

PHYSICAL LITERACY: FROM THEORY TO PRACTICE
EXPLORING EXPERIENCES OF NEW HEALTH AND PHYSICAL
EDUCATION TEACHERS

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Abstract

With growing rates of child and youth obesity and overweight, school health and physical education (H&PE) has been proposed as a vehicle through which to enhance children's healthy physical and psychosocial development (e.g., Ebbeling, Pawlak & Ludwig, 2002). Physical literacy is a concept recently introduced into Ontario's H&PE curriculum, with the belief that it will raise the quality of H&PE (Ontario Ministry of Education, 2010), by providing students with the skills and confidence to be active for life (McKean, 2013). The purpose of this study was to examine new health and physical education teachers' education experiences in relation to physical literacy, with a specific focus on their education and training, perceptions, and implementation of physical literacy into school H&PE settings. Participants (N =10) included 6 males and 4 females new H&PE teachers, emerging from Faculties of Education within the province of Ontario. Using grounded theory methodology (Strauss & Corbin, 1998), data analysis followed several coding procedures geared toward theory development. Results suggest that various breakdowns were occurring within the three major educational components (i.e., formal teacher education, curriculum, and teaching practicum), hindering the successful integration of physical literacy in practice. Findings are considered in relation to existing teacher education and H&PE research and a grounded theory of the educational components associated with the successful integration and implementation of physical literacy is presented. Practical implications and future research directions arising from this exploratory theory are discussed.

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I. Introduction

An ever-growing body of research exists concerning childhood obesity and sedentary behaviour patterns (e.g., Wang & Lobstein, 2006). It has been reported that approximately one third of Canadian youth are considered overweight or obese; which in turn lends itself to putting children at risk for various health related issues (Statistics Canada, 2009). Furthermore, there is evidence to suggest that health related behaviours that are established in childhood often carry into the adult years (Whitaker, Pepe, Seidel, & Dietz, 1997). Although overweight and obesity have emerged as major issues within the child and youth population, the literature suggests that overweight and obesity are largely preventable diseases and measures should be taken at younger ages in order to reduce future health risks (Ontario Agency for Health Protection and Promotion, 2012).

In recent years there has been increasing awareness regarding the importance of physical activity and physical education both in Canada and worldwide (e.g., Strong et al, 2005). Research is continuing to recognize both the physical and psychosocial benefits affiliated with partaking in regular activity as well as a possible intervention strategy to reduce the rates of overweight and obesity among our youth population (McKean, 2013). In Ontario, Health and Physical Education (H&PE) is a mandated curriculum for all students and is compulsory for students grades K-9 (Ontario Ministry of Education, 2010). Students enrolled in Kindergarten through grade 8 should have an allocated 150 minutes of H&PE per week, plus an additional 20 minutes per week of Daily Physical Activity (Ontario Ministry of Education, 2010). Secondary students (i.e., grades 9-12) however, are only required to take one H&PE credit, which can be taken in any grade (Ontario Ministry of Education, 2010).

Within Canada, provinces and territories operate under separate and distinct curricula, yet there are similarities and common practices that unify their focus (Council of Ministers of Education Canada, n.d.); physical literacy is one such commonality. Over the past decade, physical literacy has and continues to be a major construct of H&PE in numerous provinces across Canada such as British Columbia, Saskatchewan, Ontario and Newfoundland and Labrador (Mandigo, Francis, Lodewyk, & Lopez, 2009). A renewed elementary H&PE curriculum was released in 2010, which aimed to positively affect student-learning outcomes and provide students with an understanding of lifelong physical activity through the promotion of physical literacy.

Physical literacy is built upon principles similar to literacy in mathematics or language; physically literate children must learn from experiences in multiple domains (i.e., sport, physical education, and play), in multiple contexts (i.e., land, water, ice) and from multiple sources (i.e., teachers, coaches, peers). Physical literacy promotes knowledge acquisition in various forms, moving away from traditional knowledge acquisition (Fernandez-Balboa, 1997). In this way, physical literacy seeks to provide students with a more holistic understanding, attitude, and approach to physical activity (Whitehead, 2007). Mandigo and colleagues (2009) have said that students who have a strong grasp of physical literacy are able to move across a variety of environments and adapt to various situations, as well as embrace lifelong participation in physical activity and embrace the development of life skills.

Although there is belief in the potential of school H&PE in increasing children's physical activity levels, and decreasing overweight and obesity rates, with new concepts such as physical literacy serving as potential means to do this, past research shows that

school-based H&PE programs are not meeting current Health Canada and Ontario Ministry of Education standards (Stone et al., 2012; Higgins et al., 2009). Furthermore, there is no research to date that examines physical literacy as it relates to attenuating obesity. Teachers in training provide an excellent lens through which to explore the introduction of new concepts such as physical literacy into H&PE curricula, given they bridge the gap between teacher training and classroom (i.e., gymnasium) implementation. As such, this study uses an exploratory design aims to better understand the preparation of H&PE teachers in Ontario, with a particular focus on their experiences related to physical literacy.

II. Literature Review

The education system in Canada has been subjected to a stream of policy change and development (Stone, Faulkner, Zeglen-Hunt, & Bonne, 2012; St. Leger, 2001). Within this landscape, Health and Physical Education (H&PE) has been highlighted consistently as an area of concern, with the achievement of recommended guidelines proving to be a recurring dilemma (e.g., Marshall & Hardman, 2000).

History of Physical Education in Canada

Within Canada, education is sanctioned under provincial jurisdiction; that is, each province has its own authority over mandated curricula. Due to this fact, the historical implementation of physical education varies slightly between provinces. Physical education emerged within the Canadian education system in the mid-1800s, which is largely attributed to Egerton Ryerson (Francis & Lathrop, 2011). The core of early Ontario “physical training” programs was based around military drills and gymnastic exercises for boys and calisthenics for girls (Francis & Lathrop, 2011).

The 1900’s saw a need to educate and prepare individuals to effectively teach physical education; the Toronto Normal School was the province’s main teaching centre and provided individuals with pedagogical preparation (Smyth, 2003). In the wake of teacher training initiatives, physical education curriculums received a revamp and physical education began to grow in importance, receiving compulsory status among school-aged children (Francis & Lathrop, 2011). Throughout the course of many decades, physical education evolved and progressed to keep up with the ever growing and ever changing demands of society, continuously being redefined by what was deemed important within current culture. For example, in the 1950’s H&PE tests of physical

fitness (i.e., strength and endurance) were critical components of the curriculum (Francis & Lathrop, 2011). However, following societal trends and increasing research regarding H&PE within the school system, there was a shift in ideas surrounding H&PE and it began to encompass philosophies concerning positive youth development (Felshin, 1967).

The 1960's and 70's saw an increased participation from marginalized groups. For example, the 1970's saw a major push towards female participation in both sport and physical education (Francis & Lathrop, 2011). The 1970's also experienced the birth of ParticipACTION, which supported and encouraged physical education and physical activity (Bauman, Cavill, & Brawley, 2009).

The 1980's and 90's in Ontario witnessed a decrease in the emphasis and importance placed on physical education and wide scale cutbacks set forth by the provincial government. Under Bill 160, Education Quality and Improvement Act, the government allowed non-certified teachers to teach certain subjects (e.g., art and physical education) (Anderson & Jaafar, 2003). This created a decrease in the opportunities that were once offered by H&PE programs. Although various H&PE programs saw major cutbacks and a decrease in significance and importance, studies began to arise signifying the onslaught of a major health crisis. In the late 1990's Canada was being made aware of the potentially hazardous sedentary lifestyle society had become accustomed to, along with decreasing physical activity rates, and increasing prevalence of overweight and obesity among children and youth (Falkner & Michel, 1998).

The early 2000's saw Canada, and Ontario specifically, begin to shift focus back to H&PE, implementing potential measures with the aim of helping mediate the obesity crisis. The introduction of Daily Physical Activity (DPA) was initiated in order to

promote and facilitate increased time for physical activity (Ontario Ministry of Education, 2009). In 2010 physical literacy was added to the H&PE curriculum document at the elementary school level (Ontario Ministry of Education, 2010). The Ontario Ministry of Education (2010) set this measure in place in order to help promote and encourage physical activity throughout the life course, beginning at the grassroots level. As a new concept within the H&PE curriculum, physical literacy aims to educate students and provide them with skills necessary to become competent in their abilities and an understanding as to the importance of being abiding to positive health behaviours during both youth and adulthood.

Physical Inactivity and Physical Activity in Childhood

Childhood obesity is a complex disease with potentially detrimental consequences. Similar to adult obesity, childhood obesity has proven to have both negative physical and mental side effects ranging from high blood pressure, increased levels of cholesterol, hyperinsulinemia (Ebbing, Pawlak & Ludwig, 2002; Tremblay & Willms, 2003; Sothorn, Loftin, Suskind, Udall, Blecker, 1999), depression, poor body image and low self-esteem (Strauss, 2000). One study indicated that there is an increasing prevalence of type II diabetes among the adolescent population, noting that it was once an unrecognized disease in the child and adolescent population, but now the childhood and adolescent populations account for as many as half of all new diagnosis (Ebbeling, Pawlak, & Ludwig, 2002). Youth overweight and obesity tend to track into adulthood and tend to be accompanied with comorbidities (Trudeau, Laurencelle, Shephard, 2004; Whitaker et al., 1997). Collectively, these findings demonstrate an increasing need for more solutions to address this crisis.

Overweight and obesity are the result of an energy imbalance, whereby the energy intake exceeds that of energy output (Rocandio, Ansotegui, & Arroyo, 2001). The current rise in obesity statistics have been blamed in part on an increase in sedentary behaviour; greater time spent in front of the television, playing video games, or in front of a computer screen has been associated with decreased levels of physical activity (Harrison, Burns, McGuinness, Heslin, & Murphy, 2006). Though children are relatively more active than their adult counterparts, they are becoming increasingly less active than youth from earlier generations (Wang & Lobstein, 2006). Statistics Canada (2009) recently reported that children ages 6-19 spend on average between 7.5 and 9 hours per day performing sedentary activities. Regular physical activity throughout childhood has been shown to have both immediate and long lasting health benefits; early and continuous participation has shown to positively effect body composition, cardiovascular health and musculoskeletal development (Strong et al., 2005) as well as habitual activity levels (Nemet et al., 2005) and self efficacy and self concept (Sallis, Prochaska& Taylor, 2000). It is important to recognize that physical activity is a modifiable behaviour and a school-based H&PE program coordinated by a trained teacher has the potential to act as the foundation for children to establish understanding and competency regarding movement skills (Siedentop & van der Mars, 2012).

The Role of the School

Pate et al. (2006) in conjunction with the American Heart Association have suggested that the role of the school should be reconsidered in the wake of the obesity crisis. Together they recommended that the school markedly expand their role in providing physical activity to children and adolescents, as the school has the ability to

both teach and promote the idea of lifelong physical activity. Specifically, the school not only has the opportunity to provide its students with adequate time for physical activity – both structured and unstructured, but it is also organized in a manner to create an environment in which healthy living can be introduced and promoted. Further, while it has been suggested that monitoring physical activity and energy expenditure is possible within a school setting (Sallis et al., 1997), H&PE teachers must be equipped with the knowledge and means necessary to implement successful H&PE programs.

Physical Education Curriculum

In light of increasing evidence of the role of schools in promoting lifelong physical activity (e.g., Lee et al., 2007), provincial governments took the initiative to mandate physical education classes and have made them statutorily required for both girls and boys throughout elementary school, in addition to some credit at the high school level (National Children’s Alliance, 2012). The H&PE curriculum in Ontario remained unchanged from 1998 until 2010. In 2010, Ontario’s Ministry of Education created an elementary H&PE curriculum, which was viewed by many as a means to combat current health issues (The Canadian Press, August, 2010). James Mandigo, an academic expert in the field (2012, p.2) suggested the new program was “possibly one of the most sophisticated H&PE programs in the world”. However, the initiative to implement the new curricula was halted in April 2010 due to concerns about the content.

While many researchers have promoted the idea of using school-based H&PE as a resource to combat the epidemic of chronic disease (Strong et al, 2005; Lee, Burgeson, Fulton, & Spain, 2007) there is additional evidence to suggest that school-based H&PE programs are doing a poor job at achieving minimum physical activity recommendations

as set out by the governments (Stone, Faulkner, Zeglen-Hunt, & Bonne, 2012). Marshall and Hardman's (2000) worldwide study in 126 countries investigated both the state and status of H&PE, exposing some major concerns and gaps related to both implementation and curriculum content. Specifically they found that although H&PE is a government sanctioned course, actual implementation does not reach the prescribed guidelines, noting that 29 percent of the time H&PE is dropped in place of another subject. They also point to Canadian (British Columbia) findings, revealing that up to 98 percent of schools do not meet the time requirements for physical education.

Physical Literacy

Alongside growing interest in using schools as vehicles to promote lifelong physical activity, government and medical professionals have sought additional innovative methods to promote and sustain ideas about healthy and active living. The idea and critical debate surrounding the topic of physical literacy emerged in the mid-1990s (Whitehead, 2001) but has only recently gained increased interest. Education and public health professionals are seeing the potential and value in the concept of "teaching" physical activity, much like one would teach math or science; with this in mind, there has been a push towards the promotion of physical literacy during compulsory education and throughout the lifespan (Whitehead & Murdoch, 2006). The Ontario Ministry of Education (2010) acknowledges the potential of physical literacy to help in raising the quality of H&PE as well as its possibility to combat obesity, by providing students with the skills and confidence to become and remain active for life (McKean, 2013). Although physical literacy is being promoted as having the potential to positively influence the obesity crisis, no research has been conducted regarding how or to what effect physical

literacy will have on child obesity. Additionally, optimal implementation of physical literacy, how teachers are trained to execute and employ physical literacy, as well as how children and youth understand physical literacy and its concepts have not yet been explored. Given the lack of research connecting physical literacy to obesity, it cannot be concluded that a link exists between said concepts.

Definitions and Descriptions. In an article written by Whitehead (2006), physical literacy was described as

...the ability and motivation to capitalize on our motile potential to make a significant contribution to the quality of life. As humans we all exhibit this potential; however, its specific expression will be particular to the culture in which we live and the motile capacities with which we are endowed.

The definition and description was modified slightly to read: “individuals who are physically literate move with competence and confidence in a wide variety of physical activities in multiple environments that benefit the healthy development of the whole person” (Mandigo, Francis, Lodewyk, & Lopez, 2009, p. 28). A more recent definition of physical literacy has emerged and defines physical literacy using arguably more measurable concepts; it reads, “the motivation, confidence, physical competence, knowledge and understanding that individuals develop in order to maintain physical activity at an appropriate level throughout life” (Whitehead, 2010, p. 5). Based on both Whitehead’s descriptions (2006, 2010) as well as Mandigo and colleagues modified definition (2009), it can be argued that through the acquisition of physical literacy, individuals have the ability to develop the necessary tools and understanding to make appropriate decisions regarding physical activity; individuals learn to adapt physical

activity to their surrounding environment. In this way physical literacy provides the individual with critical thinking skills so that physical activity can be executed in a safe and effective manner. PHE Canada (2013) also suggests that physical literacy enables individuals to “demonstrate a variety of movements confidently, competently, creatively and strategically across a wide range of health-related physical activities.” In this definition, physical literacy allows for the acquisition of various physical activity techniques that can be applied to numerous settings. Unlike conventional sport skill acquisition, PHE Canada (2013) believes physical literacy allows the individual to apply their knowledge in various physical settings broadening their horizons as to what constitutes activity. It is the hope of health and education professionals, that in broadening one’s spectrum as to what constitutes activity, individuals will sample a wider variety of activities and remain active in different capacities throughout their lives (PHE Canada, 2013). The school acts as a fundamental institution to educate individuals about health. Schools have the necessary resources to equip youth with essential knowledge and skills, which will allow them to remain healthy active participants within society (e.g., Lee, Burgeson, Fulton, & Spain, 2007).

Integration into Health and Physical Education. In a paper written by Whitehead and Murdoch (2006) it was recommended that the “nurturing and establishment of physical literacy” be the underpinning goal of schools and other education institutions, suggesting schools have both an obligation and responsibility to help children achieve and develop in all aspects of life. There is evidence to suggest that school-based physical education programs that address multiple factors and are innovative in the domains of both structure and delivery, show the greatest success in

terms of developing health behaviours that go beyond school physical activity (Lee, 2009). Whitehead and Murdoch (2006) go on to say that the goal of physical education should not solely focus on the development of sport specific skills, rather physical education should be concerned with gaining and maintaining a competence and confidence to participate in various physical activities and should promote and develop positive attitudes towards participation. Given government and policy makers' recognition that the benefits of quality physical education programs are far reaching, they have supported educators' incorporation of physical literacy into their programs through the reform of curricula, in addition to the provision of other resources (e.g., Physical Literacy for Educators, Mandigo, Francis, Lodewyk, & Lopez, 2009). Physical literacy, in various forms, is now a reality in many curricula across Canada, leaving Canadian H&PE educators to emphasize and develop ideas pertaining to physical literacy and lifelong physical activity. Specifically, current curricula modifications are working to move away from a standard-based model of assessment, realizing that physical education and learning in general is an integrated and multifactorial process (Maguire, 2010) The addition of physical literacy as a holistic approach to health and physical education teaches the individual that physical activity can be personalized and modified and does not have to fit a stereotypical sports model (Haydn-Davies, 2012)

Assessment and Evaluation. One potential concern that has arisen relates to the assessment and evaluation of physical literacy within school programs. Current literature notes that student learning is best supported when instruction and assessment are based on clear learning goals (Gibbs & Simpson, 2004) and are differentiated according to student learning needs. Assessment criteria act to frame learning, create learning, and

orient behaviours in order to reach achievement goals (Gibbs, 2006). The Ontario Growing Success document (2010) suggests assessment is defined by what the information will be used for; assessment *for* learning is used to understand where the learner is within his/her learning process versus where he/she needs to go. This type of assessment allows the educator to determine the next steps for the student. Assessment *as* learning is a form of evaluation by which students are given the capacity to monitor their own learning, allowing them to reflect upon their learning practices. Finally, assessment *of* learning uses a task or activity to determine a student's competency in regards to a particular subject matter. In this way assessment and evaluation tools work to clearly communicate outcome goals or expectations for the students, allowing them (along with parents/guardians, education officials etc.) track their progress towards achievement.

Tremblay and Lloyd (2010) identified the need for an assessment tool in order to evaluate physical literacy, advocating for a valid and reliable measurement tool that could be used to promote and endorse physical literacy as important component of H&PE curriculums, but it would also provide multi-level feedback. They proposed an itemized list of potential measurable variables that could shed light regarding an individual's physical literacy. In response to this call for a validated tool(s) to measure physical literacy, the Canadian Assessment for Physical Literacy (CAPL, 2013) was created. CAPL "is the first comprehensive protocol that can accurately and reliably assess a broad spectrum of skills and abilities that contribute to and characterize the physical literacy levels of participants." This tool remains in its early stages, and as such has the potential to add a much needed component to physical literacy within the school system, yet is also still subject to many issues regarding feasibility (CAPL, 2013).

Teacher Training

While there are multiple means by which to study the introduction of physical literacy into school physical education programs, teachers in training provide a unique lens, given they bridge the gap between educator training and program implementation. However, the changing circumstances around training of H&PE teachers must be acknowledged. Globally, society has become increasingly knowledge-based, placing additional pressure on teacher education and preparation programs and consequently teacher quality (Adams & Cox, 2008). There is a variety of research, which suggests that standards among the teaching community, in terms of teacher education, are necessary in order to ensure teacher quality (McNeil, 2000); however, Rossi et al. (2009) suggested that the standards-based model that is often used in teacher education programs, frequently does not translate into a physical education context. There are arguments that debate the use of a standard-based model, contesting that both teaching and learning are multi-dimensional and involve both complex and interconnected process and learning cannot be merely based upon outcome (Maguire, 2010). Further, Valli and Buese (2007) have suggested that due to curricula and policy reform, the climate of teaching has changed. Studies have shown global trends in terms of school-based physical education programs, noting a lack of resources, insufficient training and a lack of interest and investments in school H&PE (Morgan & Bourke, 2008). Despite these considerations, researchers and government policy makers alike agree that school-based H&PE can act as a medium for increasing physical activity and providing the knowledge and skill necessary to remain physically active throughout the life course (St. Leger, 2001).

Teaching Practicum. In addition to classroom based teaching and education, many teacher-training programs also involve an “apprenticeship” or practicum aspect where the pre-service teacher learns through hands-on field experience (Behets, 1990). An understanding of teacher education and teacher training programs is pertinent to the successful development of education and ultimately students. Studies have shown that teacher education impacts teacher quality (Musset, 2010) and the most effective way to increase education quality is through the modification of initial teacher training (Darling-Hammond, 2005). It is evident that teacher education and teacher training programs are imperative to education quality; however, this area has been significantly under researched. There have been a few studies however looking at the impact this model, teacher education coupled with teaching practicum, has on both teaching and learning. Within the literature concerning pre-service teacher education, there is a general consensus acknowledging the significant role the associate teacher and teaching practicum have (Beck, & Kosnik, 2002). Building upon this, there is research that indicates excellence in supervision by the associate teacher and use of positive and constructive feedback provided by the associate teacher as characteristics which mark positive teaching practicums (Darling-Hammond, Wise, & Klein, 1995; Koerner, Rust, & Baumgartner, 2002; Maynard, 1996). Of particular concern however, is research that indicates elements of power and control as well as the perpetuation of traditional teaching methods that exists within the teaching practicum (Townley, 1993). An argument could be made regarding the interplay and connectedness between these two phenomena. In an article written by Townley (1993) she reviews Foucault’s power relation; in this article she suggests that power is an underlying element within the mentoring experience of the

teaching practicum. It is his belief that this power-relation informs what is “right” or a normal standard of practice versus what is considered divergent from the prevailing structure. Based on these suggestions, it could be speculated that it is through power that thought patterns are perpetuated from one teaching generation to the next.

Rationale and Purpose

An extensive body of literature acknowledges the importance of H&PE for the wellbeing and development of children and youth (e.g., Ebbing, Pawlak & Ludwig, 2002). However, research depicts a grim picture whereby H&PE classes are not achieving the minimal recommended guidelines (Stone et al., 2012; Higgins, Begoray, & MacDonald, 2009) and sufficient programs are not being provided (Darling-Hammond, 2000). Physical literacy is a concept recently introduced into Ontario’s H&PE curriculum, with the belief that it will work to raise the quality of physical education (Ontario Ministry of Education, 2010) and combat obesity, by providing students with the skills and confidence to become and remain active for life (McKean, 2013). When emerging concepts, such as physical literacy are built into new curricula, it is important that research explore the training, implementation, and learning processes being these introductions. Teachers in training provide an excellent lens for this investigation, to explore how teacher education programs both communicate and demonstrate physical literacy. This study utilized an exploratory research design to better understand the preparation and education of contemporary physical education teachers, with a particular focus on the concept of physical literacy. Specifically, the purpose of this study was threefold; a) to examine the education and training that physical education teachers receive in relation to physical literacy, b) to explore new teachers’ perceptions of physical

literacy and c) to gain understanding of how new teachers are implementing the concepts of physical literacy is being implemented into school H&PE settings.

Physical Literacy: From Theory to Practice

Exploring Experiences of New Health and Physical Education Teachers

Overweight and obesity, within the child and adolescent population, is becoming an epidemic within North America and globally. Recently, Statistics Canada estimated that over 31% or 1.6 million youth aged 5-17 in Canada are considered overweight or obese (Roberts, Shields, de Groh, Aziz, & Gilbert, 2012). This is particularly concerning given that children's higher ratings on the body mass index (BMI) predict a greater likelihood of increased BMI as an adult (Clarke & Lauer, 1993). A recent report also shows a rising number of Ontarians dying due to chronic, but largely preventable, illnesses (Ontario Agency for Health Protection and Promotion, 2012). Given these concerns, there has been growing interest in addressing overweight and obesity issues at earlier stages. An ever-growing body of literature, through epidemiological research, suggests physical activity as not only a combative means, but also as a potential preventative measure for chronic disease (Booth, Gordon, Carlson, & Hamilton, 2000; Boreham & Riddoch, 2001; Paffenbarger, et al., 1993; Pedersen & Saltin, 2006). Further, research shows that exercise beginning at a young age and continuing throughout the lifespan has the ability to stave off the incidence of chronic disease in the future (Sothorn et al., 1999).

School-based physical activities that aim to improve the long-term health of children and adolescents through exercise are one means to create lifestyle patterns of regular physical activity that carry over into the adult years (Telama et al., 2005). There is mounting evidence to suggest that school-based interventions are an effective means of combating the current child obesity crisis by introducing educational components to

create a sustainable healthy lifestyle (e.g., McKean, 2013). In particular, there has been increased interest recently in the role of schools in facilitating physical literacy, defined as an individual who has the ability to “move with competence and confidence in a wide variety of physical activities in multiple environments that benefit the healthy development of the whole person” (PHE Canada, 2013). Physical literacy operates in a similar fashion to literacy regarding mathematics or language; physically literate children must learn from experiences in multiple domains (i.e., sport, physical education, and play), in multiple contexts (i.e., land, water, ice) and from multiple sources (i.e., teachers, coaches, peers). The concept of literacy within an educational setting goes well beyond knowledge acquisition (Fernandez-Balboa, 1997); the emphasis is placed upon meaningful understanding, proficiency and application in a variety of contexts. Despite this, research shows that school-based health and physical education (H&PE) programs are not meeting current Health Canada and Ontario Ministry of Education standards (Stone et al., 2012; Higgins et al., 2009), as sufficient programs are not being provided (Darling-Hammond, 2000), and there is significant variation in activity amongst schools (Hobin, Leatherdale, Manske, & Robertson-Wilson, 2010). This suggests more work must be done to take a closer look at the alignment of H&PE curricula and teaching practices, by delving into the how H&PE is translated and relayed to the student population. Teachers in training provide an excellent lens through which to explore this question, given they bridge the gap between teacher training, classroom (i.e., gymnasium) implementation of curriculum, and student experiences. Advancing understanding of how teachers are taught to demonstrate and communicate the current curriculum, particularly

in relation to physical literacy, has the potential to inform best practices to optimize children's healthy physical activity behaviours through school programs.

Review of Literature

Role of Schools

In the wake of the current obesity crisis, Pate et al. (2006) recommended that schools markedly expand their role in providing physical activity to children and adolescents, suggesting schools have the ability to both teach and promote the idea of lifelong physical activity through structured and unstructured means. Other studies have also noted the importance of physical education as a tool to combat the epidemic of chronic disease, and promote and foster lifelong activity, given their vast reach and subsequent opportunity to help children develop the skills and attitudes needed to remain physically active both within and outside the school setting (Lee et al., 2007; Strong et al., 2005). School-based H&PE programs that have been multi-factorial and innovative in the domains of structure and delivery have shown the greatest success in terms of developing health behaviours beyond school outcomes (Lee, 2009). However, as noted above, there is mounting evidence to suggest that school-based H&PE programs are doing a poor job at achieving minimum physical activity recommendations (Stone et al., 2012). For example, Marshall and Hardman (2000) investigated the state and status of H&PE worldwide, exposing some major concerns and gaps related to both implementation and curriculum content. It was revealed that though there was a requirement for H&PE in 92 percent of the surveyed countries, actual implementation did not reach the prescribed guidelines, noting that in 29 percent of cases H&PE was not implemented in accordance with guidelines or requirements. Marshall and Hardman's

study also highlighted findings drawn from data collected in Canada (British Columbia), revealing that up to 98 percent of schools did not meet the time recommended guidelines for physical education.

Physical Literacy within School Curricula

In 2010 in Ontario, the Ministry of Education released a new Health and Physical Education (H&PE) curriculum, following up on the previous document, released in 1998. The new curriculum was designed to help combat current health issues (The Canadian Press, August, 2010) with one lead expert suggesting it was “possibly one of the most sophisticated H&PE programs in the world” (Mandigo, 2012). Specifically, it was believed that it had the potential to raise the quality of physical education (Ontario Ministry of Education, 2010) and combat obesity, by providing students with the skills and confidence to become and remain active for life (McKean, 2013).

In line with Whitehead and Murdoch’s (2006) recommendation that “nurturing and establishment of physical literacy” be the underpinning goal of schools and other education institutions, the new 2010 curriculum introduced the concept of physical literacy. While the concept of physical literacy first emerged in the mid-1990s (Whitehead, 2001), it only recently gained significant interest among educators, where it has been promoted for its potential value of “teaching” physical activity, much like one would teach math or science. Consequently, there has been a push towards promoting physical literacy within compulsory education and throughout the lifespan (Whitehead & Murdoch, 2006).

Physical literacy was originally defined as “the ability and motivation to capitalize on our motile potential to make a significant contribution to the quality of life”

(Whitehead, 2007, p .287). Following this definition, Whitehead also suggested that “as humans we all exhibit this potential; however, its specific expression will be particular to the culture in which we live and the motile capacities with which we are endowed” (p. 287). Mandigo and colleagues (2009) modified the definition, describing individuals who are physically literate to be those that “move with competence and confidence in a wide variety of physical activities in multiple environments that benefit the healthy development of the whole person.” (p. 28). In 2010, Whitehead further modified her definition to include arguable more measureable criteria; she wrote that physical literacy was “the motivation, confidence, physical competence, knowledge and understanding that individuals develop in order to maintain physical activity at an appropriate level throughout their life.” (p. 5) It could be argued that this definition begins to quantify physical literacy so that it can be assessed from a teaching perspective. Acquisition of physical literacy depends upon individuals developing the necessary tools and understanding to make appropriate decisions regarding physical activity, and learning to adapt physical activity to their surrounding environment. Unlike conventional sport skill acquisition, physical literacy allows individuals to apply their knowledge in various physical settings, broadening their horizons as to what constitutes activity. Further, knowledge acquisition is not only physical in nature, as social and psychological dimensions of physical development are also recognized.

Teachers in Training

Teachers in training provide an excellent lens through which to explore the implementation of new curricular concepts such as physical literacy, as new teachers have the opportunity to engage in the process of training, implementation, and learning

within a relatively short time frame. Teacher education has been shown to impact teaching quality and student outcomes (Kirk, 2005; Musset, 2010); one study suggests the most effective way to increase students' education quality is through the modification of initial teacher training (Darling-Hammond, 2005). Further, the teaching practicum, where the teacher in training works with an associate teacher, has been found to be a critical component of the teacher training process, given the learning that occurs in this context (Beck, & Kosnik, 2002). While it is evident that teacher education and teacher training programs are imperative to education quality, only a limited body of literature has looked at the impact of these programs on new teachers' teaching and learning.

Rationale and Purpose

Although literature exists acknowledging the importance of H&PE for the healthy physical and psychosocial development of children and youth (e.g., Ebbeling, Pawlak & Ludwig, 2002), a second body of research shows H&PE classes are not achieving the minimal recommended guidelines (Higgins et al., 2009; Stone et al., 2012) and sufficient programming is not being provided (Darling-Hammond, 2000). Physical literacy is a concept recently introduced into Canadian, and specifically Ontario's H&PE curriculum, with the belief that it will work to raise the quality of physical education (Ontario Ministry of Education, 2010) and combat obesity, by providing students with the skills and confidence to become and remain active for life (McKean, 2013). When emerging concepts, such as physical literacy are built into new curricula, it is important that research explore the training, implementation, and learning processes accompanying these introductions. Teachers in training provide an excellent lens for this investigation, to explore how teacher education programs both communicate and demonstrate physical

literacy. This study utilized an exploratory research design to better understand the preparation and education of new H&PE teachers, with a particular focus on the concept of physical literacy. Specifically, the purpose of this study was threefold; a) to examine the education and training that physical education teachers receive in relation to physical literacy, b) to explore new teachers' perceptions of physical literacy and c) to gain understanding of how new teachers are implementing the concepts of physical literacy is being implemented into school H&PE settings.

Method

Research Design

This study employed a grounded theory qualitative approach to generate and discover a theory (Glaser & Strauss, 1967). Grounded theory has been described as being ideal for exploring integral social relationship and the behaviour(s) of groups where there has been little exploration (Crooks, 2001) and was suitable in this study, to identify emerging relationships between teacher education and its implications for practice, given the application and translation of teacher education into practical settings has been less explored in current research. The grounded theory design allowed for a detailed exploration into new teachers' educational experiences and their introduction into the teaching profession, using a systematic setoff data collection and analysis procedures to develop and derive theory from the data (Corbin & Strauss, 1990; Strauss & Corbin, 1994).

Context and Participants

Data were collected from July to September of 2013 at the convenience of the participants. At this time, there were several factors affecting the current teaching climate among Ontario educators including unemployment, curriculum reform and policy reform.

Specifically, at the time of data collection, Ontario was facing a surplus of teacher graduates, putting a strain on the job market; reports by the Ontario College of Teachers at this time suggested approximately 70% of first year teachers were underemployed or unemployed (McIntyre, 2011). Secondly, despite the release of Ontario's H&PE curriculum in 2010, which integrated new concepts of physical literacy, concerns were raised related to concepts of human development presented in the document, and full implementation of the curriculum was halted. Following further modifications, the elementary curriculum was re-released in 2012, but the revised secondary school curriculum had not been released at the time of data collection in the fall of 2013, leaving secondary schools operating in part under the 1999 curriculum, and in part with new concepts not thoroughly introduced, from the 2010 curriculum. Lastly, educators motioned to strike in the fall of 2012 following decisions to impose two-year contracts under Bill 115 – Putting Student's First Act (Abarbanel, 2013). This bill was repealed in January of 2013 (Rushowy & Ferguson, 2013); however some tensions remained between the government and school officials, resulting in many teachers withholding duties performed outside of the classroom (i.e., extracurricular activities and supervising school sports) (Rushowy & Ferguson, 2013), only to resume in late March of 2013 (Lawes, 2013). Given the aforementioned issues within the teaching climate at the time of data collection, many new graduates were reluctant to participate in the study, and speak about their experiences, fearing anonymity and the potential that participation in such study could be perceived negatively when applying for future jobs.

The final sample of participants included 10 new teachers from various Faculties of Education within the province of Ontario who were H&PE specialists. Given the time

in which data were collected (2013), all participants had completed an 8-month program within their Ontario Faculties of Education; provincial standards changed to require a 16-month program beginning in the Fall of 2014. H&PE specialists included Intermediate/Senior division graduates (i.e., certified to teach grades 7 to12) with a H&PE specialty according to the Ontario College of Teachers guidelines (2013). (There are no specialties in the Primary/Junior or Junior/Intermediate divisions). Given a specialized degree translates into an increased time devoted to H&PE curriculum, it was believed teachers with this degree would have an increased knowledge of H&PE and would be most equipped to comment on concepts of physical literacy within the new H&PE curricula. We aimed to recruit new teachers within 3 years of graduation (i.e., since 2010), given our particular focus on concepts of physical literacy within the curricula originally released in 2010.

Following ethical approval from the affiliated institution, participants were recruited through snowball sampling, whereby the researcher collected data from a few members within a defined population, then asks those individuals to provide information needed to locate other members of the population they may know (Noy, 2008). The primary researcher began by contacting two recent graduates of a Faculty of Education within Ontario with an H&PE specialty and provided them with an overview regarding the nature of the research along with a consent form.

Final participants included 6 males and 4 females emerging from 4 different Faculties of Education within the province of Ontario. Participants' ages ranged from 23-27years ($M = 25$ years); time since graduation ranged from 3 months to 4 years ($M = 2.1$ years). (One participant did not meet criteria for 3-year window since graduation, but

showed awareness of physical literacy within the context of new curricula and teacher training). None of the 10 participants held full time positions within a school board and all held part-time jobs in various disciplines unrelated to teaching. Two interviewees were on the supply list and one was on the waitlist for the supply list. All teachers were continuing their education by taking Additional Qualification (AQ) courses through the Ontario College of Teachers

Data Collection

This study employed a grounded theory approach. Initial participant information was gathered through a Participant Information Questionnaire, while the primary data source was qualitative in nature, collected through semi-structured interviews.

Participant information questionnaire. The Participant Information Questionnaire (PIQ) was used during the selection process and ensured all participants met the study criteria. The PIQ was a two-page descriptive questionnaire that pertained to participants' demographic information and education background. Sample questions included, "At what university did you attain your teaching degree?" and "In what year did you graduate?" The PIQ was also used to ensure all participants had similar qualifications and met the study criteria with sample questions including, "What are your current teaching qualifications?" and "What is your first teachable?" Furthermore, open-ended questions were used to inform and create a more robust qualitative interview guide. Examples included, "List some of the key strengths of your Teachers' College experience" or conversely, "List some of the key challenges you faced during Teachers' College".

Semi-structured interviews. Semi-structured interviews were chosen as the method for primary data collection given previous research suggesting this approach allows for deep exploration of experiences (Drever, 1995). It has been noted that semi-structured interviews provide the most useful data when sample sizes are relatively small, while still allowing for in-depth thematic analysis (Alvarez & Urla, 2002). Further, due to the flexible nature of this approach, the researcher can make thought provoking interjections during the course of the interview, which allow for further explanation or detail concerning certain arguments made by the interviewee (Drever, 1995).

The interview guide was created following discussions with various individuals within the field of education, including current and retired physical education teachers, a high school principal and a superintendent of education. Each of these parties had a unique perspective regarding H&PE, and subsequently, helped to inform and pilot the interview guide to assure optimal relevance, with significant and important questions. The interview guide was refined prior to data collection, with questions in three key areas, aligning with the three main purposes of the study. First, questions focused on teachers' experiences throughout the education and training process, particularly in relation to physical literacy. Sample main and probing questions included "Tell me about your experiences in Teacher's College." "What were the major focal points of your physical education classes?", "Was physical literacy addressed?, If so, how?" and "What strategies were developed to promote and emphasize physical literacy?" Second, question focused on exploring new teachers' perceptions of physical literacy and examining how they understood and operationally defined the concept of physical literacy. Example main and probing questions were, "What is your understanding of physical literacy?" and

“What does it mean to be physically literate?” Third, main and probe questions focused on how physical literacy was integrated in a classroom (i.e., gymnasium) setting, to investigate new teachers’ first introductions into teaching, with a particular focus on physical literacy. Sample and main questions included, “What was taught/what did you learn throughout your teaching placement? What approach did your associate teacher take in terms of H&PE? Did you integrated concepts of physical literacy within your placement? If so, describe.

The interviews were conducted either in person (n = 7) or via telephone (n = 3) and ranged in duration from 45 minutes to an hour and a half. Telephone interviews were used for those individuals who were too geographically dispersed to meet with in person from the perspective of cost effectiveness. Telephone interviews are extensively used within qualitative research (Barriball, Christian, While, & Bergen, 1996; Carr & Worth, 2001) and are a well-supported approach in terms of data collection (Aday, 1996). Interview times and dates were chosen by the participant and a mutually convenient and neutral location was chosen for those face-to-face interviews.

Data Analysis

Analytical Steps. Data analysis is central to building theory (Corbin & Strauss, 2008). Each interview was audio recorded and transcribed verbatim, with data analysis commencing immediately following collection, ensuring interplay between data analysis and data collection processes (Corbin & Strauss, 2008). Using a systematic set of grounded theory analysis procedures, data was analyzed through a multi-step practice to develop and derive theory (Corbin & Strauss, 1990; Strauss & Corbin, 1994). Transcripts were then read and re-read to assure integrity. Consistent with past recommendations

(e.g., Weiss, 1994) minor editing was done to the participant transcripts in order to clearly and accurately communicate the full intended meaning (e.g., filter words such as um and uh-huh were removed). Each participant was then assigned a pseudonym in order to maintain anonymity.

Open coding. Open coding was used to identify concepts and uncover properties and dimension within the data (Corbin & Strauss, 1998). Data analysis began with a line-by-line examination of transcripts. This worked to create descriptive, multi-dimensional categories which formed a preliminary framework for analysis. Specifically, text was divided into meaningful pieces of information known as meaning units (MU). Words, phrases and events that appeared to be similar were grouped into the same category. The responses aligned with the primary objectives of the study concerning a) how teacher education introduced and taught concepts pertaining to physical literacy b) how physical literacy was understood and c) how this understanding then translated into practical settings. These categories were reworked and/or gradually modified during the subsequent stages of analysis.

Axial coding. Axial coding is the second of Corbin and Strauss' (1990) three-phase methodological approach, which serves to put the fractured data back together in new ways "by making connections between a category and its subcategory". It works not only to describe but also to understand a particular phenomenon from a different perspective. During axial coding the researchers worked to build a conceptual model, creating relational statements between categories.

Selective coding. Lastly, selective coding is the process by which central categories are selected and relationships formalized into a theoretical framework –

essentially the “process of integrating and refining the theory” (Corbin & Strauss, 1990; Strauss & Corbin, 1998). To accomplish this final task, the analyst selects a core category and then relates all other categories to the core, as well as to the other categories.

Theoretical saturation. The coding process continued until a point a theoretical saturation was met. This point is achieved when data does not reveal any new properties or emerging dimensions. “Once a category is saturated it is not necessary to theoretically sample anymore...theoretical completeness is achieved for this particular research” (Glaser, 2001, p. 192).

Results

Results revealed three central components to new teachers’ experiences surrounding physical literacy: Formal Teacher Education, Curriculum, and Teaching Practicum. Each of these components is described and explained through subcategories and associated concepts.

Formal Teacher Education

Teachers spoke extensively about their preparation and teacher education within their Faculties of Education in terms of H&PE, with a particular focus on insufficient curricular focus, and insufficient time to gain knowledge and practice.

Insufficient curricular focus. Many participants felt as though their teacher training experience did not focus sufficiently on curriculum. As Brian revealed, “To be honest, I can probably count on one hand the times that we looked at the [H&PE] curriculum during class.” Similarly, Jennifer explained,

We opened the document [H&PE curriculum] from time to time. We looked at what the expectations were for each unit. What the students had to achieve or

should be competent in doing. But we never really went over the different ways we can get the same outcome.

Further, Amanda emphasized how focus was placed instead on classroom management (i.e., organization, diffusing conflict, and administration), at the expense of better curricular understanding, “Teacher’s College focused a lot on law and our legal obligations as a teacher, how to keep our classroom in order, how to refocus students when they aren’t behaving, things like that.”

Insufficient time to gain knowledge and practice. Many new teachers also identified time as a limiting factor in both the practical and theoretical settings, suggesting increased time in the program would have allowed them to gain a greater depth of knowledge in terms of literature and research related to health and physical education, as well as provide them with more time to experiment and implement new ideas and further develop their teaching skills. Essentially, they would have appreciated more time to immerse themselves within the profession,

I will admit during most of Teacher’s College I did complain and thought that I was ready. I really wish I had more time...More time to learn and practice. I feel like we just skimmed the surface. (Daniel)

Christopher echoed this sentiment, “I am always nervous because I don’t know if I know enough. Maybe I should be spending more time researching and reading and seeing what’s out there.” Jennifer was also concerned they had not learned enough about children’s development, “I started off in Child and Youth Studies so maybe I am biased but we don’t learn why we should do something or not do it. We aren’t told if certain skills may be too advanced and so on.” Other new teachers expressed their insecurities

regarding their ability to translate their knowledge into practice: “The curriculum is a huge document and tells you what should...needs to be taught but it doesn’t tell you how.” (Andrew)

Curriculum

Closely tied to their experiences related to formal teacher education, were concerns about knowing, understanding, and applying their H&PE curriculum document.

Lack of a definition of physical literacy. New teachers often highlighted the lack of a definition of physical literacy in the secondary school curriculum, resulting in a trickle-down effect to their own understanding and integration of the concept. “I think the understanding of physical literacy is lost” (Daniel). Participants also struggled to legitimize or promote physical literacy in a positive way without such a definition, saying, “Other teachers need to know this [physical literacy] is just as important as learning to read.” (Michael)

Disjointed elementary and secondary curricula. New teachers spoke about difficulties experienced related to the lack of introduction of physical literacy across H&PE curricula. In particular, they outlined that the elementary and secondary school curriculums had become fragmented. The K-8 working document had been released in 2010, withdrawn, but then re-released in 2012. In contrast, the 9-12 working document was released in 2010, withdrawn, and had not been re-released at the time of data collection, leaving new secondary teachers working from the 1999 curriculum document, while still integrating some components of the 2010 document. New teachers realized this as a limitation when trying to introduce physical literacy in their teaching. As Michael said, “It’s not in the [secondary school] curriculum so we aren’t quite sure what

it looks like at the high school level.” Another participant revealed concern pertaining to the discontinuity,

We took a look at both [elementary and secondary H&PE curricula]... It’s pretty similar but somethings are missing from the high school curriculum... They are hopefully being taught this stuff and then they come to high school and we have a different focus. We [H&PE teachers in elementary and secondary] need to all be on the same page. (Christopher)

Creative integration of physical literacy. Although many participants had only a vague idea of physical literacy, numerous mentioned that the curriculum had such great depth that they could adapt and modify units to incorporate these ideas. Nicole said, “You can add physical literacy. Its pretty much inline with what we teach now anyways. We can change the way we word instructions or how a drill is performed to have it more reflect it [physical literacy].” Michael furthered this point saying, “We put our own spin on things. If we want to add physical literacy in there we could find a way.”

Lack of curricular assessment and evaluation criteria. Participants of the study expressed frustration regarding a lack of direction concerning assessment and/or evaluation related to physical literacy. The new teachers made mention that to date there was no consistent tool within the curriculum to measure a student’s physical literacy, “Sure great concept [physical literacy] but how can I tell if a student is making progress...getting better?” (Amanda) This point was also emphasized by Daniel who said, “My job is to evaluate progress. I love watching a student get better, improve. But with physical literacy, it’s not clear what I am looking for so I can’t help my students.”

Teaching Practicum

New teachers spoke extensively about their experiences in teaching practicum placements, as it appeared this was where their challenges in implementing physical literacy became most evident.

Weak fundamental skills. In discussing their experiences in practicum placements, new teachers frequently highlighted their frustrations around students' fundamental and basic skills. As Michael said, "It feels like we are teaching from scratch. Some kids come to high school and can't shoot or pass a ball and then we have to teach basic stuff. They don't have skills to build on." New teachers often highlighted major differences in students' basic movement skills, suggesting, "Some are real athletes; others I don't think have ever played a sport. They should all know the basics though. They've all had gym class for the past eight years" (Jennifer). These differences often resulted in teaching challenges, as new teachers felt they had to dilute lessons and teach rudimentary skills in order for all students to be operating within a similar skillset, and forego other aspects of the curriculum that involved complexity or increased intricacy. Sarah expressed her frustration by saying, "Sometimes my lesson plans go out the window in September because I get a batch of students that just don't have the skills and I need to spend the semester bringing them up to speed."

Through these conversations, many concerns were raised, which were seen as sources of aggravation in the greater problem. In particular, new teachers were frustrated that greater value was not placed on physical education throughout the curriculum. For example, they expressed their concerns that generalists rather than specialists were

teaching H&PE at the elementary level, and that there was little focus on H&PE in the teacher training process of non-specialists.

I don't teach math for a reason. That reason is I wasn't taught how to. They [elementary school teachers] have to teach phys-ed though, so why don't we [Faculties of Education] teach them how to do it? (Daniel)

Christopher further expressed frustration regarding the attitude of some elementary generalist teachers towards H&PE, suggesting that withdrawal of H&PE was frequently used as a form of punishment: "Students won't have phys.ed. if they are behind or misbehaving."

Associate teachers' approach and content delivery. As outlined above, associate or 'mentor' teachers are those who supervise and evaluate teacher candidates within a practical teaching setting. While most new teachers spoke positively about associate teachers' mentorship role in supporting them and providing them with appropriate feedback, they also expressed some concerns about their associate teachers' approach and content delivery. Brian said, "... the mentor teachers that I was paired with, great teachers but, you know, stuck in their ways. Taught things their way, the way they've been teaching it for 10 to 15 years." New teachers often expressed a desire to implement new approaches or content (i.e., physical literacy), but some were hesitant or even fearful to challenge the status quo. Amanda articulated concern regarding future job prospects, "It's hard to get a job and we all want one. We see a teacher with a full time job doing it one way and think that's the way we need to do it if we want a job too." There was also a tendency to both accept and embody current practices instead of integrating

new ideas, "...every unit and every component just seemed to flow together. Was it innovative or anything? No, but it worked" (Nicole).

Perpetuated sport-based physical education. In line with findings outlined above regarding associate teachers' approach and content delivery, were findings related to the perpetuated sport-based physical education program. Physical education classes tended to be conducted in a traditional fashion, with units built around specific sports, focused on practicing skills and techniques.

These are learning skills that we really need to evaluate and, the best way to, kind of, assess those skills is to have kids play sports. I mean, we introduce different sports and there's the evaluation of techniques as we progress before we have a game. For instance, basketball, there's basketball drills, learning how to dribble, doing lay-ups, proper technique in taking, foul shots. Learning the rules, three seconds in the key, travelling, double dribbling, before we actually engage into, a game. (Daniel)

New teachers commented on this in relation to a lack of change in curricular approach around physical literacy. "The [H&PE] classroom seems to be the same year after year. The students see typical sports, practice, and then make teams and play the game" (Daniel). "Some things especially related to the health units have really evolved since I have been in high school. But the gym aspect doesn't seem to be going through the same changes or evolution" (Andrew).

Assessment and evaluation. New teachers also spoke extensively of the challenges of assessment and evaluation as they tried to teach, assess, and evaluate the

concepts of physical literacy, given the focus by the Ministry of Education on observable and measureable learning outcomes,

How do you explain to a parent that their child is physically literate? Children, parents and even other teachers understand grades, grades alone. A kid wants to know if they are doing well...and when it comes to parent teacher interviews you have to justify those grades. (Daniel)

Brain spoke to the need for standardized criteria in order quantify evaluation,

It's a great concept [physical literacy] but how do I assess it? How can I deem that a student is meeting the requirements? If I can't answer those questions, I can't teach it. I need to put a grade on their report card. (Brian)

Andrew also emphasized the necessity of such a diagnostic tool in cases students wanted to dispute grades,

...we have rubrics or marking schemes or some kind of grading format. We have a way of defending ourselves if a student asks why they got a mark that is different from their friend's. If we give a mark its because they did or didn't do certain things. (Andrew)

These challenges were also seen more broadly to apply to physical education as a whole. Many new teachers struggled with the subjectivity of evaluation in H&PE. Although they did acknowledge that H&PE could be assessed, they commented that current strategies were not comprehensive and did not take into account the variable skill levels within a given classroom.

Is it fair that just because a kid is athletic they get a better mark? How about that kid that tries really hard and shows an effort? How do we determine what's important? Is it fair that they get the same mark? (Amanda)

Christopher shared similar ideas, "This isn't math. It isn't black or white, right answer or wrong. This is moving and growing and becoming proficient."

Sarah spoke about a need to evaluate and measure progress rather than skill or ability,

Some students come into class with talent so what I can teach them and the gains they make over the semester may be small in comparison to the student who isn't the best athlete and increases their fitness test by a lot. That doesn't mean that each student isn't making progress, just the progress is different... The question when I started though was how do I mark that?

Finally, new teachers highlighted the lack of consistency on this issue among associate or mentor teachers, creating even further confusion.

There don't seem to be a consensus between them [teachers]. Sometimes I don't understand how I should evaluate. What should the marks be based on if there is no right or wrong? (Michael)

Discussion

Towards a Grounded Theory of New Teachers' Experiences Integrating Physical Literacy

A grounded theory presenting new teachers' experiences integrating physical literacy is presented in Figure 1, providing an overview of how the concepts, subcategories, and categories are interrelated. In developing our grounded theory, our findings were analyzed, compared, and understood within the context of past research

and theory concerning H&PE and teacher training. The use of previous theory and research in this manner is consistent with grounded theory methodology (Strauss & Corbin, 1998), and has been used extensively in qualitative studies. In sum, it appears that various breakdowns were occurring within the curricular, formal teacher education, and teaching practicum levels, hindering the successful integration of physical literacy in practice. Specifically, there was interplay between three key areas regarding physical literacy: curriculum, teacher education, and teaching practicum. The proposed grounded theory outlines interactions of these three key concepts, which may inform future processes whereby teachers are being prepared and trained to integrate new concepts into curricula.

Curriculum. Firstly, it appears that the root of many of the challenges in the effective integration of physical literacy tied back to issues of curricula. A prominent finding concerned new teachers' poor understanding of the concept of physical literacy, in part due to lack of a clear working definition within the curriculum they were working from at time of data collection. This challenge was further accentuated by the patterns of introduction and release of new curricula documents. Specifically, despite the release of elementary and secondary H&PE curricula in Ontario in 2010, which included concepts of physical literacy, these documents were almost immediately retracted following release; the elementary curriculum was updated and re-released in 2012, while the secondary curriculum had not been released at the time of data collection. New teachers suggested this led to issues of discontinuity between the elementary and secondary school curriculum. Further, new teachers also had more general concerns about the structure and content of both the elementary and secondary curricula. Despite the breadth of both

documents, participants felt as though there was a lack of depth within the curricula, and ambiguity concerning subject matter.

Ball and Cohen (1999) revealed the existence of a dynamic relationship between curriculum, teacher, and student; they noted the importance of each element and their interconnectivity, highlighting that educational success is dependent upon the interplay of each component, and that they cannot operate separately of each other. Ball and Cohen go on to state that the curriculum “influences the instructional capacity by constraining or enabling students’ and teachers’ opportunities to learn and teach” (1999, p. 4) These statements assert the importance of new teachers’ introduction and familiarity with the curriculum and it’s content.

Formal teacher education. Building upon the findings related to curriculum, come notions related to teacher training and preparation within Faculties of Education. New teachers expressed concerns regarding their preparation, specifically in regards to not receiving sufficient nor comprehensive training on emerging topics or trends in H&PE such as physical literacy; they did not feel they were being provided with suitable baseline knowledge or resources to adequately understand topics, especially physical literacy. Part of this problem may have been a result of disconnect between teacher preparation experiences delivered by Faculties of Education and curricular documents delivered by Ministries of Education. Physical literacy was being discussed in the specialized teacher qualification for H&PE teacher education and preparation programs; however, breadth and depth were limited, given it was not outlined in the operational H&PE curriculum at the secondary level.

Findings may also be explained in part by the increased pressure on teacher education and preparation programs in recent years (Adams & Cox, 2008). During the late 20th century, there was a call for the reform of teacher education programs; teacher education programs moved from primarily knowledge based and placed greater emphasis on practice (Darling-Hammond, 1994). However, concerns now are being raised regarding adequate time spent in the formal education setting acquiring theoretical knowledge (Kleickmann et al., 2013). It has been argued that while a standards-based well-established program structure may seem imperative to ensure teacher quality and the legitimization of the profession, it frequently does not translate into a physical education context (McNeil, 2000; Rossi, Tinning, McCuaig, Sirna, & Hunter, 2009), as teaching and learning are multi-dimensional and involve both complex and interconnected process (Maguire, 2010). It is evident that teacher education and teacher training programs are imperative to raising education quality, yet research concerning optimal teacher education structure has been significantly under researched.

Teaching practicum. The context in which breakdowns in physical literacy integration were arguably most evident, was in practice - throughout new teachers' practicums. New teachers expressed difficulties during their practical placements once again due to unfamiliarity with the definition of physical literacy and its related concepts, leading to a subsequent disconnect in subject matter and teaching approach. In addition, associate or 'mentor' teachers were often unclear about concepts of physical literacy and failed to lend knowledge or mentorship to new teachers in this area. Nonetheless new teachers consistently communicated the integral role of their practicum in their development as a teacher, in contributing to their understanding of how to facilitate

learning in the classroom (i.e., gymnasium), and reported adopting habits and teaching methods as demonstrated by their associate teacher. These findings are supported within the realm of education literature, as there is general agreement of the importance and critical component the teaching practicum plays for teacher training (Beck, & Kosnik, 2002).

Despite this, past research also indicates associate teachers can demonstrate power and control over their student teachers, perpetuating traditional teaching methods that exist within the teaching practicum, that may be dated or lack innovation (Russell, McPherson, & Maertin, 2001). New teachers in this study followed their associate teachers' lead in taking a traditional sport-based teaching approach in delivering H&PE, it seemed in part because of their fear of challenging the "status-quo" and taking risks, as many participants spoke with apprehension about making changes in their practicum classrooms (i.e., gymnasiums). This seemed particularly evident in light of the climate within Ontario at the time of data collection, with limited available teaching positions, and concern that their ingenuity would be frowned upon. This fear or apprehension acted as a detriment or roadblock in the evolution of H&PE along with the development or progression of teaching style(s). Townley (1993) re-emphasizes Foucault's idea of power relation, suggesting that power is an underlying element within the mentoring experience of the teaching practicum, and that this power-relation informs what is "right" or a normal standard of practice versus what is considered divergent from the prevailing structure. Essentially, from Foucault's previous research, Townley suggests that it is through power that thought patterns are perpetuated from one teaching generation to the next.

The sports-based H&PE approach seemed particularly problematic, as participants suggested this structure could in fact hinder student enjoyment. Given the traditional culture of H&PE, Ennis (1996) reported that students are profiled based on sport related skilfulness, and this skilfulness buys opportunities and prestige within the classroom. These findings are in line with past research suggesting that strictly sport-based physical education may be detrimental to student success and lifelong enjoyment of physical activity (Ennis, 1996). Although there is extensive research concerning youths' positive development through sport (e.g., Gould & Carson, 2008), most of this research has been conducted in community and/or high performance contexts (e.g., see Gould & Carson, 2008), leaving much less known regarding sport's role in optimizing development within a H&PE context. While by no means deliberately, it appears that associate teachers may be doing an injustice to upcoming educators by placing them in a similar cycle whereby physical education and sport become synonyms, with more innovative and multidimensional approaches to teaching physical literacy pushed aside.

Lastly, there were key challenges surrounding feasibility of assessment and evaluation within teaching practicums, with several factors collectively contributing to these challenges. For example, the Ministry of Education's heavy reliance upon observable and measureable results to assess and evaluate, made the lack of a tool to quantify and track progress towards physical literacy extensively problematic. Further accentuating this issue was the diversity of students' skill level when entering classes, with many students at the very low or limited end of the spectrum – perhaps a reflection of insufficient or ineffective H&PE programming in earlier years. Consequently, new teachers struggled to measure the effectiveness of the program(ing) they were delivering.

These issues again play back into notions related to the curriculum document, as a clear working definition of physical literacy within curricula would lay the foundation for the development of an appropriate tool for formative and summative assessment. Gibbs and Simpson (2004) highlighted that student learning is best supported when instruction and assessment are based on clear learning goals and are differentiated according to student learning needs, while Tremblay and Lloyd (2010) expressed that “careful measurement will improve the standards, expectations, profile, credibility, and confidence of the profession leading to more physically literate children” (p. 30). Interestingly, despite extensive challenges, new teachers often suggested they found creative and innovative ways to integrate concepts of physical literacy into their early teaching experiences.

From Grounded Theory to Practical Implications

As evidenced within the first component of the grounded theory, the adoption of physical literacy in the classroom (i.e., gymnasium) will continue to be thwarted until a stronger and/or formalized presence is created within curriculum documents. It appears that successful integration of physical literacy is heavily reliant on a comprehensive curricular document, which clearly defines physical literacy, providing a dependable resource for teachers. Further a curricular document that incorporates assessment criteria is necessary in order to provide a strong vision regarding student goals and outcomes. A comprehensive vision as to the evolution of physical literacy, through all grade levels is also required, so that teachers can structure H&PE programs in such a way that learning objectives can be monitored long term. It appears that curriculum is the crux of many teacher education and teacher preparation programs, and without a modernized or

cohesive curriculum, Faculties of Education will continue to struggle to provide adequate training to new teachers.

As evidenced by the second component of the grounded theory, formal teacher education (i.e., within Faculties of Education) offers a period where new teachers have the opportunity to develop strong theoretical knowledge. As such, it is critical that comprehensive and sufficient training programs be provided to new teachers to optimize achievement. Specifically, Faculties of Education must offer and deliver clarity surrounding the concept of physical literacy, in turn facilitating new teachers' learning and navigation of assessment tools. In this way Faculties of Education can work to create solid theoretical knowledge of concepts (i.e., physical literacy) and eliminate potential ambiguity regarding the assessment and evaluation of students. Interestingly, many new teachers identified time within the Faculty of Education program as a limitation to their optimal education and training experiences. Beginning September 2015, those admitted into Faculties of Education will be required to complete a two-year (i.e., 16-month) versus one-year (i.e., 8-month) program. According to the Ontario University Application Centre (2014) the extended programs "will require a higher number of days spent in practicums (supervised placements in classrooms), and will include core elements reflective of the Ontario curriculum and government's priorities for teacher education."

Lastly, the teaching practicum plays a major role in bridging the gap between theory and practice, as this is when new teachers have the best opportunity to apply theoretical understanding of new concepts, such as physical literacy, into practical settings. Associate teachers, along with Faculties of Education, must provide examples as to how new concepts can be integrated within classroom (i.e., gymnasium) settings.

Change needs to be both advocated and reinforced by the associate teacher so that there may be an evolution within H&PE classes. Previous research has shown that teacher candidates are most confident, willing to take risks, and subsequently, open to introducing new concepts when they feel competent in their skills, and feel within a safe environment, where feedback is presented in a positive and constructive manner (Kwan & Lopez-Real, 2005). As such, it is during this stage that new teachers have the potential to become familiar with the application of physical literacy and begin honing their assessment techniques. While the current structure of the curriculum posed many challenges for new teachers, it also appears to offer a certain flexibility in terms of content delivery and interpretation by the educator; consequently, new teachers should be encouraged to introduce new concepts in various fashions, keeping students both engaged and interested in subject matter.

Collectively, findings as presented in the grounded theory highlight numerous breakdowns occurring within the interconnected levels of curriculum, formal teacher education, and teaching practicum, hindering the successful integration of physical literacy in practice. However, it is our belief that should new teachers have more constructive learning experiences that better informed their knowledge, understanding, and delivery of physical literacy, they would be more successful in their integration and implementation. It is unlikely that each component can independently offer optimal outcomes, but rather, that success is contingent on all components sharing a similar vision.

Strengths, Limitations, and Future Directions

This study explored new H&PE teachers' experiences integrating physical literacy. Findings highlight areas of understanding while also increasing awareness of potential gaps that exist between theory and practice. That is to say, the study emphasizes conceivable incongruences and limitations in new teachers' learning experiences within their Faculties of Education, and how their knowledge is being translated and disseminated into practical settings (i.e. physical education class). While the study's findings offer important insight in advancing our understanding of the integration of a new concept such as physical literacy into practice through the lens of new teachers, attention to limitations of the study must also be acknowledged. In particular, this study investigated the experience(s) of only new teachers. Further research would benefit from involving current experienced teachers, education administration (i.e., principals and superintendents), instructors from Faculties of Education, and students, to provide more insight regarding how new and emerging concepts such as physical literacy are being introduced, taught, and reinforced.

Research examining how to better support new teachers' education and preparation is also required, given findings suggesting breakdowns regarding content delivery within teacher education programs. Specifically, further research should aim to better understand teacher education program objectives, content delivery, and effectiveness, to discern optimal means of meeting program objectives, and more broadly, whether program objectives align with new teachers' required knowledge and skills once in the classroom. Such research will have the potential to inform where particular gaps exist in the formal H&PE teacher education process, and can perhaps lead

to possible ways of overcoming these obstacles.

Interestingly, new teacher softens seemed to suggest through their communications that they had come to accept the “status quo” or sport-based approach to H&PE, in part because they feared challenging associate teachers within the climate at that time. The quality and success of the practicum is dependent very much on the role and effectiveness of the supervising teacher (Koerner et al., 2002). As such, research must be conducted concerning the power relationships that exist during the teaching practicum and how to overcome such barriers so that new teachers are functioning within a more positive environment. Research must also explore how to better inform mentor teachers of emerging concepts and trends within their field, to in turn facilitate their ability to lend their expertise to new teachers, effectively and creatively integrating new topics. Further, findings highlighting new teachers’ acceptance of ‘status quo’ also indicate value in conducting research on their motivations for integrating new concepts such as physical literacy into their teaching, while also suggesting the value in further investigating what ‘creative integration’ might look like in terms of both process and outcome.

Evidently, without a designated and formulated diagnostic tool it is difficult, if not impossible, to assess teaching competencies and implementation of physical literacy in H&PE classes. Future research must continue to explore how physical literacy can be measured across all grade levels, in an effective and practical manner to enhance the physical literacy experiences of H&PE students, teachers, and educational administrators alike. While a preliminary tool has been introduced, many limitations remain, including an efficient process for assessing students on multiple outcomes (CAPL, 2013).

Finally, also integral to this discussion is a comprehensive understanding of physical literacy which is clearly articulated in curriculum documents, which make it very clear how to best facilitate theoretical knowledge within the formal education setting. Not only is it necessary for educators to understand physical literacy, but it is also essential for students to understand and buy into the concept. Further research is needed in order to assess if and how physical literacy is being taught to and learned by students. In addition, research will be necessary to assess its effectiveness. Longitudinal research is required to examine if and how physical literacy may be changing child and youth physical activity behaviours and if these behaviours remain for a prolonged period.

Concluding Remarks

Physical literacy has become an integral component of the Ontario H&PE curriculum as well as other H&PE curriculums across Canada. Embedded within the definition of physical literacy is the apparent aim of allowing students to master fundamental movement skills and providing them with an understanding of how to participate appropriately in a variety of environments within their individual range of ability; physical literacy works to promote confidence and confidence within the realm of physical activity, which in turn acts as a cornerstone to lifelong participation in physical activity. Findings of this study highlight the importance of physical education programs providing all students with interesting, meaningful, and intrinsically rewarding opportunities to participate skillfully in physical activities that include games and sports, and that too many programs may be limiting children and youth's access not only to the joys of participation, but also to personally and socially rewarding and satisfying ways to gain the health-related benefits of physical activity. To promote positive physical

education, educators must provide a meaningful, instructionally effective, and safe environment for all participants.

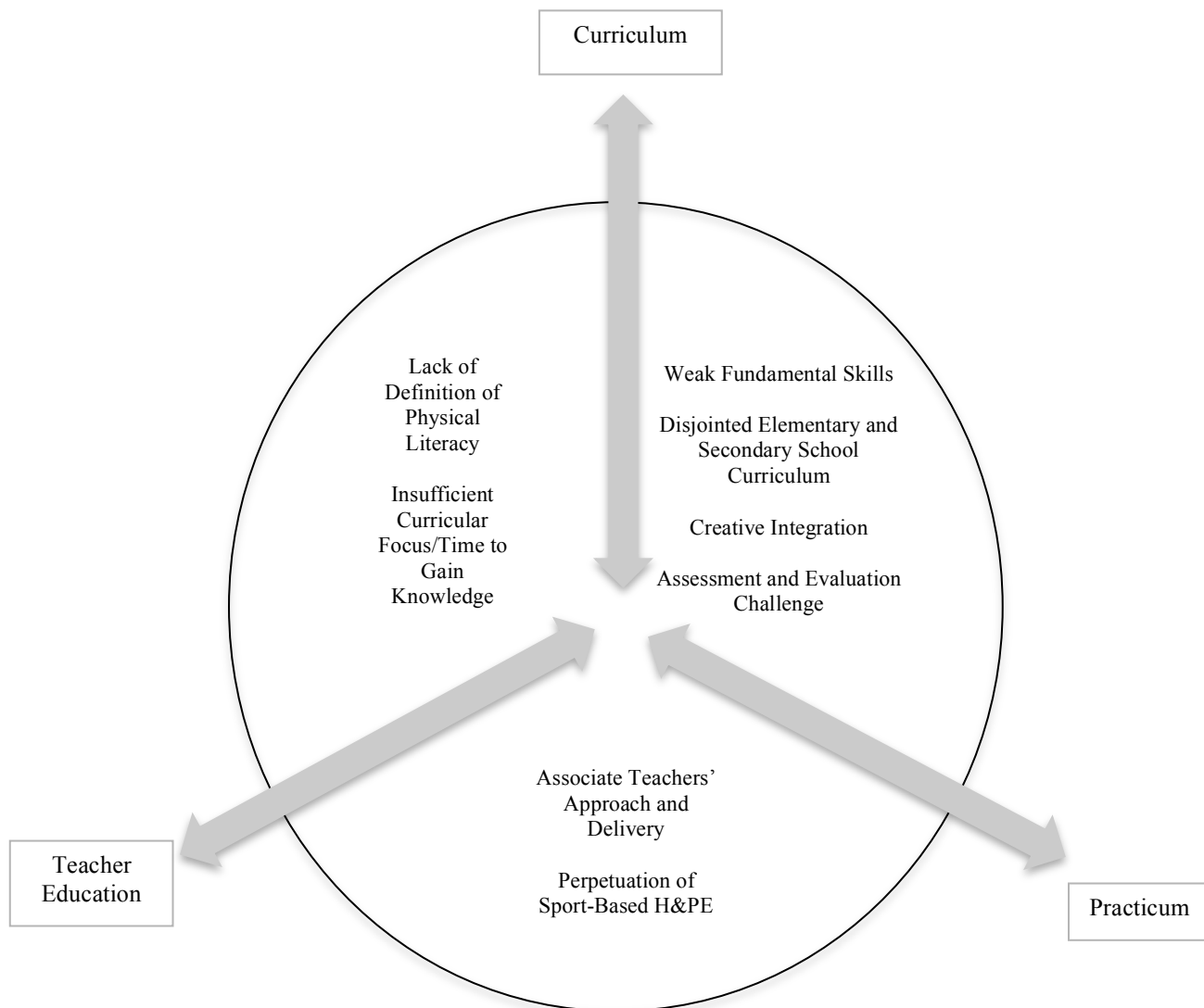


Figure 1. Grounded theory of new teachers' experiences integrating physical literacy

IV. General Discussion

This study used a grounded theory approach to understand physical literacy through new teachers' experiences. It took a multidimensional approach by exploring how teachers defined and understood physical literacy and how this then translated into practical or classroom settings. This study is particularly timely, given current concerns around overweight and obesity (Stone et al., 2012; Higgins et al., 2009), and the potential role of schools.

Specifically, physical activity has been shown to have major physical and mental benefits, contributing decreased heart disease, stroke, and diabetes (Deckelbaum & Williams, 2001; Ebbing, Pawlak, & Ludwig, 2002; Tremblay & Willms, 2003), as well as self-affect, cognitive academic skills, and behaviour (Strauss, 2000). The statistics concerning are particularly concerning, given increasing reports that childhood obesity often tracks into adulthood and positive physical activity and health behaviours established at early ages are critical for the formation of habits in adulthood (Trudeau et al., 2004; Whitaker, 1997). Schools provide a unique venue for children and youth to engage in physical activity, given they serve nearly two million youth within Ontario (Education Ontario, n.d.). The idea of the school environment serving as a potential intervention or preventative strategy to promote health is not a newly conceived idea; physical education has been shown to have the potential to lay solid foundation upon which to promote lifelong physical activity as well as advocate for positive health behaviours (e.g., Telama et al., 2005). By the same token however, schools are facing an increasing challenges to allocate time towards physical education and physical activity. Recent reports indicate that majority of school are failing to meet the required 20 minutes

of Daily Physical Activity (Stone et al., 2012) and fewer than one in five schools are meeting the recommended 150 minutes of physical education per week (OASPHE & Ophea, 2007). Physical literacy, a new buzzword in the realm of H&PE, operates on the crux of providing students with the knowledge base and tool kit to become and remain active for life (Mandigo et al., 2009). Physical literacy has been identified as a new concept with major potential and should operate in a fashion to fill some of the existing gaps within current H&PE classes. There is very little research however that has focused upon mediating both successful and effective H&PE programs that work to achieve these aforementioned goals. Further, little is known concerning how teachers are being educated and trained to implement the concept of physical literacy as well as, from a practical standpoint, how physical literacy is integrated into the classroom and what that ultimately looks like.

Given the above stated areas of concern, this study explored new teachers' learning and integration experiences surrounding physical literacy. More specifically, this study offered a deeper understanding of how teachers perceived the concept of physical literacy and how that knowledge was translated from theory to practice. Findings of this study extend the understanding of school-based physical activity and H&PE, and may offer insight into some of new teachers' challenges and optimal mechanisms for facilitating and fostering efficient and comprehensive H&PE classes. In examining H&PE through the lens of the new teacher, this study gained a more complex understanding of how teachers in training are prepared to deliver H&PE curricula, particularly through the lens of physical literacy. Findings may also contribute to identifying possible ways to improve the experience for both the new teachers and

children and youth within school-based programs. Although evidence from this study suggests that physical literacy is a component and is being taught within formal teacher education programs, participants expressed difficulties defining the topic, implying new teachers did not have a clear understanding of the concept, which led to a ‘trickle down effect’ of less-than optimal integration of the concept within their practical settings.

As previously mentioned, there is a gap in research both in understanding the teacher education processes, and specifically in regards to physical literacy. At the time of the study there was no research available regarding how teachers were taught to understand physical literacy and how this then translated this understanding into practice. Despite research acknowledging the need for improvement(s) regarding pre-service teacher education programs (e.g., Darling-Hammond, 2000), there has been little research that suggests how to overcome current barriers and obstacles. Further, regardless of dissatisfaction expressed towards formal teacher education, there has been only a minimal evolution concerning curricular changes or modification to practices within Faculties of Education (Metzler & Tjeerdsma, 2000).

The results of this study align with and reinforce previous research that suggest formal teacher education programs are not providing sufficient training or instruction, and show this is particularly the case in relation to physical literacy. Participants expressed having an unclear or ambiguous understanding of physical literacy. Given substantive investment in physical literacy at the provincial ministry level, these findings are concerning, as without both an expansive depth and breadth of knowledge it is unrealistic to expect teachers to have confidence to deliver programming through the lens of physical literacy.

Furthermore, there remains a lack of literature regarding the optimization and facilitation of learning during the teaching practicum. There is research suggesting the importance of a positive teaching practicum in the learning experience of new teachers (Darling-Hammond, 2005). Supporting past research, all participants mentioned the role of the teaching practicum and associate teacher within their formal education. What is concerning however, is the idea that the teaching practicum seemed to reinforce or perpetuate a dated and sport-based approach to teaching H&PE. As well, new teachers did not feel encouraged to engage or integrate new practices such as physical literacy, which has the potential to lead to further breakdown in effective integration of physical literacy, as these new teachers move into career positions.

This study also contributes to research by Tremblay and Lloyd (2010) advocating for an assessment tool for physical literacy, suggesting that an objective and comprehensive measurement tool is critical for physical literacy to be elevated within the realm of education. Participants of the study supported their concerns, expressing a need for an evaluation measure so that they can justify the integration of physical literacy. Many interviewees commented on the necessity of an evaluation criterion simply so they could justify the importance of physical literacy to students and parents, as well as other educators. At the time of the study no assessment or evaluation tool existed pertaining physical literacy. However a new tool, the Canadian Assessment for Physical Literacy (CAPL) “is the first comprehensive protocol that can accurately and reliably assess a broad spectrum of skills and abilities that contribute to and characterize the physical literacy levels of participants” (CAPL, 2013). Evidently, the CAPL is in its infancy, and many challenges may be anticipated, but it is a step in a promising direction towards the

evaluation of physical literacy within the school setting, and CAPL has created training materials to assist educators in effectively administer and/or use the CAPL scoring system (CAPL, 2013).

In conclusion, this study has contributed to emerging research on physical literacy and teacher training and education. The findings of this study demonstrate that currently, there exists a gap between theory and practice. Efforts must be directed towards developing a more comprehensive curriculum within Faculties of Education that provides new teachers with a consistent and palatable definition of physical literacy as well providing a more in depth knowledge base. Research must also begin to explore how to better keep current teachers educated and informed about upcoming trends, such as physical literacy, so that they may provide better support and feedback during the teaching practicum. In doing so, it is believed that associate teachers can help to further new teacher education programs by providing them with practical knowledge concerning successful and effective integration techniques. Having new and current teachers thinking in a similar manner, H&PE may evolve to encompass more relevant and applicable programming to increase children and youths' physical activity behaviours. Having the associate teacher become familiar and knowledgeable with novel ideas within the H&PE field, education may begin to bridge the gap between theory and practice. A concerted effort is required from Ministries of Education, Faculties of Education as well as a private and public school boards to work together to enhance new teacher education. Lastly, newly emerging assessment tool pertaining to physical literacy must be implemented so that teachers, both new and current, may begin to more legitimately promote physical literacy within H&PE, to solidify and validate physical literacy as a critical component of

H&PE. In sum, this study highlights many challenges, but also points to clearer directions necessary at several levels, in order to achieve the goal of increasing lifelong engagement in physical activity, through the integration of physical literacy into schools.

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If yes, please list: _____

What is your first teachable: _____

Other teachable(s) (if applicable)

Is this your first career: Yes No

If no, please list pervious career(s) _____

If you are currently teaching, please circle the amount of years from the completion of teacher's college to being placed on the supply list: 1 2 3 4
5 5+

If you are currently teaching, please circle the number of years from supply list to full-time position: 1 2 3 4 5 5+

If you are currently teaching, what grade level(s) do you teach (circle one): primary junior/intermediate senior

List some of the key strengths of your Teachers College experience:

List some of the key challenges you have faced during your time in teachers college:

APPENDIX B: Teacher Interview Guide

1. Tell me about how your past experiences shaped your decision to become a Health and Physical Education teacher?
2. What was your experience of Teachers College?
 - How were classes constructed? Was it theory driven? What were some of the major focus points of your physical education classes? Was physical literacy addressed - If so, how? “What strategies were developed to promote and emphasize physical literacy?” How do you see the role of assessment and evaluation?
3. How is physical literacy addressed in Teacher’s College?
 - How is physical literacy approached in the classroom? How is physical literacy defined by the Ontario curriculum? How do you define physical literacy? What does it mean to be physically literate? Do you feel physical literacy is an important component of remaining physically active throughout the lifespan? What strategies, techniques and tools are developed in Teacher’s College in order to promote and emphasize physical literacy?
4. Tell me about your placement/teaching blocks during teachers college?
 - What was taught/what did you learn throughout your teaching placement? What was taught/what did you learn throughout your teaching placement specifically concerning physical literacy? What approach did your associate teacher take in terms of H&PE? Did you integrate concepts of physical literacy within your placement? Was placement what you expected? How did it differ? What learning curves or obstacles did you face and how were you able to overcome them? What direction and information were you able to gain in placement that was not addressed in classroom sessions? How did your associate teacher and other staff support (feedback, shared experience etc.)
5. How prepared do you feel to teach HPE?
 - In what ways could Teachers College be improved to better prepare teacher candidates? Are there additional resources available to you? Are you aware of any additional or alternative avenues to gain a greater understanding of HPE?
6. What are your ideas about the current curriculum?
 - What are some of the strengths of the curriculum? What are some of the limitations? What are some of the key challenges that you face in implementing the curriculum? Do you feel the curriculum addresses current concerns? Explain. Are there any key areas of the curriculum that you would modify? Why? How?

7. As you know, obesity and overweight among school-aged youth is a growing public health concern. The literature often recommends school-based physical activity and education as a possible way to combat the crisis. Can you speak to ideas regarding how the current curriculum acts to address this issue?
 - What are your ideas about lifelong physical activity? How do you feel the curriculum addresses lifelong physical activity? Do you have any suggestions as to how lifelong physical activity could be better promoted by teachers, schools, and curricula?

APPENDIX C: Informed Consent Form

LET'S GET PHYSICAL: A TEACHER CANDIDATE'S JOURNEY INTO PHYSICAL EDUCATION *York University*

Primary Researcher: Lauren Tristani York University, School of Kinesiology and Health Science, Norman Bethune College, Room 350, 4700 Keele St. Toronto, ON M3J 1P3; Phone: 416.736.2100 ext.20952; tristani@yorku.ca

BACKGROUND INFORMATION: With an ever-growing rise in the prevalence of childhood obesity the school has been named a primary environment in which the disease can be combated. We would like you to participate in a study that will examine how physical education teachers are taught to interpret and apply curriculum-based guidelines and the effects this may have on lifelong physical education. The following brief is intended to provide you with the necessary details prior to giving consent to participate in this study. Please read the following information carefully and feel free to ask any questions you may have.

PURPOSE OF THE RESEARCH: To explore the perceptions and experiences of teacher candidates within the context of health and physical education.

WHAT YOU WILL BE ASKED TO DO IN THE RESEARCH: You will be asked to complete a brief questionnaire regarding demographics and educational background. You will also be invited to participate in 45 min focus group interviews, during which time you will have the opportunity to discuss your experiences and perceptions of Teachers College, your thought about current curriculum design and content and as well as your personal beliefs of lifelong physical activity.

RISKS AND DISCOMFORTS: We do not foresee any risks or discomfort from your participation in the research.

BENEFITS OF THE RESEARCH: The results of this study will advance understanding of the current state of Health and Physical Education within Ontario schools. In particular, the study will provide a view for the “new” teacher’s perspective, a view that has been under explored in the literature.

VOLUNTARY PARTICIPATION: Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer will not influence the treatment you may be receiving or the nature of the ongoing relationship you may have with the researchers or study staff at York University either now, or in the future.

WITHDRAWAL FROM THE STUDY: You can stop participating in the study at any time, for any reason, if you so decide. Your decision to stop participating, or to refuse to answer particular questions, will not affect your relationship with the researchers, York

University, or any other group associated with this project. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

CONFIDENTIALITY: All information you supply during the research will be held in confidence and unless you specifically indicate your consent, your name will not appear in any report or publication of the research. You will be instructed not to record your names or any specific identifiers anywhere on your questionnaires. Your data will be safely stored in a locked facility and / or on a password protected computer and only research staff will have access to this information. Data will be stored for the duration of the study (i.e. 4 years) and will subsequently be destroyed. Confidentiality will be provided to the fullest extent possible by law.

QUESTIONS ABOUT THE RESEARCH? If you have questions about the research in general or about your role in the study, please feel free to contact Lauren Tristani either by telephone at 416.736.2100 ext.20952 or by e-mail (tristani@yorku.ca). This research has been reviewed and approved by the Human Participants Review Sub-Committee of York University's Ethics Review Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, please contact the Senior Manager and Policy Advisor for the Office of Research Ethics, 5th Floor, York Research Tower, York University (telephone 416-736-5914 or e-mail ore@yorku.ca).

Legal Rights and Signatures:

I _____ consent to participate in *Let's Get Physical: A Teacher Candidate's Journey into Physical Education* conducted by Lauren Tristani. I understand the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

Participant's Signature

Date

I give my consent to participate in the focus group interview

Participant's Signature

STATEMENT OF INVESTIGATOR

I, or one of my colleagues, have carefully explained to the subject the nature of the above research study. I certify that, to the best of my knowledge, the subject understands clearly the nature of the study and demands, benefits, and risks involved to participants in this study.

Principal Investigator's Signature

Date