehavior because they had the knowledge and support necessary to deal with problems quickly and calmly. For example, the positive stories of the participants support calls for PETE students to gain practical teaching experience for children with special educational needs and obtain a wider multidisciplinary experience (Shoval, Erlich, and Fejgin 2010; Vickerman and Coates 2009). This type of multidisciplinary SL project may help to create an understanding about some major schooling issues and resolutions to combat the enormity of problems for children with behavior problems in education (i.e. Stanley, Canham, and Cureton 2006). It may also address the concern of Meldrum (2011) who suggested PETE programs may not teach their students to anticipate teaching challenges that lie ahead of them. To summarize, the direct social contact with the children led PETE students to alter their preconceptions about children with ADHD and it also increased their perceived level of confidence, preparation, and patience when teaching children with behavioral problems. Similar to contact theory (Sherrill 2004), the study findings suggest that direct interaction with students who have a disability may result in attitudinal changes for people without a disability. The findings also concur with Romack and Hsu (2011) who suggested there are substantial benefits to be gained through direct social contact in SL projects within an APE context.

Finally, the PETE students claimed team teaching was a large obstacle to participation in the SL project. Differences in teaching philosophies, communication styles, and lesson planning often caused conflict within teaching teams. Several PETE students reported a preference to work alone because teaching peers were perceived as a barrier to effective teaching. Not only did they report being unaware of the challenges of working with others, but they also suggested a personal lack of skill and ability to do so. This finding was rather surprising because the PETE students had already performed two student teaching practicums where they were involved in team teaching. Thus, the project altered PETE student perceptions because they realized the need to address their own professional challenges and recognized the importance of teamwork in professional development. These findings echo the words of Rink (2010) who suggested that well-developed team teaching may lead to wonderful teacher-learning opportunities.

Limitations

Two study limitations are provided. First, there was a range of 6–21 months which lapsed between PETE student participation in the respective SL project and their interviews. The time lapse and any additional student-teaching experiences may have affected participant recall. However, the participants brought interview artifacts (i.e. lesson plans, final paper) to stimulate recall and reflection so individual memories could be triggered and maximized. Second, the PETE student–child ratio was high because three PETE student

teachers taught groups of 7–10 children with ADHD while a graduate student and a university professor also provided direct supervision. Thus, the gymnasium environment was very well controlled. Previous research suggested SL participants deemed it beneficial if the course professor was present for every teaching session (i.e. Domangue and Carson 2008). Thus, the lead author and university professor were positively engaged in situated PETE pedagogy (i.e. Korthagen 2010).

Recommendations for future research

Future research recommendations are related to the role of participants, context, and qualitative research approaches in SL experiences. This study explored the perceptions of only the PETE students involved in SL. The experiences of other SL participants (i.e. children, parents, social worker, nurse) could be sought to gain much greater insight into the SL experience and help to shape future projects. For example, the inclusion of parents, siblings, or friends could substantially alter the SL experience. For instance, how would the PETE students change their teaching approach if they were responsible for teaching activities to families? How would the SL experience change if the number of PETE students was reduced or the number of children with ADHD was increased?

This study explored PETE student SL experiences conducted in the ADHD clinic and gymnasium of a mental health institute. To the best of our knowledge, this study is the first of its kind to explore relationships between PETE student perceptions and their SL experiences in an adapted context. Similar to the SL and PETE literature, little attention has been paid to the lack of research support for the specific use of SL in APE. Thus, much research remains to be performed in APE and SL. For example, follow-up studies of study participants should be conducted to observe how SL programs may impact their ability to include children with ADHD or other disabilities when they are teaching in general PE classes. Other APE studies could explore SL projects embedded within the sole required course offered at an undergraduate level (Romack and Hsu 2011). Additionally, SL projects in PETE could be studied in various contexts. For example, a SL project could be conducted in a local community recreation center where students from PETE, recreation, and kinesiology could participate together. This type of multidisciplinary approach may encourage PETE students to learn from and share experiences with students from other disciplines and bridge gaps between PETE and other allied health professionals. Perhaps PE teachers and PETE students could develop SL projects together. This type of SL may contribute to the continuous professional development of PE teachers and help to strengthen bonds between PE professionals and PETE students.

A variety of different qualitative research approaches may be used to inquire about SL experiences. For example, autobiographical narratives could be written by the PETE students to uncover their experiences from a person first perspective (Creswell 2007). Ethnographic studies (Creswell 2007) about SL experiences may also be used to investigate and interpret the values, behaviors, and beliefs of PETE students at the local, provincial, and national levels. Furthermore, an expansion of qualitative methods may tap more tacit information about PETE student experiences for students with and without ADHD. Written or videotaped weekly journals may provide more vivid insight and detail about weekly SL experiences. Focus group interviews may further assist PETE students to more openly reveal their experiences and feelings about SL. Furthermore, the PETE students in our study were interviewed only after they completed their respective SL project. It would be ideal to interview the participants at pre-, mid-, and post-SL project schedule times to provide an indication of prior pedagogical content knowledge, baseline data to track the

evolution of PETE student teaching performance, and a description of the SL process. It would also assist in the selection of course readings and design of relevant assignments. Finally, the study findings will contribute to the APE and PE literature by adding a unique set of PETE student voices about their SL experiences. SL projects that operate in multidisciplinary environments may also be exciting new venues for PETE programs (Collier 2006) that promote a situated PETE pedagogy (Korthagen 2010). They may answer a call to develop caring pedagogies that prepare future teachers for the realities and challenges of a changing world (Collier 2006; O'Sullivan 2006). Most importantly, this study lays an additional foundation for future studies to explore an exciting and practical research endeavor, the exploration of SL and PETE for persons with and without disabilities.

Note

1. The reader is referred to Harvey and Reid (2003) for a review of issues surrounding the identification, diagnosis, treatment, and motor behavior of children with ADHD.

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