An Interpretative Phenomenological Analysis of Grade 8 Students' Physical Education Experiences in Nova Scotia

by

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Submitted in partial fulfilment of the requirements
for the degree of Doctor of Philosophy

at

Dalhousie University
Halifax, Nova Scotia
July 2020

Dedication

I dedicate this body of research to every health and physical education teacher who works tirelessly to inspire, motivate and encourage children and youth to reach their true potential.

In loving memory of my sister Jenn–my most influential teacher of all time.

Jennifer Ursula Zahavich (July 25, 1979 – March 6, 2011)

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Abstract

In Nova Scotia, the Department of Education and Early Childhood Development is responsible for overseeing curriculum changes and providing physical education (PE) teachers with professional development opportunities and training regarding new curriculum implementation. The current Nova Scotia PE curriculum for Grades 7-9 aims to enhance students' health and continued development of physical literacy; however, there is limited information available about how the curriculum is being implemented or the types of transferable skills students are acquiring as a result. Examining students' PE experiences helps with understanding their perspective of and relationship with physical activity. Therefore, the purpose of this research was to examine the social and environmental factors that influence Grade 8 students' PE experiences. The research aimed to build knowledge on how PE is being supported in Nova Scotia with the goal of providing PE students and teachers a greater local voice in the pursuit of making PE a priority. Elements of Heidegger's hermeneutic phenomenology were applied, where 18 Grade 8 students (7 females and 11 males) were placed in the centre of the investigation. Supplemental interview data from six PE teachers (4 females and 2 males) and document analysis of the PE curriculum were used to support students' reported experiences collected via focus group discussions. The research was contextualized within a Socio-Ecological Model, which represented the social environments within the PE community. Data were analysed using interpretative phenomenological analysis which revealed six themes representing the key issues that influence students' PE experiences. Themes included: (1) student engagement, (2) varying views of PE's purpose, (3) role of the PE teacher, (4) low status of school PE, (5) comprehensive school health, and (6) red tape policies. Based on students' and teachers' reported experiences, two sets of recommendations are presented. The first set is for PE teachers from students, and the second is for PE policymakers from PE teachers. Results may be used to provide guidance for the planning, development, implementation and delivery of future PE curriculum, and to advance our knowledge of the current curriculum as to how it is being experienced by students, perceived by teachers, and supported in schools.

List of Abbreviations Used

AVRCE	Annapolis Valley Regional Centre for Education
CCH	Nova Scotia Department of Communities, Culture and Heritage
CSEP	Canadian Society for Exercise Physiology
CSH	Comprehensive School Health
DEECD	Nova Scotia Department of Education and Early Childhood Development
DHW	Nova Scotia Department of Health and Wellness
DPA	Daily Physical Activity
FMS	Fundamental Movement Skills
HPS	Health Promoting Schools
HRCE	Halifax Regional Centre for Education
IPA	Interpretative Phenomenological Analysis
MVPA	Moderate-to-Vigorous Physical Activity
NCCP	National Coaching Certification Program
NSTU	Nova Scotia Teacher's Union
PACY	Physical Activity Levels of Children and Youth in Nova Scotia
PE	Physical Education
PHAC	Public Health Agency of Canada
QDPE	Quality Daily Physical Education
QPE	Quality Physical Education
SEM	Socio-Ecological Model
TAPHE	Teacher's Association of Physical and Health Education
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization

Glossary

Physical activity	Physical activity encompasses "all leisure and non-leisure body movement produced by the skeletal muscles, which result in an increase in energy expenditure over resting levels" (CSEP 2019, S2, p. 8).
Physical education	Physical education (PE) is a compulsory academic subject for Grades P-10 in the Nova Scotia school curriculum. It is designed to build on students' physical literacy skills from previous grades and to enable them to pursue a healthy and physically active lifestyle outside of school.
Physical inactivity	Physical inactivity is a term used to describe a lack or absence of physical activity. It is usually reflected as the proportion of time not engaged in physical activity of a predetermined intensity and therefore not meeting established physical activity guidelines (Tremblay et al., 2017).
Physical literacy	Physical literacy is the "motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life" (International Physical Literacy Association, 2014).
Quality Physical Education	Quality Physical Education (QPE) is a term used to describe active, inclusive, peer-led learning. A QPE program supports the development of students' physical, social and emotional skills which in part create self-confident and socially responsible citizens (UNESCO, 2015).

Acknowledgements

First and foremost, I wish to express my deepest gratitude to my supervisor, Dr. Sara Kirk, for lending me your time, energy, expertise and patience over these last four years. I am also very appreciative to my research committee members, Dr. Laurene Rehman (Dalhousie University), Dr. Antony Card (Mount Saint Vincent University) and Dr. Angie Kolen (St. Francis Xavier University), for providing invaluable guidance and great support throughout this entire process. As well to my external examiner, Dr. Tim Fletcher (Brock University) for assisting in the final steps of the process. I am also enormously grateful to Niki Power, the former PhD Health Program Administrator and 'PhD Mom', for her incredible support and warm encouragement from the very outset of this journey.

I would like to acknowledge the following groups and individuals for their assistance and contributions to this research: to the student participants (and their guardians/parents) for their involvement; to the teacher participants for their trust and confidence in me; to my research assistants, Lillie Cyr and Alyssa Grimes, for accompanying me on trips to the Valley for data collection; to Shirley Wheaton, for her *invaluable* transcription services; to my personal PE teachers from various stages of childhood who provided me with positive PE experiences and instilled the necessary building blocks to value and pursue lifelong physical activity; and to my personal PhD/PE cheerleaders, Dr. John Sasso and Mr. Rob "C" Chambers, for helping me see the light at the end of the tunnel.

It is also an honour to acknowledge the following grants and scholarly awards which have enabled me to successfully complete my doctoral training, the Nova Scotia Graduate Scholarship and the Physical and Health Education Canada Research Council Emerging Scholar (Doctoral) Award.

And finally, I am most thankful to my three wonderful girls, Esme (18 months), Roslyn (3 years 11 months) and my loving wife, Ashley, for always cheering me on and waiting patiently at the finish line. It's finally time to go outside and play!

Chapter 1: Introduction

"Intelligence and skill can only function at the peak of their capacity when the body is healthy and strong" (Kennedy, 1960, p. 16)

Throughout the last 15 years, I have held many positions where I was responsible for conducting fitness assessments and prescribing exercise for populations ranging from high-performing athletes excelling in sport to individuals managing one or more chronic diseases. Somewhere along this spectrum of health and human performance is the teaching of physical education (PE). During the first year of my doctoral program, I accepted a part-time teaching position at a local independent school, where I was responsible for delivering the current Nova Scotia physical and health education curricula to students in Grades 7-11. This experience left me with a heightened level of respect and appreciation for teachers in general and the work that they do. It also changed the way I perceived PE both as an academic discipline and as a professional field of practice within the public health system.

Physical education is a school subject like no other, as its impact has no boundaries and its effects can be felt and observed both immediately and long-term. The United Nations Educational, Scientific and Cultural Organization (UNESCO) recognizes a quality PE (QPE) program as one that "supports students to develop the physical, social and emotional skills which define self-confident and socially responsible citizens" (UNESCO, 2017). Understanding students' PE experiences can provide important information on how to improve future health-related curriculum and to assist in developing healthy school policy initiatives. The introductory quote is an excerpt from then President-elect John F. Kennedy's famous *Sports Illustrated* article, *Soft American* (1960). It serves as a reminder

to how important physical activity is to the whole child and to the education system in general.

Physical Inactivity: A Cause for Concern Among Young People

According to the World Health Organization (WHO, 2017), children and youth are at the centre of a global public health problem, as low levels of physical activity and high levels of sedentary behaviour are being reported worldwide (Aubert et al., 2018). These inadequate movement behaviours warrant attention, as young people are not moving enough to support healthy growth and development (ParticipACTION, 2018). In Canada, less than 40% of children and youth ages 5 to 17 years are meeting physical activity targets (Statistics Canada, 2019), and based on several reviews (Corder et al., 2019; Hayes et al., 2019; Telama, 2009), there is some evidence suggesting unhealthy movement behaviours established during childhood and adolescence may influence one's physical activity patterns later in adulthood. From a public health standpoint, this is concerning because failure to meet recommended physical activity levels has been identified as the fourth leading risk factor for premature death in adults (WHO, 2009).

The physical, social, emotional and cognitive health benefits gained through daily physical activity, particularly amongst school-aged children and youth, have been well researched, widely accepted, and extend beyond its impact on disease prevention (Biddle & Asare, 2011; Donnelly et al., 2016; Janssen & LeBlanc, 2010; Poitras et al., 2016). In a recent review that examined the relationships between objectively measured physical activity and relevant health indicators, Poitras et al. (2016) reported that children and youth aged 5-17 years who meet recommended physical activity guidelines are likely to experience improved physical fitness (aerobic fitness, muscular strength and endurance)

and bone health, maintain healthy body weight, body composition (fat-free mass) and cardiometabolic biomarkers (cholesterol, blood pressure, triglycerides, insulin resistance and fasting insulin, and fasting glucose), and experience an enhanced quality of life through improved mental health, self-esteem and academic achievement. Conversely, in a review that examined the relationships between objectively and subjectively measured sedentary behaviour and health indicators, Carson et al. (2016) reported that children and youth who do not meet recommended guidelines, are at increased risk for developing chronic illnesses such as metabolic syndrome, cardiovascular disease, type 2 diabetes and certain types of cancers. Both reviews recommend children and youth meet the 24-Hour Movement Guidelines (Tremblay et al., 2016) for the purpose of disease prevention and health promotion.

Despite the known health benefits of meeting physical activity guidelines, there is consistent evidence demonstrating an age-related decline in physical activity across the lifespan, particularly during adolescence (Dumith et al., 2011). These unhealthy physical activity trends are associated with increased risk for chronic disease, which in turn, can create a significant financial burden on the health care system. In 2009, the estimated total annual economic burden of physical inactivity in Canadian adults was $6.8 billion (3.7% of overall health care costs). This included both direct (i.e. value of goods, services or resources used in treatment, care and rehabilitation) and indirect costs (value of economic output lost) of illness, injury-related work disability or premature death associated with physical inactivity (Janssen, 2012). Therefore, research and policy efforts that aim to understand and improve adolescents' movement-based behaviours could offer important public health benefits and thus, warrant further study.

Addressing Physical Inactivity Through Policy

As previously stated, physical inactivity is a global public health problem. In response, many policy documents and action plans have been developed and implemented including at the global, national, provincial and regional/local levels. In 2018, the WHO released the *Global Action Plan on Physical Activity 2018-2030* which aims to reduce physical inactivity in adults and adolescents by 15% by 2030. The *Action Plan* includes four overarching objectives: (1) Create active societies, (2) Create active environments, (3) Create active people, and (4) Create active systems. Each objective is equipped with a list of relevant action items, many of which recommend partnering with the education section to strengthen knowledge and skills in order to provide more options for active play, QPE, adaptive physical activity, fundamental movement skills and physical literacy.

In response to a call for a pan-Canadian framework on physical activity by federal, provincial and territorial governments, the Public Health Agency of Canada (PHAC) released *A Common Vision for Increasing Physical Activity and Reducing Sedentary Living in Canada: Let's Get Moving* (PHAC, 2018). The *Let's Get Moving* policy document is solely focused on physical activity and its relationship to sport, recreation and health, and other relevant policy areas. It aims to align and support the goals and objectives of existing national, federal, provincial and territorial policies, strategies and frameworks in Canada. *Let's Get Moving* is guided by five interdependent principles considered to be foundational to increasing physical activity and reducing sedentariness, one of which involves enhancing children's physical literacy through quality daily physical education (QDPE) instruction in schools. *Let's Get Moving* encourages the education system to increase PE

instruction time and invest in professional development opportunities for their health and physical education teachers.

In November 2018, the Nova Scotia Department of Communities, Culture and Heritage (CCH) issued a response to the nation's *Let's Get Moving* policy document, with their own action plan for increasing physical activity titled, *Let's Get Moving Nova Scotia* (Government of Nova Scotia, 2018). The provincial plan lists several action items relevant to addressing physical inactivity amongst adolescents, including: (1) the development and implementation of a Physical Activity Framework for the public education system that is based on the principles of Nova Scotia's Health Promoting Schools (HPS) framework for healthy school initiatives intended to strengthen the school community (Government of Nova Scotia, 2014e); (2) added support for community and school partnerships that improve physical activity opportunities for students; (3) pilot initiatives that aim to increase physical activity amongst adolescent minority groups that have been historically overlooked; (4) incorporate physical activity throughout the entire school day; and (5) increase opportunities for adolescent students to actively commute to and from school.

In Nova Scotia, the Department of Education and Early Childhood Development (DEECD) is responsible for overseeing the public education system by working with teachers, regional education centres and community partners to "provide children, students and families with a strong foundation for success" (Government of Nova Scotia, 2016). The DEECD is also responsible for the development and implementation of policies and guidelines related to student safety and educational learning outcomes, which includes overseeing curriculum changes and supporting teachers with professional development opportunities and training regarding new curriculum implementation. However, there is

reason to be concerned whether teachers in Nova Scotia are adequately equipped to deliver the curriculum as it is intended. Fraser-Thomas and Beaudoin (2002) conducted a case study analysis of two Nova Scotia junior high school PE teachers' experiences implementing the previous (1998) draft of the curriculum. They reported several constraining factors to implementation including lack of time to achieve all learning outcomes, inadequate equipment, large classes, heavy teaching loads, lack of professional development and lack of consultant support. The authors made several recommendations for effective implementation strategies including more time for PE instruction, additional funding and increased opportunity for professional development. Although some of these challenges were addressed in the development of the current curriculum, namely a reduction in the number of learning outcomes, many of the same barriers continue to be problematic for some PE teachers in Nova Scotia.

Role of Physical Education in Public Health

The purpose of school-based PE has long been debated, as there are as many approaches to teaching PE as there are views of its purpose (Pühse et al., 2011). Sallis and McKenzie (1991) were among the first to challenge the traditional PE model, which primarily incorporated sport-specific activities and movement-based games. The authors argued for a paradigm shift in how health professionals, educators and the public, view the role of PE. This shift, driven by increasing rates of childhood obesity, argued that school PE programs should be used as a vehicle to prepare children for a lifetime of physical activity, and in doing so, should focus on improving students' health. The authors also recommended that more research needs to be done on the immediate and long-term effects PE has on students' cognitive, social, behavioural and physical well-being. Twenty years

later, Sallis et al. (2012) published a follow-up paper highlighting the progress made within the fields of PE and public health, which included the acceptance of PE as a public health resource and the adoption of the term "health-optimizing physical education" or HOPE, as their goals shifted to optimizing the public health impact of PE. The HOPE curriculum model has since been operationalized by Metzler et al. (2013a, 2013b) and integrated into various comprehensive school physical activity programs throughout the United States (Hunt & Metzler, 2017). However, Landi et al. (2016) draws our attention to Tinning's (2010) description of HOPE as an acronymic pun, arguing "that these programs and initiatives are based on hope rather than a sound understanding of the significance of context in all educational endeavours" (p. 169). Landi et al. argued that PE models that propose an entire program to have a sole focus such as HOPE's overarching goal "to help P-12 students acquire knowledge and skills for lifelong participation in physical activity for optimal health benefits" (Metzler et al., 2013a, p. 42), would potentially exclude at least all other purposes of PE including: physical activity for enjoyment and leisure, aestheticism, and competition, movement as a means to develop motor skills, coordination, balance, social and emotional learning, physical literacy, amongst many other possible aspects of learning in PE (Landi et al., 2016).

Tinning (2015) describes the public health approach to PE as one of two dichotomous "camps" that characterize the discourse of the relationship between health and PE. He aligns HOPE with the "instrumental" position, which views PE as a site for promotion of physical activity with the goal(s) of achieving better physical health and the prevention of obesity. The second camp Tinning describes is the "educational" position which argues that the purpose of PE should be fundamentally focused on education and not

purely health focused (Tinning, 2015). Tinning notes these "camps" are built upon on different literatures and discourses, which some may perceive to be polarized or opposing; however, for the purpose of this research, I will refer to differences in views of the purpose of PE as *varying*, which will be discussed at length throughout this thesis. It is worth noting, Tinning acknowledged a third position, where subscribers would consider PE to be both instrumental and educational. This position seems to align best with Whitehead's (2001) concept of physical literacy as it relates to the role of PE in public health.

Physical literacy, as defined in *Canada's Physical Literacy Consensus Statement*, is "the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life" (International Physical Literacy Association, 2014). Whitehead (2001) argued that physical literacy is a *reassessment* of the physical dimension of human existence as well as the physical component in education. Over the past two decades, the concept of physical literacy has been progressively gaining momentum as a core construct of sport, recreation, physical activity, public health and school PE (Tremblay et al., 2018). Sport for Life (2019) describes physical literacy development as a lifelong journey that begins at birth and continues into a greater array of complex skills, capacities and understandings into adolescence thru to adulthood. In developing a child's fundamental movement skills (FMS), movements are broken down into simple skills to help the child learn and understand (Coaching Association of Canada, 2020). When the child is provided a safe and inclusive environment to practice these skills in a wide range of activities, such as school-based PE, they acquire the basic building blocks to become physically literate. And most importantly, they may begin to enjoy a lifetime of healthful physical activity.

Lubans et al. (2010) published a review article which examined the relationship between FMS competency and several health-related outcomes. Results found a positive relationship between FMS competency and cardio-respiratory fitness, and an inverse association between FMS competency and weight status. Thus, teaching children to become competent and confident performers of FMS may lead to a greater willingness to participate in physical activities beyond adolescence, and may also provide opportunities to improve fitness levels and reduce the risk of unhealthy weight gain (Lubans et al., 2010). Understanding physical literacy development during adolescence and its implications for lifelong physical activity participation remains a priority, as physical activity levels within this population are alarmingly low.

Status of PE in Canada

Since 2005, the ParticipACTION Report Card on Physical Activity for Children and Youth (formerly prepared by Active Healthy Kids Canada) has been assigning letter grades to various indicators of physical activity behaviours and opportunities with respect to where children and youth live, learn and play in Canada (Active Healthy Kids Canada, 2005). Individual letter grades are assigned based on an examination of available data against a relative benchmark, and together, provide a complete assessment of how Canada is doing in terms of the promotion and facilitation of physical activity for children and youth. The 2020 Report Card assigned a D+ letter grade to the school-based Physical Education indicator. The benchmark for the PE indicator is reflective of the percentage of Canadian students in Grades K-8 receiving 150 minutes of mandatory PE per week, the percentage of high school students taking PE and the percentage of students in Grades K-8 receiving daily physical activity (DPA) in provinces that have DPA policies

(ParticipACTION, 2020). Therefore, the overall weighted percentage of K-12 students receiving 150 minutes of physical activity per week at school is approximately 36-37%. The Report Card made several recommendations for future PE research, including the examination of the relationship between PE/DPA policies and low adherence rates, objectively measured physical activity levels during PE, the uptake and implementation of DPA in schools and updated information on the percentage of Canadian students receiving PE instruction from teachers specifically trained in PE. In addition, recommendations for how to improve the PE indicator grade included treating PE with the same respect as other core subjects such as language arts, mathematics and science, focusing on enjoyment and inclusiveness rather than competition and sport specialization, prioritizing efforts to increase PE quantity and quality, and investing in professional development opportunities for generalist PE teachers (ParticipACTION, 2020). Moreover, in a recent analysis of Canadian PE curricula, Kilborn et al. (2016) reported a misalignment between stated aims of the curricula and the specific content of the learning outcome statements, which are less focused on healthful living and more so on movement skills, games and sport technique. These conflicting messages are problematic as it adds confusion to the intended messaging of PE and detracts from the credibility of the academic discipline and the professional field of practice.

Physical and Health Education Canada (PHE Canada) is Canada's recognized lead organization that advocates for quality school-based health and PE. Their mandate is to support students and teachers with the development and implementation of quality resources and programs grounded in a comprehensive school health approach (PHE Canada, 2017). One such initiative is the Quality Daily Physical Education (QDPE) Award

Program, which was developed in 1986 (Chad et al., 1999) to recognize Canadian schools that offer quality PE programs according to a set of standards (PHE Canada, 2020b) based on the UNESCO QPE guidelines (UNESCO, 2015). In 2020, only 293 schools out of an approximately 15,000 eligible schools were acknowledged as recipients of the QDPE award (PHE Canada, 2020a). Recognizing that the QDPE award program is not entirely accurate as an overall indicator of quality amongst health and PE programs either nationally or provincially, as the submission process is voluntary and not all teachers/administrators may be motivated by recognition awards. However, this low rate does warrant concern for the state and status of PE programs in Canada in terms of meeting QPE standards.

State of PE in Nova Scotia

Over the last two decades a series of research studies, government reports and political events have influenced the current state of school-based PE in Nova Scotia. The *Physical Activity Levels and Dietary Intake of Children and Youth in Nova Scotia (PACY)* study was the first of two surveillance studies conducted in 2001-2002 (PACY1) and 2005-2006 (PACY2). The purpose of the PACY studies was to monitor provincial and regional trends in physical activity and body mass index (BMI) of students in Grades 3, 7 and 11 in Nova Scotia. Results indicated students in PACY2 were significantly less active than students in PACY1. Girls, in both studies were significantly less active than boys, and in both studies, students in Grade 11 were significantly less active than students in Grade 7, who were significantly less active than students in Grade 3 (Campagna et al., 2007; Thompson et al., 2009). Lessons learned from PACY1 greatly influenced the development of Nova Scotia's first provincial physical activity strategy, *Active Kids, Healthy Kids* (Government of Nova Scotia, 2002) which aimed to increase the number of children and

youth who accumulate at least 60 minutes of moderate or higher-intensity physical activity on a daily basis. Results from PACY2 were used to renew the *Active Kids, Healthy Kids* strategy in 2007.

The following 4-year cycle of PACY data collection was rebranded as *Keeping Pace* (2009-2010). Although statistical comparison between the original PACY study and Keeping Pace were not possible due to changes in data analysis methods, a similar age-related decline in physical activity was reported (Thompson & Wadsworth, 2012). The updated physical activity standard was set as a minimum accumulation of 60 minutes of moderate or greater intensity per day, for at least five days of the week. Results indicated a large proportion of the Grade 3 boys (81.6%) and girls (80.3%) met the physical activity standard; however, proportions significantly dropped for boys (28.4%) and girls (13.2%) in Grade 7. By Grade 11, these proportions declined even further, as only 4.5% of boys and 0.9% of girls met the standard. Findings from the 2009-2010 Keeping Pace study, were used to develop the *Thrive* physical activity strategy released in June 2012. *Thrive* proposed four strategic directions, supported by a series of objectives and action items, one of which, was to increase PE and physical literacy in Nova Scotia public schools. The strategy made reference to PHE Canada's QDPE program, indicating steps were being taken to conduct a needs assessment to develop and implement a plan to achieve 30 minutes of daily PE instruction to students in Grades P-9 (Government of Nova Scotia, 2012). In 2014, updates to *Thriv*e indicated a QDPE needs assessment was underway (Government of Nova Scotia, 2014d); however, results from this assessment have not been made available to the public.

In October 2014, a comprehensive review of Nova Scotia's public-school system was conducted by the Minister's Panel on Education (Government of Nova Scotia, 2014a).

Results indicated 50% of Nova Scotians were not satisfied with the provincial education system, as very little had changed in the previous 50 years, despite the many reports that had been published with clear recommendations for change. The Minister's Panel outlined 30 recommendations for changes to improve the curriculum, teaching, transitions, inclusion, school climate, student health and well-being and the system structure. Regarding school PE, the Panel reported:

> The need for more physical activity during the school day was a frequent theme in reports, survey comments, and e-mails received by the panel. Respondents noted that students need more physical education classes each week, especially in high schools where only one physical education credit is required. Many also recognized that meeting the national goal of 60 minutes of physical activity a day requires more than just formally scheduled physical education classes. (Government of Nova Scotia, 2014a, p. 50)

In November 2014, the NSTU responded to the Minister's report with their own, which addressed each of the 30 recommendations at length. In response to the above PE recommendation, the NSTU replied:

> The NSTU agrees that there is an urgent and significant need to support students in areas of health, especially mental health and physical activity… As the Panel's report notes, current in-school physical activity falls well below 60 minutes per day per student. While physical education teachers and other teachers volunteer countless hours each week to provide students with additional sport and exercise opportunities before and after school and on evenings and weekends, the NSTU supports more curricular physical education time for students. (Government of Nova Scotia, 2014c, p. 23)

Then in July 2015, expiry of the three-year provincial teachers' agreement (term: August 1, 2012 – July 31, 2015) between the NSTU, its members, and the DEECD, led to a series of rejected contract proposals which failed to address classroom issues, systemic working conditions, and changes to teacher compensation (Government of Nova Scotia, 2017a). This eventually resulted in a province-wide work-to-rule teacher strike, lasting from

December 5, 2016 to February 21, 2017. At that point, teachers were required to return to work by law when the McNeil Government imposed a new contract through legislation, titled Bill 75 (Government of Nova Scotia, 2017b). The impact of this experience continues to be felt by teachers, which will be further discussed in subsequent chapters.

In 2015, the DEECD implemented a new middle school (Grades 7-9) PE curriculum (Government of Nova Scotia, 2014b). The updated curriculum marked a shift away from sport to a holistic, active living approach and incorporated aspects of physical literacy and quality pedagogical practices. It was intended to be a continuation of the Grades 4-6 physical literacy-based PE curriculum, which builds on students' prior knowledge of and established FMS. However, little is known about how the current PE curriculum is being supported or implemented in schools throughout Nova Scotia, or the transferable skills students are acquiring as a result. Therefore, it is difficult to ensure implementation of relevant supports such as PHE Canada's QPE guidelines and QDPE awards program are being accessed, or if they are even attainable.

Physical and Health Education teachers in Nova Scotia are supported by the Teachers' Association of Physical and Health Education (TAPHE). TAPHE aims to improve the professional practice of physical and health education in Nova Scotia and to represent its members within the NSTU. At the beginning of each school year TAPHE hosts an annual one-day conference, which for many teachers serves as their only opportunity for discipline-specific professional development. TAPHE endorses PHE Canada's QPE guidelines and QDPE awards program; however, in order for these initiatives to have widespread impact, they need to be embedded and systematized at the policy level and implemented by the entire school community.

Health Promoting Schools

Despite Canada's public education system ranking among the highest in the world in terms of academic performance (i.e., literacy, numeracy and science learning) (OECD, 2019), lack of attention to student health and has led to some of the highest prevalence rates of chronic disease, including overweight and obesity (Lobstein & Brinsden, 2019). Veugelers and Schwartz (2010) recommended the Comprehensive School Health (CSH) model as an effective approach to promoting healthy lifestyle behaviours among children and youth in schools. The CSH model is an evidence-based approach to coordinating and integrating health education into all aspects of the school setting and lives of students (Joint Consortium for School Health, 2019). According to McIsaac et al. (2012), CSH models offer a more holistic whole school approach to teaching students about health-related topics, rather than the traditional classroom single-topic approach which tends to separate health into various compartments and isolated curriculum. As such, the CSH approach requires teachers to think differently about health and the role that the school community plays in supporting students' well-being.

The CSH approach, or *Health Promoting Schools* (HPS) initiative, as it is known in Nova Scotia, is a partnership led by the DEECD and DWH and involves regional school centres for education, the provincial health authority and community partners. McIsaac et al. (2017) recently examined factors that influence implementation of the HPS framework in Nova Scotia schools. The authors reported increasing demands on the education system (e.g., large classroom sizes, changes to curricula, pressures to raise academic standardized assessments), political and financial obstacles (e.g., unable to afford to staff adequate number of PE teachers) and an obstructive community culture (e.g., increasing societal

changes to healthy living outside of school such as busy family schedules) as barriers to inhibiting HPS implementation. However, in another study, McIsaac, Penney et al. (2017) reported that HPS-related policies developed by the Provincial Government were rarely enforced nor monitored, which limits the impact a CSH initiative can have on school practices and students.

In January 2019, significant financial support for UpLift, a school-community-university partnership, was secured (CBC News, 2019). The partnership is formed with the Public Agency of Canada (PHAC), Nova Scotia government, Nova Scotia Health Authority (NSHA), school communities, non-profits and the private sector. UpLift is co-led by Dr. Sara Kirk and Dr. Camille Hancock Friesen, and hosted within Dalhousie University's Healthy Populations Institute. It is embedded within Nova Scotia's existing HPS framework and aims to bring together a wide network of stakeholders to catalyse HPS action within existing structures and through youth engagement and leadership in order to support the health and wellbeing of children and youth within their school communities. In September 2019 UpLift began implementation into two school regions, with the plan of scaling up across the rest of the province over subsequent school years (subject to funding).

Research Purpose

Despite the expansive body of evidence supporting the physical, social, emotional and cognitive benefits that physical activity provides school-aged children and adolescents, in addition to the numerous action plans, strategies and policy documents that recommend the implementation of QPE embedded within a CHS/HPS framework, very little has been done to support the PE community in making sustainable changes to PA levels among students. Moreover, little is known about how PE is supported in Nova Scotia. Therefore,

the purpose of this research was to examine the PE experiences of Grade 8 students receiving the current Nova Scotia middle school (Grades 7-9) PE curriculum. To support students' reported experiences, Grade 8 PE teachers were interviewed, and document analysis of the PE curriculum was conducted.

Research Questions

The three following questions were used to guide the research: (1) What social and environmental factors influence students' PE experiences? (2) How does the current Nova Scotia Grade 8 PE curriculum contribute to the continued development of students' physical literacy? and (3) Where do gaps exist between students' experiences, PE teachers' perceptions of students' experiences, and the PE curriculum content?

Outline of the Thesis

This body of research is organized around six chapters. Chapter 1 served as an introduction and outline for this thesis, beginning with a presentation of the health benefits of physical activity for children and youth, as well health risks associated with physical inactivity. The role of school-based PE within public health was discussed, as schools are often viewed as a convenient site for addressing physical inactivity amongst school-aged children and youth. A recent series of social and political events that have shaped the current state of PE in Nova Scotia were presented. Finally, the purpose of this research and the guiding research questions were stated.

Chapter 2 provides a historical timeline of PE curriculum reform in North America over the past century, which concludes with a critical analysis of the current Canadian PE curricula, with a focus on Atlantic Canada. This chapter also presents a review of literature that examined students' and teachers' perceptions and experiences of school-based PE. The

chapter concludes with a summary of the common themes related to factors that influence students' PE experiences.

Chapter 3 outlines the research methodology and procedures used to conduct this study. It begins with an explanation of my position to the research, in terms of personal views, experiences and expectations. A description of Heidegger's hermeneutic phenomenology as the chosen methodology and its associated philosophical underpinnings are provided. Next an outline of the procedures used to recruit and select participants, collect and analyze data, and techniques used to ensure rigour, are discussed. Finally, ethical considerations relevant to the research are explained.

Chapter 4 presents an interpretive phenomenological analysis of the PE experiences of 18 Grade 8 students based on focus group data. This includes narratives from six PE teachers who were selected for individual interviews and document analysis of the current PE curriculum. The chapter opens with a description of the data sources, including socio-demographic information about the student and teacher participants and a descriptive profile of the Nova Scotia Grades 7-9 PE curriculum. Next, six themes that represent the key issues that influence students' PE experiences as they relate to the various social and environmental levels within the SEM (intrapersonal, interpersonal, organizational, community, policy) are presented. The six themes are: (1) student engagement, (2) varying views of PE's purpose, (3) role of the PE teacher, (4) low status of school PE, (5) comprehensive school health, and (6) red tape policies.

Chapter 5 further discusses the six themes and provides meaning to them as they relate to the research questions and relevant literature. The implications this research may have on the guidance of future PE curriculum planning, development, implementation and

delivery in Nova Scotia are discussed. Next, two sets of recommendations are presented, the first set is for policymakers on behalf of the PE teachers involved in this study, and the second set is for PE teachers on behalf of Grade 8 student participants. The limitations of this research are discussed and finally, directions for future research are presented.

Finally, Chapter 6 concludes this thesis with a summary of the key findings and contemplates what a reimagined PE program in Nova Scotia could look like. Finally, a statement summarizing my final thoughts and impressions regarding this research journey is shared.

Chapter 2: Literature Review

In Chapter 1, information about declining physical activity levels amongst Canadian youth, with a focus on Nova Scotia, was presented. An argument in support of school-based PE as a viable public health approach to addressing low-levels of physical activity was made and a timeline of social and political events that have shaped the current state of PE in Nova Scotia was presented. Finally, the purpose of this research was stated, and an outline of the thesis was provided. The purpose of Chapter 2 is to present a historical timeline of PE curriculum reform in North America over the past century, as it aids in understanding how modern views and approaches to program instruction have been influenced. Next a critical analysis of the current Canadian PE curricula, with a focus on Atlantic Canada is presented. This chapter also presents a review of literature that examined students' and teachers' perceptions and experiences of school-based PE. The chapter concludes with a summary of the common themes related to factors that influence students' PE experiences.

Timeline of PE Curriculum Reform

Since becoming a fixture in the basic schooling curriculum, PE has undergone many rounds of curriculum reform due to paradigm shifts and advancements within the field. This has resulted in much debate over the status of PE as an academic discipline, which in turn has PE researchers referring to the subject matter as a "chameleon of all curricula" (McKenzie, 2001) with a "muddled mission" (Pate & Hohn, 1994). These two catchphrases are widely recognized by members of the PE community as they have become synonymous with the pedagogical debate over the role and purpose of PE that has been ongoing since the 1950s.

The Early Years: Late 1800s-1930s

The history of school-based PE dates back to the late 1800s, when it was first issued by medical doctors as a vehicle for health promotion (Prusak et al., 2011). During this period, the science of PE was derived from several health-related fields and delivered on topics such as personal health, hygiene and educational reform through movement-based learning (Mechikoff, 2010). In the United States, the Association for the Advancement of Physical Education (now SHAPE America) was established in 1885 to lead the development of the 'new profession' as its goals were very different than those of athletics or any existing medical specialty (Park, 1989). During this era, PE curricula in Canada was directly influenced by the United States, as many of Canada's leading physical educators would travel to Boston for additional training (Robbins, 1990). Similar to the American model, the Canadian Physical Education Association (now PHE Canada) was established in 1933 to advance the field of PE in Canada.

Systematic Exercise for Health: 1930s-1950s

The first significant period of curriculum reform occurred between the 1930s and 1950s. Armour and Harris (2013) referred to this era as *Pedagogies of Systematic Exercise for Health.* It was a time defined by war, where PE served as a model for military preparation as outlined in the curriculum document titled, *British Syllabus for Physical Training* (Board of Education, 1933). Drill, an intense military-like form of exercise, was the preferred method of instruction as it instilled habits of obedience, intelligence, hygiene and order (Armour & Harris, 2013). Even during this early period there were strong recommendations for daily PE instruction, as it was deemed necessary for healthy child development. The *British Syllabus* also highlighted the importance of a "practical syllabus

and a competent teacher" as essentials for useful PE instruction–possible antecedents to modern day QPE guidelines.

Movement Education: 1950s-1980

The second period of curriculum reform occurred between the 1950s and 1980, which Armour and Harris (2013) referred to as *Pedagogies of Movement Education.* This era presented a shift away from military-influenced methods of instruction and introduced the concept of physical fitness for the purpose of healthy childhood development. This led to many new and complex pedagogical models that were thought to be appropriate to meet the developmental needs of children. A defining event of this era, occurred in December 1960, when American President-elect John F. Kennedy published his administrative agenda in *Sports Illustrated* magazine in an article titled, *The Soft American* (Kennedy, 1960). In it, Kennedy expressed his concerns over the declining status of young Americans' physical fitness in fear that it would compromise the nation's ability to serve and protect. The article referenced the seminal work of Drs. Hans Kraus and Sonja Weber (Kraus & Hirschland, 1953, 1954), which compared physical fitness test measures between American and European youth. The Kraus-Weber fitness test used a series of simple movements designed to assess trunk muscle strength and flexibility. Results from the Kraus-Weber study indicated that despite the unrivalled standard of living that American children were accustomed to, including access to quality food, an abundance of outdoor playgrounds and an emphasis on school sports, American youth failed in comparison to their European counterparts in terms of physical fitness (Kraus & Hirschland, 1954).

During the 1960s and 1970s, evidence linking fitness and physical activity to good health accumulated. For example, in Canada, Dr. William Orban (1961) in partnership with

The Royal Canadian Air Force published the *Five Basic Exercises (5BX) Plan for Physical Fitness*, which was one of the first accessible physical activity programs to recognize exercise intensity as a contributing factor to health. Correspondingly, interest grew in the development of youth fitness test batteries focused primarily on health-related physical fitness (Morrow et al., 2009). The Kraus-Weber fitness test formed the basis of the Presidential Youth Fitness (PYF) program offered by SHAPE America, which was administered as part of the public school PE curriculum from 1960 until 2013 (President's Council on Fitness, Sports and Nutrition, 2013) when it was replaced by the FITNESSGRAM® assessment (Plowman et al., 2006). Meanwhile, similar declines in physical activity levels and subsequent fitness measures were reported amongst Canadian youth. This led to the development of the Canada Fitness Award (CFA) program, a national fitness performance test and evaluation program operated by the Government of Canada and administered as part of school PE programs. The CFA program developed by PHE Canada, consisted of six short-duration physical fitness measures designed for 7- to 17-year-olds (Canadian Association for Health, Physical Education, and Recreation, 1966). It originally consisted of a 50-yard run (testing for speed), 300-yard run (testing for cardiovascular function), timed flexed arm hang (testing for strength), shuttle run (testing for agility), sit-ups (testing for muscular endurance) and the standing long jump (testing for power). According to Gellman et al. (1977) the CFA program was designed to "create better attitudes towards personal fitness as well as to improve aptitudes and skills that will continue beyond the formative years" (p. 269). The CFA program was offered in schools from 1970 until 1992, when it was discontinued in part because it discouraged those students who failed to achieve even the minimum participation grade, which is whom the

program was intended to motivate (Shephard, 2018). Jocular reports of the impact the CFA program had on individuals has appeared in various blogs (Sedgwick, 2015; Sorokan, 2010), news articles (Landini, 2017; Pearce, 2017) and musical lyrics, such as Canadian rock band, Tragically Hip's (1998) hit song *Fireworks*, which references an individual performing a flexed arm hang as part of the CFA program during PE class. The flexed arm hang is a static exercise that requires an individual to hold the top phase of a pull-up where their biceps remain flexed, elbows at 90 degrees, and chin held at the height of the bar for as long as possible, hence, eternal:

> Next to your comrades in the national fitness program
> Caught in some eternal flexed arm hang
> Dropping to the mat in a fit of laughter
> Showed no patience, tolerance or restraint (The Tragically Hip, 1998)

According to Robbins (1990), during this period of curriculum reform, PE was in a state of "confusion and disarray" and relied on gimmicky projects to carry the curriculum. From this era a number of leisure and games-oriented teaching methodologies were developed, along with several national packaged programs, such as the aforementioned PYF and CFA programs, and the Jump Rope for Heart initiative, which is a physical activity fundraising event for the Heart and Stroke Foundation involving elementary school students (American Heart Association, 2014).

Science for Health: 1980-2000

The third period of curriculum reform occurred from 1980 to 2000. Armour and Harris (2013) referred to this period as *Pedagogies of Science for Health*. In the mid-1990s, research reaffirming the benefits of daily physical activity across the lifespan (United States Department of Health and Human Services, 1996) led to the establishment of age-appropriate physical activity guidelines for children and youth in Canada (Health Canada

& CSEP, 2002a, 2002b) and the United States (National Association for Sport and Physical Education, 1995, 2002). As a result, discussion of the purpose of school PE shifted to meeting physical activity guidelines and promoting lifelong physical activity (Green, 2002). However, at the time, evidence was limited, and many research questions arose regarding claims about the health benefits of physical activity for children and youth (Biddle et al., 2004) and the extent to which PE can pave the path for lifelong physical activity (Trudeau et al., 1999). From this period, a variety of games and sports curriculum models were developed, including Bunker and Thorpe's (1982) Teaching Games for Understanding and Siedentop's (1994) Sport Education Model.

Teaching Games for Understanding, or more commonly known as TGfU, is both a curriculum model and an instructional approach to teaching PE. The TGfU approach takes advantage of the motivation and enthusiasm students have to play games and attempts to improve both students' tactical awareness and skill acquisition for the purpose of helping students lead a healthy lifestyle (Werner et al., 1996). A limitation of the TGfU model/approach is the integration of a performance-based assessment strategy, which often requires students to have a heightened level of prior experience, knowledge and appreciation for the particular game being taught (Webb et al., 2006). The Sport Education Model was designed for the purpose of providing students a positive, authentic sport experience in a school-based PE setting (Siedentop, 1994), with the goal of helping students become "competent, literate and enthusiastic sports persons" (Siedentop, 1998, p. 20). However, some evidence suggests the Sport Education Model unintentionally promotes gender stereotypes and favours higher skilled students (Wallhead & O'Sullivan, 2005).

During this era it became obvious there was a need to expand upon teachers' knowledge and practical teaching skills in order to effectively deliver accurate health messages to students (Armour & Harris, 2013). As noted by Robbins (1990), conversations about the need for QPE were becoming more frequent, and in response, PHE Canada launched the ongoing QDPE award program. A study examining the effectiveness of the QDPE program 10-years after its inception, reported an increase in the awareness and support for daily PE among key stakeholders; however, the program had limited influence on school PE programming (Chad et al., 1999).

Physical education curricula that evolved from this era were arguably most influenced by educational philosopher, Peter Arnold's (1979) three dimensions of movement, commonly known as education 'in, through and about' movement. During this period, the Arnoldian dimensions of movement were often held as the gold-standards for PE and sport pedagogy curriculum development (Stolz & Thorburn, 2017). Arnold's belief was that PE needed to be intellectually worthy and explained "education 'in' movement upholds the view that movement activities…are in and of themselves worthwhile " (Arnold, 1979, p. 176). Brown (2013) explained how the aim of education *in* movement is for students to become aware of their bodies and describe how it makes them feel when they move in a certain way; thus, this type of learning involves students directly acquiring "knowledge, understandings and skills" as a result of participation in physical activity (Brown & Penney, 2013). For example, applying a strategy to earn a point when playing a game. Education *through* movement refers to instrumental outcomes where students indirectly acquire "knowledge, capacities and attitudes" as a result of participating in physical activity (Brown & Penney, 2013). For example, increased muscular strength.

Finally, education *about* movement refers to the formal act of inquiry, where students directly acquire "knowledge and understandings" as a result of studying and participating in physical activity (Brown & Penney, 2013), e.g., learning about the benefits of school-based PE by studying about the effects of exercise. Bailey et al. (2009) reported that a significant outcome from this period of curriculum reform was evidence suggesting that educational and psychological approaches to PE instruction, were more likely to achieve long-term physical activity participation, rather than health-related fitness programs alone or a focus on the number of minutes of MVPA accumulated during PE classes.

Weight Management and Obesity Reduction: 2000-2010

At the turn of the twenty-first century, PE curriculum development entered a fourth era of reform. This period lasted until 2010 and was referred to as the period of *Pedagogies of Weight Management and Obesity Reduction* (Armour & Harris, 2013). Some of the popular PE curriculum models that were developed during this period include Conceptual PE and the previously discussed HOPE model (Metzler et al., 2013a, 2013b). Conceptual PE programs combined traditional lectures that taught concepts of health and fitness, with laboratory-style exercise sessions that focused on personalized fitness in a non-competitive environment suitable for conducting self-monitoring and fitness assessments (Dale & Corbin, 2000). According to Dale and Corbin (2000), the goal of a conceptual PE program is to help students build confidence and competence, and establish a positive attitude toward physical activity that will encourage students to adopt a physically active lifestyle. A limitation to conceptually-based PE programs, is that students are only engaged in physical activity for half of the allotted time dedicated to PE, as they are in lecture for the other half (State of New Jersey, 1999). A second weakness, is the narrow focus that

conceptual PE programs typically adopt, as performance-based fitness classes (i.e., cardiovascular endurance, muscular strength, flexibility) are solely focused on health outcomes (Armour & Harris, 2013), as opposed to movement for fun and enjoyment.

Despite the highlighted need for health-focused PE curriculum, improved teacher education training and discussions about the need for QPE, there were no significant changes to how PE was viewed or delivered since the previous era of curriculum reform (Armour & Harris, 2013). It was however, during this era that comprehensive school health programs became increasingly more common and accepted. In 2005, the Pan-Canadian Joint Consortium for School Health was established, and the Comprehensive School Health framework became the focus of many health-focused government initiatives. This was perhaps the most important outcome from this era, a shift to a broader conceptualization of a healthy school community.

Current State of Canadian PE Curricula

Unlike countries such as Australia, England, New Zealand and the United States, Canada does not have a national PE curriculum (Australian Government, 2017; Government of the United Kingdom, 2014; New Zealand Government, 2014) or uniform set of grade-level PE outcomes (SHAPE America, 2013). Rather, each province and territory is responsible for the regulation and administration of their own independent curriculum. This results in a wide range of curriculum models and learning outcomes, making it difficult to compare or draw conclusions about the nature and status of PE between provinces/territories or with other countries. To better understand the current landscape of Canadian PE programs and curricula, three recent studies examining Canadian PE from various perspectives are discussed.

Thomson and Robertson (2014) conducted a review of Canadian PE curricula which aimed to critically analyse each provincial/territorial curriculum using a PE policy analysis framework the authors developed. The framework aimed to categorize each curriculum into one of three categories of curriculum policy, based on underlying values and PE philosophies. The three levels for the PE policy framework included traditional PE, interactive/constructivist physical literacy, and critical physical literacy (Thomson & Robertson, 2014). The traditional PE category included curriculum models that reflect an emphasis on competitive sports and fitness, and individual behaviour change. The interactive/constructivist physical literacy category include curriculum models that reflect a social and developmental approach to physical activity, and the critical physical literacy category included curriculum models that address empowerment, critical analysis, identification of power imbalances, questioning of assumptions, advocacy, and action for social change. Findings from this critical analysis determined all three categories of the PE policy analysis framework were reflected to varying degrees in PE policies across Canada. However, while the philosophies of the curriculum policies include critical considerations, the learning outcomes in these policies primarily reflected more traditional PE models involving competitive games and sports. Nova Scotia's current middle school PE curriculum was not part of this critical analysis as it was reported to be "under review" and not available either online or in print to the authors at the time of publication.

Kilborn et al. (2016) conducted a descriptive analysis of Canadian PE curricula, which aimed to reveal trends and themes related to instructional time allocations, curricular aim statements, curricular organizing categories and learning outcome statements. Findings from this descriptive analysis revealed four main issues related to how PE curricula are

developed, interpreted, implemented and analysed. Issues included: (1) conflict between stated aims of curriculum, which focused on healthy, active living, and the specific content of the learning outcome statements, which focused on movement skills, games and sport technique; (2) PE has a marginalized status, as indicated by the discrepancy between the recommended time allocations for PE, and actual PE instruction, suggesting PE is being pushed aside to make room for higher prioritized subjects; (3) politics play a part in curriculum renewal as there is no consistent time frame for the renewal of PE curriculum by Canadian provincial/territorial governments, which is influenced the political landscape in each province/territory; and (4) many challenges exist when conducting curricular analysis in Canada, namely accessing the most currant and accurate materials, as there is no consistency in how each province stores and distributes curriculum documents.

Kilborn et al. (2016) expressed several concerns about the accuracy and accessibility of the Canadian PE curricula documents. First, oftentimes there was no bibliographic information available, so the authors had to communicate with retired and current government consultants to verify authenticity and date of publication. Second, obtaining curriculum time allocations was difficult and required extensive efforts to obtain reliable sources and verify information. And third, on a more practical note, the authors questioned what this meant for teachers who might not have the time, resources, or contacts to gain access to this information, as they believed access to public school curricula should be free of barriers. Similar to Thomson and Robertson (2014), Kilborn et al.'s (2016) descriptive analysis did not examine the current Nova Scotia middle school PE curriculum as it was not available during the time of analysis. Rather, the previous 1998 draft of the PE curriculum was assessed.

Randall et al. (2014) provided a narrower geographic focus with their review of PE curriculum, which investigated the extent to which QPE was being taught in Atlantic Canada. The authors used survey methods to generate descriptive data of PE teachers' sociodemographic information, as well information on what they were teaching during PE class. At the time of the study there were approximately 1,000 teachers responsible for teaching PE in the four Atlantic provinces. In total, 206 teachers completed the survey, representing approximately one fifth of the population of PE teachers in Atlantic Canada. Randall et al. (2014) reported that fewer than half (44%) of the participants' students received PE instruction at least three days each week. The amount of time within each PE class varied from 20-minutes or fewer to greater than 80 minutes, with the most common length being 21-30 minutes. Only 18% of the participants indicated that their school had a daily physical activity policy. The authors found this statistic to be "disconcerting" and "embarrassing", considering Atlantic Canada has the lowest indicators of health and wellness, yet they also do not have government mandated DPA.

Randall et al. (2014) also indicated that sport experience represented the curriculum content area that participants seemed to be willing to spend the most time teaching, with 77% spending more than a third of their time teaching content related to traditional team sports and games (e.g. basketball, volleyball, soccer, hockey, badminton, track and field, handball and tennis). Participants reported a high level of preparedness to teach sport experience and active living; however, they felt least prepared to teach dance and gymnastics. The majority of participants indicated they attributed up to 30% of their students' grade to fitness-related (78% of participants) and cognitive (81% of participants) outcomes. The authors concluded their review by comparing the state and status of PE in

Atlantic Canada to that of Kirk's (2010) "more of the same" scenario. This was in reference to the continuation of multi-activity, sport-based PE programs, which have been shown to lack meaning for students, have little impact on students' intentions to pursue a physically active lifestyle, and at worst, cause physical or psychological abuse for students who do not demonstrate athleticism (Ennis, 1996). To this end, Kirk (2010) warned, while this approach to PE programming may be sustainable in the short term, without significant change, the long-term future of school-based PE is at risk of extinction (Kirk, 2010 as cited in Randall et al., 2014). The authors recommended further research aimed at improving the quality of students' PE experiences in Atlantic Canada is warranted.

Findings from these reviews of Canadian PE curricula indicate that, although curricula policies may incorporate evidence-based pedagogical practices and be reflective of critical PE in nature, learning outcomes continue to deliver upon traditional views of competitive games and sports rather than principles of QPE. Furthermore, much of the research on PE curriculum development and implementation is from the perspective of the teacher and or researcher. As such, future research should aim to incorporate the experiences and perceptions of PE from other perspectives within the PE community, namely students.

Urgent Need for Quality PE

As previously discussed, PHE Canada recognizes schools who deliver QPE through the QDPE awards program. The program is guided by four overarching principles: (1) PE is a fundamental right for all Canadian students, (2) teachers must be pedagogically competent and qualified, (3) curricula should be developed on sound pedagogical principles, and (4) PE programs should be age-, ability- and culturally-appropriate (PHE

Canada, 2020b). School recipients of the QDPE award are acknowledged using a one to five-star rating system based on their level of commitment to supporting QDPE guidelines. With less than 1% of eligible Canadian schools being recognized in 2018-2019 as QDPE award recipients (PHE Canada, 2020a), there is an urgent demand for healthy school policies that focus on implementing comprehensive school health models which incorporate QPE as part of the framework.

From a school policy perspective, provincial education departments, school boards and individual schools have the ability to develop and implement school health policies. For example, five of Canada's 13 provinces and territories have mandated policies around daily physical activity (Olstad et al., 2015), which in theory helps students meet the recommended 24-Hour Movement Guidelines, as well minimum requirements to achieve PHE Canada's QDPE status. The reasons why some provinces have adopted DPA policies, while others have not are not entirely understood (Olstad et al., 2015). One possible reason may be the historical and cultural norms held by education systems regarding the status of PE. Education systems tend to strongly focus on academic achievement and often overlook the potential benefits physical activity has on academic performance (Olstad et al., 2015).

School-based PE has a long-standing history of justification within the school curriculum. Bleazby (2015) refers to this as the "traditional curriculum hierarchy" whereby some school subjects are seen as more valuable than others (Bleazby, 2015, p. 671). This hierarchy is thought to be embedded in an epistemological framework dating back to the first institution of higher learning founded by Plato. This hierarchy views abstract, theoretical curriculum content (e.g. physics and math) as elite. The highest level of education is thought to be associated with universal truths and abstract reasoning, whereas,

practical, concrete curriculum content (e.g. industrial arts and PE) is associated with labour and trade and is considered lower status (Bleazby, 2015). The hierarchical views continue to penetrate our modern-day education systems, where subjects such as health and PE tend to take a back seat to science and math, with regards to resources for curriculum development and allotted time for instruction (Lounsbery et al., 2011). These traditional views send students a confusing and potentially harmful message about health in general. From a Nova Scotia perspective, with Whitehead's (2001) concept of physical literacy as the basis to our provincial PE curriculum, embedded within a *Health Promoting Schools* framework, future directives for school health and PE appear to be heading in a much clearer direction.

Various Perspectives of PE

Dyson (1995) stated students and teachers are "the two groups most intimately involved" (p. 394) in the everyday function of the education system, yet their views and perspectives are rarely sought by researchers. Understanding students' experiences and teachers' perceptions of school-based health-related curricula is important as it provides researchers insight into how health information is being disseminated to students, which ultimately influences their health-related decisions and actions.

Since the 1990s, a growing body of research focused on examining perceptions and experiences of school-based PE from various perspectives within the PE community, including students (Beni et al., 2017; Bernstein et al., 2011; Ennis, 1996; Enright & O'Sullivan, 2010; Gibbons & Humbert, 2008; Knowles et al., 2011; Papageorgaki, 2018; Portman, 1995; Silverman & Subramaniam, 1999), parents (Na, 2015), teachers (Balázs et al., 2016; Boyle et al., 2008; Dwyer et al., 2003; Morgan & Hansen, 2008), principals

(George & Curtner-Smith, 2017), PE teacher education students (Harris, 2014) and PE teacher educators (McEvoy et al., 2017), has emerged. This section aims to explore some of the reported themes related to views held concerning the purpose of PE and factors that influence students' engagement and participation during PE.

Student Voice

Teachers and researchers stand to gain critical insight into how a PE curriculum is received by students by examining their perceptions and lived experiences. SooHoo (1993) was part of the initial wave of participatory research to invite students as partners when researching their learning experiences and learning conditions. This concept and set of structured research methods, better known as student voice, has since become its own body of research, which will be explored in this section as it relates to school-based PE.

Cothran and Ennis (1999) argued that without information about students' perspectives on PE, it is not possible for PE policymakers to make evidence-based changes to curricula and it is difficult for PE teachers to implement accurate strategies to effectively increase student engagement. Sanders (1996) believed the main reason why students' insights are missing from educational research is because of the time and effort it takes to gather their reports. However, the value in knowledge gained from student-centred PE research far outweighs the effort required to obtain this information.

Portman (1995) used field observations and interviews to describe the PE experiences of 13 low-skilled sixth-grade students (11 girls and 2 boys). Students were determined to be low-skilled based on two criteria, teacher judgement and skill tests (i.e. serving a volleyball, performing a lay-up or striking a ball with a bat). The author reported four common themes across students' experiences: (1) all students agreed that they like PE

better when they are successful, and associated success with having fun; (2) all students agreed that PE was not fun when they were unsuccessful, and unsuccessful experiences were far more common than successful events, which meant students' PE experiences were primarily negative; (3) the role of the PE teacher in helping low-skilled students improve was not evident, this was confirmed by field notes recorded during observations, as skill-related feedback from the PE teacher was seldom reported; and (4) students believed they would be more successful in PE class if their classmates did not publicly criticize them, especially during competitive situations. The author noted that low-skilled students would react to negative situations by either pretending nothing happened, getting physical with perpetrators, or physically removing themselves from the situation, and thus, no longer participating in class. This research highlighted the critical role of the PE teacher and some of the issues that stem from competition during PE.

Ennis (1996) acknowledged that sport-based PE programs have been found to negatively impact students' perspectives on physical activity, and historically, have not contributed to positive personal or educational experiences. She suggested PE teachers who have used sport-based models in the past should apologize to students for the mistreatment they have experienced and to seriously question why some PE teachers continue to employ such models. Ennis (1996) did offer her support to the Sport Education Model which promotes the benefits of sport for all participants. The Sport Education Model claims to support low-skilled students, some of whom are girls, as they find themselves more actively involved during PE because they feel protected both by their "teammates" and PE teachers (Siedentop, 1994).

In a literature review examining students' attitudes toward PE, Silverman and Subramaniam (1999) reported several influencing factors: (1) attitude declines as a function of grade level; (2) the marginal status of PE in the school curriculum negatively impacts students' beliefs and attitudes toward the subject matter; (3) high- and low-skilled students experience PE differently, as low-skilled students do not receive adequate feedback from their PE teachers to improve their skill level and they frequently blame themselves for being unsuccessful; and (4) attitude is influenced by the PE curriculum content, as students who were exposed to a variety of activities that focus on movement pattern development were more in favour of PE, as opposed to students who were exposed to a more rigid, skill-based curriculum.

Gibbons and Humbert (2008) examined the PE experiences of 90 female middle school students (Grades 6 and 7) using focus group interviews, one-on-one interviews and written open-ended questions The authors noted four themes to describe the female students' PE experiences: (1) students preferred doing a variety of lifetime activities (e.g., dancing, walking, judo) and input into these choices, rather than playing traditional team sports which was more often the case in their PE experiences; (2) students' personal competence was associated with their sense of efficacy in their sport-specific skills; however, students did not believe they were provided enough time during PE to truly master new skills, which they were then unfairly evaluated on; (3) many students had at least a basic understanding of the relationship between physical activity and health; however, they felt bombarded by adults warning them and trying to control their every decision related to diet and physical activity; and (4) students were gaining an emerging sense of gender inequity, as their PE teacher often chose activities that their male

classmates preferred or they were told to "just ignore the boys" (p. 179) by their PE teacher when the male students behaved inappropriately toward the female students. This research identified PE experiences that are unique to female middle school students.

As part of a larger three-year research participatory action research project involving 41 15-19 year-old female secondary school students, Enright and O'Sullivan (2010) examined how students' increased involvement in curricular decision-making impacted their PE engagement. Qualitative data was collected using individual and group conversations with the student co-researcher participants which was guided by participatory research artefacts (e.g. photographs, posters). The authors reported that participatory approaches to research and curriculum-making can promote students' meaningful engagement during PE and can assist in the critiquing and reimaging of students PE and physical activity experiences.

Bernstein et al. (2011) examined middle school students' (10 boys and 14 girls) attitudes and perceptions of competitive activities in PE. The authors stated students' experiences of competition during PE is an important construct to explore, as it may influence students' future participation in physical activity. Three major themes emerged from this study: (1) students' skill level influenced their perceptions and participation in PE; (2) students felt skill was a necessary part of competition, even though not everyone was provided the opportunity to develop the skills; and (3) how competition is structured during PE affects students' experiences. The authors suggested future research should focus on both students' and teachers' perceptions and attitudes toward the PE class environment and how tasks are structured, as both are a crucial part of students' enjoyment.

Identifying barriers to physical activity participation are also important to consider when examining the PE experiences of students. Knowles et al. (2011) conducted a phenomenological study exploring factors related to the decrease in physical activity amongst 14 adolescent females during the transition between primary and secondary school. Thematic findings suggested that a change in the environment was central to understanding the decline in physical activity levels since primary school. The most notable difference between primary and secondary school was the overall unsupportive physical activity environment. The females reported a lack of peer support, family support and an unsupportive social environment for physical activity at the secondary level in comparison to their previous primary experience. Some females noted feelings of being uncomfortable in a physical activity environment in the presence of their male peers. Another important change was a lack of enjoyment or enthusiasm experienced by the female students. The authors made several suggestions for creating a more positive environment when participating in physical activity in secondary school, such as increased focus on non-competitive, skill-enhancing programs to increase self-efficacy.

Beni, Fletcher and Chróinín (2017) published a review that examined students' sense of meaning in school-based PE and youth sport. They used the phrase "meaningful PE" to describe experiences that are individually constructed, as they vary from person-to-person and are based on personal life experiences and influences such as socio-economic status, sex, gender, grade-level, family structure, community and school location. Beni et al. (2017) presented six common themes from the literature, which tend to influence students' meaningful PE experiences: (1) peer interactions in a socially supportive environment; (2) deriving fun from lessons learned; (3) engaging in challenging activities

that are both age- and ability-appropriate; (4) competitive tasks that are non-intimidating; (5) activities that result in enhanced motor competence; and (6) lessons that are relevant and result in skills that are transferable to aspects of daily living outside of school. The authors reported that regardless of grade level, meaningful experiences in PE are often interconnected, for example, the qualities 'fun' and 'challenging' can either impede or enhance each other. This is especially important when analyzing students' views on the purpose of PE because a meaningful PE experience does not necessarily depend on all six criteria being present in an experience or on any one of these criteria, but rather on the way they intersect and are combined interpreted by learners and teachers alike.

Papageorgaki (2018) provided an example of Van Manen's phenomenological work in a study that examined the lived PE experiences of three Greek students and their PE teacher. The author reported students associated school PE with play, and although the PE teacher did not object, when students did not perceive PE to be reflective of play, for example during dance instruction, the students felt they were being punished. The author reported that students would act out when asked to do activities that they did not perceive as fun. The teacher viewed this behaviour as an unwillingness to try new things. This research highlighted the important role fun and play have in school-based PE programs.

Mitra (2018) published a review article that examined how student voice can impact curriculum change in secondary schools. The author reported that when the student voice is sought and valued it can improve classroom practice and organizational visioning and strategic planning for change. In addition, students can improve academically when they are given the opportunity to work with their teachers to improve the curriculum and instruction. Mitra presented a diagram in the shape of a pyramid illustrating the three levels

of student voice activities in school reform – listening (base of the pyramid), collaboration and leadership (top of the pyramid). The higher a group moved up the pyramid, the greater the degree of decision-making authority is allocated to the students and greater benefit for youth. *Listening* involves adults seeking student perspectives and then interpreting the meaning of the student data. *Collaboration* is when adults and students work together. This level is initiated by the adult, whom ultimately bears responsibility and authority over the final decisions on the group activities. *Leadership* is when the students assume most of the decision-making authority and adults provide assistance. Mitra noted that despite formal structures that promote and encourage youth involvement, implementation of youth participation into practice has been begrudgingly slow. The author added, that when poor implementation occurs, such as when tokenism or symbolic youth participation takes place, the effects can be damaging to young people.

Most recently, Cook-Sather (2020) presented an overview of student voice work that supports cultivating student agency in school spaces, both in practice and research. The author highlighted the importance of conducting student-informed research, particularly for students who are underrepresented in and underserved by schools. By actively engaging students in research that affects their lives, it ensures that educators, researchers and policymakers are better informed, and it provides youth an opportunity to be empowered as part of necessary change.

Teachers' Perceptions

Physical education teachers play an important role in the early promotion of physical activity for school-aged children and youth. Understanding their experiences and perceptions of students' PE experiences may contribute to a better understanding of some

of the challenges that students are experiencing, and potential barriers that may impact teachers' ability to implement QPE programs.

Dwyer et al. (2003) used focus groups to examine 45 generalist teachers' perspectives on barriers to implementing an elementary health and physical education (HPE) curriculum in Toronto. The authors identified three themes: (1) HPE was perceived as a low priority, as teachers reported the curriculum did nothing more than provide general physical activity guidelines, which made it difficult to integrate into other school subjects; (2) the HPE curriculum lacked performance measures, as teachers made comparisons to other subjects where expectations and performance measures were explicitly stated; and (3) schools lacked sufficient infrastructure, as teachers reported their school gymnasiums were often too small to accommodate the number of enrolled students which made scheduling daily PE classes unfeasible. The authors noted there are many social, political and economic factors that make QPE programs difficult to implement in schools.

In a study based in the UK, Boyle et al. (2008) conducted semi-structured interviews on 17 teachers, including heads of PE and heads of school, to gain an understanding of teachers' perceptions of what encouraged and discouraged children's participation in physical activity. Three themes emerged from the data: (1) some teachers thought elitism was essential for out of curriculum school clubs in order to promote and maintain their school's profile through sporting excellence, whereas others felt PE should be used to promote physical activity for all; (2) some teachers felt adolescents are faced with many choices of what to do with their leisure time and given the option would choose to be sedentary, this results in significant differences in basic skill levels between students who are active outside school and those who are not; and (3) some teachers felt their school

undervalued PE and sensed it was of low priority to senior management, as a result, there was fear some students perceive participation as less important. The authors concluded that despite many positive perceptions of the delivery of PE in schools, it is evident that barriers still exist within that delivery which discourages physical activity.

In a Hungarian study, Balázs et al. (2016) used survey method to collect qualitative data about students' perceptions and expectations of PE. A total of 1,073 students in Grades 5-8 from 13 schools participated in the study, and in-depth structured interviews were conducted with the 13 heads of PE from each school. A large number of students stated that the purpose of PE was for physical conditioning, many felt it was an important subject and that they would utilize what they learned later in life. Whereas, the heads of PE perceived students to have no clear understanding of what the intended purpose of PE was, and that students would prefer to not have to think or work during PE. Findings from this research demonstrate a clear disagreement between students' and PE teachers' perspectives.

Other Perspectives

In this process of exploring students' and teachers' perspectives and experiences of PE, it is important to acknowledge the views and beliefs of other members of the PE community, such as parents, school administrators and members of the PE teacher education community. Their perspectives also hold value and contribute to understanding students' PE experiences.

Na (2015) used qualitative methods to examine parents' perceptions of their children's experiences in PE and youth sport. The author suggested understanding parents' perceptions about education was important because they influence school policies and the

nature of schooling. Results from this research indicated parents believed PE is an important part of the education curriculum as it contributes to the promotion of students' physical health and development. The author reported playing time, health promotion and learning life skills, as the three primary aspects of PE noted by parents. However, they were not unable to state what type of life skills children learned from PE. Some parents believed that PE was exclusively meant for playing rather than learning, particularly during elementary level PE. Parents also listed learning life skills and health promotion as the primary aspects of youth sport. Interestingly, they were able to state a number of skills they believed their child acquired from sport, including teamwork, respect for others, making friends and acquiring a sense of community.

The main difference parents noted between PE and youth sport was the level of their involvement in their children's experiences, as parents viewed youth sport as an opportunity to bond with their children, whereas they were unable to be part of children's PE experiences due to time commitments. Another difference is that parents were able to recognize their children's learning directly from youth sport, and indirectly from PE based on students' report cards. Na (2015) concluded that parents believed youth sport provides a more valuable learning environment than PE. This does not suggest learning does not occur during PE; however, it is a message to PE teachers that the intended curriculum may not be what is communicated to students.

In a study that examined principals' perceptions of and expectations for school-based PE, George and Curtner-Smith (2017) used survey methods to collect data from 19 principals working in two schools systems within one state in the southeastern United States. The authors believed principals' perspectives on PE were important due to their

influence on the teaching of all subjects and their responsibility to hold teachers accountable for delivering high quality educational experiences. Survey results determined principals associated "health-related fitness" as the primary goal of PE. This included concepts of lifelong fitness, healthy lifestyles, wellness and general health. The secondary goal was leisure education, which aimed to "instill in students the passion to be active for life" (p. 390). George and Curtner-Smith (2017) reported that despite principals' primary health-focused goal of PE, most favored the use of a traditional multiactivity curriculum that exposed students to a variety of sport-related games and traditional activities, such as "soccer, basketball, volleyball, rhythm and dance and badminton" (p. 391). This was the exhaustive list of "team and individual sports" that 19 principals were able to collectively compile. Principals' beliefs about how PE teachers should evaluate students varied, as few suggested that PE teachers should focus on "what students should know and be able to do". Instead, most suggested PE teachers should focus on evaluating students' levels of participation, effort and cooperation. George and Curtner-Smith (2017) reported that despite principals' views about the focus of evaluation, 16 principals believed PE was as important as other school subjects. Interestingly, only three principals indicated they had received formal training about how to supervise PE teachers in their schools. The authors concluded that principals who participated in the study had limited knowledge and understanding of the goals of PE, its curriculum and pedagogical practices.

Using a qualitative survey and constructivist grounded theory methods, Harris (2014) examined 124 PE teacher education (PETE) students' knowledge, perceptions and experiences of teaching health-related PE in secondary schools. The PETE students were enrolled in a one-year post-graduate PETE program at a university in England. Harris

(2014) noted that the examination of the PETE process is worthy, because of PETE's potential to influence PETE students, who will ultimately impact the knowledge and behaviour of the children they will eventually go on to teach. Results from this study found PETE students' knowledge of how active children should be was limited at the outset of their program. The survey asked PETE students to generate a list of health-related topics that PE should aim to teach children. In general, PETE students believed the benefits/risks of physical activity/inactivity should be taught in PE to help promote healthy, active lifestyles. Half of the participants thought diet, nutrition and healthy eating should be included. Only one-fifth of respondents made reference to development of physical competence/skills to promote healthy lifestyles. No references to teaching children about physical activity recommendations were mentioned, which is alarming as one wonders where else they would be obtaining this knowledge. Harris (2014) concluded that PETE programs are not adequately preparing future PE teachers to deliver health-focused PE curriculum and that PE is unlikely to effectively promote healthy, active lifestyles amongst children unless significant reform to the PETE process takes place.

McEvoy et al. (2017) used semi-structured individual interviews to gain an understanding of PE teacher educators' views on the purpose of school PE. To gain a global perspective, participants were selected from seven countries: Belgium, Finland, Germany, Ireland, New Zealand, Switzerland and the United States. The authors reported participants held similar views on the overarching purpose of PE, which was to prepare young people for a lifetime of meaningful physical activity participation. A discussion about defining the boundaries of PE was presented, as participants found it easier to describe what PE was *not*. For example, an American participant stated that PE is not a place where students get

fit, rather, it is to teach them how to become fit and physically active. All participants agreed that PE may contribute to a reduction in childhood obesity, but it should not be the goal of PE. The authors also noted that some participants' views had changed over time as a result of personal reflections, time spent teaching PE and discussions with colleagues both within and outside of the profession. McEvoy et al. (2017) recommended that PE teacher educators openly discuss with their soon-to-be PE teacher students about their personal views on the purpose of PE and explain the influences that have shaped their views.

Summary

With this review of literature examining the experiences and perceptions of school-based PE among students, teachers and others, one might more fully appreciate the real and immediate need to examine the PE experiences of adolescent students. Concerns about questionable pedagogical practices, insufficient teaching environments, lack of professional development and training opportunities for teachers, and the marginalized status of PE with respect to other school subjects, have all been reported as factors that may influence students' PE experiences. In order to examine the current state and status of PE in Nova Scotia, and to ensure adolescent students are being taught the current PE curriculum the way it is intended, a comprehensive analysis of students' and teachers' reported PE experiences, in addition to a thorough review of the current PE curriculum, is warranted.

Chapter Summary

This chapter provided a historical timeline of PE curriculum reform in North America over the past century, which concluded with a critical analysis of the current

Canadian PE curricula, with a focus on Atlantic Canada. This chapter also presented a review of literature that examined students' and teachers' perceptions and experiences of school-based PE. It concluded with a summary of the common themes related to factors that influence students' PE experiences.

Chapter 3: Methodology

In Chapter 2, a critical analysis of the current Canadian PE curricula with a focus on Atlantic Canada was presented, and results from a literature review that examined students' and teachers' perceptions and experiences of school-based PE was discussed. The purpose of Chapter 3 is to provide an outline of the chosen research methodology and procedures used to conduct this study. It begins with an explanation of my position to the research, in terms of personal views, experiences and expectations. A description of Heidegger's hermeneutic phenomenology as the chosen methodology and its associated philosophical underpinnings are presented. A detailed plan of the procedures used to recruit and select participants, collect and analyze data, and techniques used to ensure rigour, are discussed. And finally, ethical considerations relevant to the research are explained.

Orienting the Research

An important step when conducting qualitative research is the acknowledgment and explicit articulation of the impact the researchers' position, experiences, personal characteristics and values have on the entire research process (Berger, 2015). Recognizing that the act of doing research in and of itself is inherently subjective, Austin and Sutton (2014) contend that it is better to be "honest and transparent" (p. 437) about one's relation to the research, thereby allowing readers to draw their own conclusions about the researcher and their interpretations presented in the output. This process, known as reflexivity, is intended to enhance the trustworthiness of the research and credibility of the findings (Koch, 1994). Therefore, as I aim to establish trustworthiness in this body of research, I will begin this section by acknowledging my paradigmatic position and the worldview that I bring to this study, including an explanation of the underlying philosophical assumptions

that have guided this research process. Next I will discuss how my personal PE experiences influenced my decision to explore middle school PE, and finally, I will describe how my personal identity, values and perspective in relation to the relevant roles that I hold in society, have influenced my approach to conducting this research.

Paradigmatic Position and Philosophical Assumptions

In order to select a strong research design, it is recommended that researchers choose a research paradigm that aligns with their beliefs about the nature of reality (Mills et al., 2006). According to Guba and Lincoln (1994), a research paradigm is a "basic set of beliefs or worldview" that guides research action. It is a vital component of any research study as it shapes how research questions are formulated, and consequently, how data is produced and interpreted. The design of this research has been shaped by the interpretive paradigm, which focuses on understanding the meanings and interpretations people give to their own actions and interactions with others (Given, 2008). I chose this paradigm because little is known about how middle school PE is received in Nova Scotia and I wanted to examine the PE experiences of Grade 8 students as well as the interpretations students give to their experiences.

Lincoln and Guba (1985) stated that the basic beliefs that define a paradigm can be summarized by the responses given to three fundamental questions: 1) ontology (what is the nature of reality?); 2) epistemology (what is the nature of the relationship between the researcher and researched?); and 3) methodology (how will the researcher find out whatever they believe can be known?). Correspondingly, interpretive inquiry is grounded by a relativist ontology, which is the belief that reality is a finite subjective experience (Denzin & Lincoln, 2005). Levers (2013) describes this as "reality *is* human experience

and human experience *is* reality" and with "multiple interpretations of experience come multiple realities" (p. 2). When considering this research, 18 students shared their interpretations of their personal PE experiences. This goes beyond 18 people experiencing Grade 8 PE differently; rather, their entire worlds, life experiences and perspectives are different. The interpretive paradigm also subscribes to a subjectivist epistemology, which is the belief that "reality is co-constructed between the researcher and the researched and shaped by individual experiences" (John W. Creswell, 2013, p. 36).

Interpretive research typically follows an inductive approach as it seeks to generate meaning from data that can be used to identify emerging themes or build theory, as opposed to a deductive approach meant for hypothesis testing (Pope, 2006). As such, interpretive researchers tend to adopt qualitative methods of data collection including focus groups, interviews and field notes allowing them to co-create knowledge with participants (Austin & Sutton, 2014). This type of qualitative inquiry provides room for a less formal style of scholarly writing which permits the researcher to create deep and compelling descriptions of lived experiences (Finlay, 2012). When considering this research, qualitative methods of data collection were used to capture the experiences of students and teachers, and the resulting co-constructed text was written in first person narrative which allowed me to insert myself as part of the research process.

Personal PE Experiences

This research has also been influenced by my personal PE experiences, both as a student and as a former PE teacher. As a student growing up in a small Atlantic Canadian suburban community, I attended five different schools throughout Grades 1-12 and was enrolled in PE for each of those years. My memories from elementary PE are mostly of

learning basic tumbling skills, failed attempts at the rope climb, and feeling embarrassed and humiliated as I received my annual bronze participation badge for failing the Canadian Fitness Award program each year. My junior high school PE experiences were less demoralizing, as it primarily involved playing traditional team sports, most notably basketball (which is not surprising, considering my former middle school PE teacher is now the head coach of a professional men's basketball team). My senior high school PE experiences are what really influenced my life course. It was during my Grade 12 PE Leadership course that I was introduced to the National Coaching Certification Program (NCCP), an organization that I continue to support and work closely with today. It was also during Grade 12 PE where I first learned about kinesiology as a professional field of study and viable career path. This experience eventually transpired into undergraduate and graduate degrees in kinesiology, health promotion, exercise physiology and health.

In the first year of my doctoral program I accepted a part-time teaching position as a health and physical education specialist at a nearby independent school. Although my formal training did not meet the requirements to teach in the Nova Scotia public-school system, I was hired based on my experience and working knowledge of children and adolescents in various non-traditional learning environments. In my position, I was responsible for delivering the current Nova Scotia PE curriculum to students in Grades 7-11. At the time, my understanding and views of the relationship between health and school-based PE were reflective of Tinning's (2015) description of the instrumentalist approach to PE programming which strives for the facilitation of better physical health and the prevention of lifestyle-related illness. Accordingly, I perceived adolescence to be the turning point for better or worse; turn one direction and it's a lifelong journey of healthful

physical activity; turn the opposite direction, and it's a path defined by physical inactivity eventually leading to chronic disease. As a result, my approach to teaching PE focused on health-related fitness and maximizing students' movement time. Although this approach to PE instruction is not wrong, it does place a lot of emphasis on the 'physical' aspect of PE, and arguably, not enough on the 'education.' I now recognize there are many other ways to teach PE, some of which may be viewed as more fun for students, or perhaps more focused on teaching and assessing the Fundamental Movement Skills (FMS) as a basis for continued physical literacy development.

Although I was fortunate in not having to navigate many of the barriers to delivering a QPE program as presented in Chapter 2 (i.e., overcrowding, competing for resources, behavioural issues), it is worth noting some of the challenges that I did experience. For example, during the first several weeks of classes, I was unable to access the current Nova Scotia middle school (Grades 7-9) PE curriculum as it was not publicly available online (Kilborn et al., 2016; Thomson & Robertson, 2014). I experienced low levels of student engagement starting in Grade 8, particularly amongst female students. The use of cell phones was a distraction for some students. Creating a non-competitive, inclusive learning environment that was fun and enjoyable to all students was often difficult, as many students preferred playing traditional team sports. I was also personally challenged by the assessment and evaluation aspect of middle school PE, partially due to my inexperience, but largely due to the lack of available resources, training and guidance within the curriculum. I also recall many moments defined by guilt and isolation, for not being able to develop and deliver a school-wide comprehensive school health model that I often read about and heard of in the literature. Having experienced some of these challenges and

barriers myself, it was important to me to incorporate the PE teacher perspective into my research.

From this teaching experience, I was introduced to the local PE community through the Nova Scotia Teachers' Association for Physical and Health Education (TAPHE) as well nationally through PHE Canada. I have come to realize that the PE community in Nova Scotia is one of the strongest in Canada, as recognized each year by the large number of recipients to receive PHE Canada's National Award for Teaching Excellence in Physical Education. This is likely due to the high-quality PE Teacher Education (PETE) program established at St. Francis Xavier University, and to the high-caliber graduates who continue to find meaningful work in the province motivating inspiring and encouraging children to reach their true potential. This teaching experience also left me with a renewed appreciation for PE teachers and to the important work that they do. It also changed the way I view PE, as I no longer only see it as a cost-effective population health approach to chronic disease prevention, but also as a means to developing physically literate individuals who have the "motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life" (International Physical Literacy Association, 2014). Finally, this experience enticed me to formally investigate the culture of PE in Nova Scotia, by examining students' and teachers' PE experiences as the focus of my doctoral research.

Personal Identity, Values and Perspective

This research has largely been influenced by my personal identity as a cisgender, white man who values and supports diversity, equity and inclusion, particularly as it involves children and youth. I believe young people deserve the opportunity to be able to

provide input on their education, and this research aims to seek and evoke the student voice as it relates to middle school PE in Nova Scotia. Furthermore, this body of research stems from my various perspectives that I hold in society, which are reflective of my professional, personal and academic roles. As an NCCP Chartered Professional Coach, I have assisted many children and adults experience the physical, social and emotional benefits that regular physical activity can offer. As a CSEP Clinical Exercise Physiologist, I have helped countless patients rediscover the healthful benefits physical activity can bring to a chronic disease diagnosis. As a former physical educator, I had the privilege of teaching health and PE to impressionable youth but have also experienced the countless roadblocks to delivering quality PE. As a father, I strive for a better education system for my children. One that supports the whole child and integrates physical activity into the entire day. And as a health researcher, I aim to provide students and teachers a voice in the pursuit of making school-based PE a priority.

Methodology

Guba and Lincoln (1994) refer to methodology as the processes used by the researcher to find out whatever they believe can be known. It is the third philosophical assumption that defines a research paradigm; therefore, methodology is constrained by parameters set within the ontological and epistemological positions held by the researcher (Guba & Lincoln, 1994). As such, when selecting a methodology for this research, I was committed to the interpretive framework, under the lens of a relativist ontology (multiple realities exist) and subjectivist epistemology (reality is co-constructed between researcher and participants). Because this research aims to explore students' PE experiences and

provide meaning to the interpretation participants' give to those experiences, I chose to use phenomenology as my methodological approach.

Phenomenological Approaches

According to Creswell (2013), phenomenology is a qualitative approach to conducting research that focuses on describing the shared meaning of a lived experience of a phenomenon within a particular group. Its basic principle is to reduce individual experiences to a description of the phenomenon as it universally experienced (van Manen, 1990) – both in terms of *what* was experienced and *how* it was experienced (Moustakas, 1994). Phenomenology is commonly used in educational research, as a means of representing and learning from the lifeworld experiences of students and educators (Koopman, 2015; Sohn et al., 2017). However, phenomenology has many different strands, interpretations and followers, each defined by how lived experiences or phenomenon is explored. Transcendental and hermeneutical phenomenology are among the most common strands (Laverty, 2003).

Transcendental Phenomenology. Transcendental or descriptive phenomenology is guided by the work of Edward Husserl. Husserl was a German mathematician who lived from 1859-1938. His philosophy of phenomenology challenged the dominant views on the origin and nature of truth at the time, as he believed that subjective information should be an important part of the scientific approach (Lopez & Willis, 2004; Neubauer et al., 2019). For Husserl, his goal of phenomenology was to discover and describe the lived world in a rigorous and "natural" way (van Manen, 1990). He believed that in order to arrive at an understanding of human consciousness, researchers must first actively shed or "bracket" all prior personal and expert knowledge concerning the phenomenon being studied (Lopez

& Willis, 2004). Husserl argued that this allowed for the researcher to investigate the human consciousness or experience objectively, that is, as free from prejudice and bias as humanly possible; a process that he referred to as phenomenological reduction (Dowling, 2007). In this view, transcendental phenomenology is applied when the researcher wants to generate an essence of a lived experience, rather than relying on a researcher's interpretations of the meaning of a lived experience.

When considering Husserl's desire for rigour and objectivity (Neubauer et al., 2019), I found it difficult to align my philosophical perspectives with his approach to conducting phenomenological research. Moreover, I believe my personal experience as a former middle school physical educator adds value to this research; thus, bracketing this expert knowledge would have impeded the research process. As such, it was Heidegger's hermeneutical phenomenology and its interpretive philosophical underpinnings that I chose as my methodological approach to guide this research.

Hermeneutic Phenomenology. Hermeneutic or interpretive phenomenology was founded by Martin Heidegger who lived from 1889-1976. Heidegger's work originated from Husserl, where the two philosophers were once aligned until Heidegger changed two key assumptions of his paradigm (Heidegger, 1962). First, Heidegger had rejected epistemology—the theory of knowledge, and adopted ontology—the science of Being (Reiners, 2012). The focus of his new approach became centred on understanding the meaning of Being within the world or "Dasein", translated as "existence" (Heidegger, 1962). Heidegger argued that this process required a reciprocal activity between the researcher and the researched, which involves the interpretation of the interpretations one gives to their experiences, often referred to as the hermeneutic circle (Koch, 1996).

Second, Heidegger did not think it was possible for a researcher to bracket their experiences related to the phenomenon under study. Instead, he believed a researcher's expert knowledge is considered a valued and welcomed guide to the research process, as it is thought to make the inquiry a meaningful undertaking (Lopez & Willis, 2004). When compared to descriptive phenomenology, interpretive phenomenology is used when a research question asks about the meaning of a phenomenon and the researcher is not required to bracket their biases and prior experiences concerning the question under study.

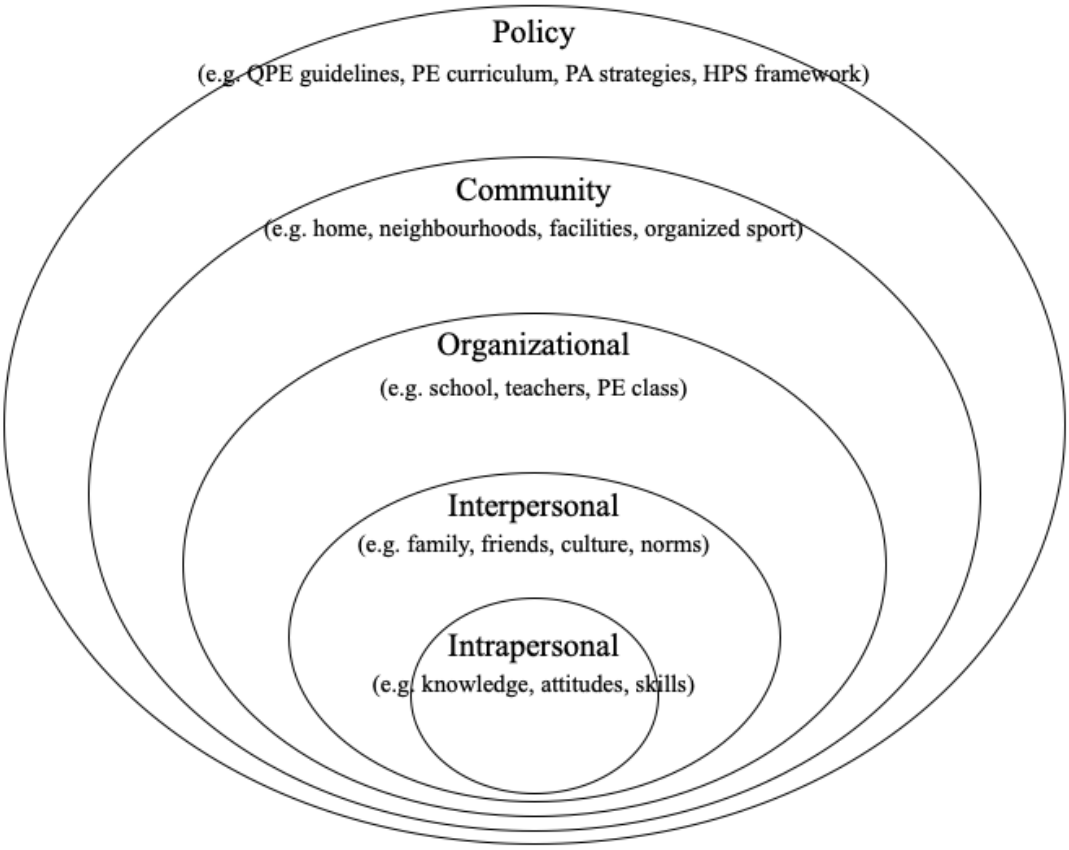
I chose to use a hermeneutic phenomenological approach for this study because I believe the meaning students give to their educational experiences provides valuable insight to educators, policymakers and researchers about how students are receiving the curriculum. Moreover, I believe my expert knowledge as a former PE teacher with experience delivering the current PE curriculum adds credibility particularly amongst the PE community, which contributes to the trustworthiness of this research.

Socio-Ecological Model

The Socio-Ecological Model (SEM) is a conceptual framework used to organize and understand how individual behaviour is influenced by and influences the various environments of the social system (Bronfenbrenner, 1977). SEMs are often used within health promotion programs and related research as they acknowledge multiple levels of influence rather than the conventional focus on individual-level factors (Zhang et al., 2012). According to Lounsbury and Mitchell (2009), SEMs can be conceptualized in different ways depending on the issues they are used to address. For example, Langille and Rodgers (2010) used a five-level SEM to assist in the recruitment and selection of stakeholder participants based on their professions within the higher levels of the SEM

(organizational, community, policy). The purpose of their research was to qualitatively investigate how physical activity is promoted in schools. In another study, Rand et al. (2017) used an SEM to explore the psychological, emotional and social experiences of obese individuals, and perceptions of health care providers. In both examples, a five-level SEM was used to examine factors that influenced behaviour in two very different contexts and environmental conditions. In this research a five-level SEM that will be used to explore the social and environmental factors that influence students' PE experiences. These levels include intrapersonal, interpersonal, organizational, community and policy. Figure 1 provides an overview of the factors that influence students' PE experiences according to the SEM used throughout this research.

Figure 1. Levels of the Socio-Ecological Model



Note: QPE = quality physical education, PE = physical education, PA = physical activity, HPS = health promoting schools.

Intrapersonal Level. The intrapersonal level of the SEM considers personal characteristics of the individual such as knowledge, attitudes and skills, as contributing factors that influence behaviour (McLeroy et al., 1988). In this research, characteristics such as Grade 8 students' knowledge or beliefs of the purpose of school-based PE, personal preferences about the school subject, individuals' perceived levels of physical literacy (i.e., motivation, confidence, competence, knowledge, understanding) and associated fundamental movement skills, are examples of intrapersonal factors that influence students' PE experiences.

Interpersonal Level. At this level, McLeroy et al. (1988) listed formal and informal social networks and support systems such as family and friends as the primary factors that influence behaviour. In this research, students' relationships with their parents/guardians, siblings and friends were explored. This includes students' perceptions of others as an influencing factor of their PE experiences.

Organizational Level. The organizational or institutional level takes into account how organizational characteristics can be used to support behavioural change including rules and regulations for everyday operations (McLeroy et al., 1988). As such, factors that influence students' PE experiences at the organizational level include the role of the PE teacher, the flow and schedule of PE classes, and rules/guidelines that have been put in place by teachers.

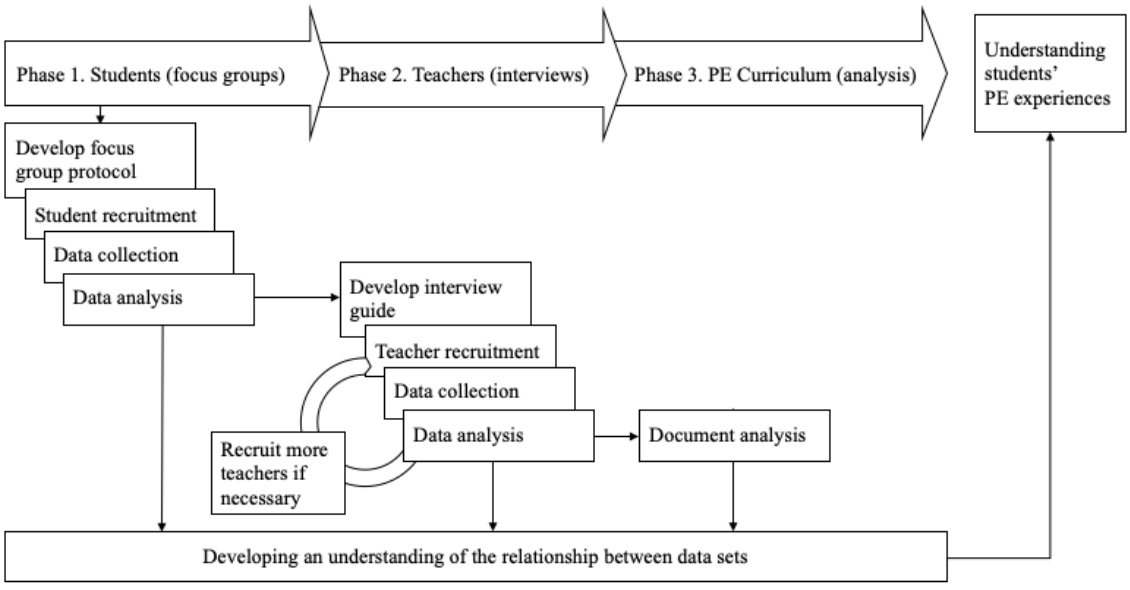
Community Level. At the community level, factors such as relationships among organizations and informal networks within the PE community were explored. This included students' and teachers' reports of the relationships their schools have with surrounding communities with respect to available resources and comprehensive school health initiatives.

Policy Level. The outermost level of the SEM considers the influence formal rules and regulations at the highest levels of public health have on health behaviour (McLeroy et al., 1988). In this research, the Nova Scotia middle school (Grades 7-9) PE curriculum serves as the overarching policy document that influences students' PE experiences; however, other pertinent policies include QPE guidelines and Nova Scotia PE safety guidelines.

Procedures

This research placed students at the centre of an interpretive phenomenological analysis (IPA) that aimed to explore their reported school-based PE experiences. The research was supported by a five-level SEM which incorporated PE teachers' perceptions of students' experiences, as well as reports of their own experiences delivering the current PE curriculum. To organize this study accordingly, while addressing the research questions that have been used to guide this research, data collection and analysis occurred in three sequential phases. The first phase involved student focus group discussions. The second phase involved in-depth individual interviews with PE teachers, and the third phase involved document analysis of the PE curriculum. Figure 2 illustrates the three phases of data collection and analysis in this study. This mixed-model study design is supported by Davison (2014) and Martindale et al. (2009) as a process to add depth and understanding to a phenomenon of interest.

Figure 2. Phases of Data Collection and Analysis



Stakeholder Engagement

During the early stages of conceptualizing this research, a stakeholder engagement meeting with two provincial government employees within the DEECD who were familiar with the culture and status of PE in Nova Scotia was held. The purpose of the meeting was not to collect data, but to gain insight from a socio-political perspective of the challenges concerning the implementation of the existing Grades 7-9 PE curriculum, which at that time was into its third year of implementation and there had not been any formal evaluation done on the curriculum. Knowledge gained from this meeting was used to inform the development of my research questions, and ultimately influence the design of this study.

A second stakeholder engagement meeting was held at the beginning of Phase 2, where I met with a provincial government PE consultant. The purpose of this meeting was to gain insight into the culture of teaching PE in Nova Scotia in the post-Bill 75 era (refer to Chapter 1*: Physical Education in Nova Scotia Schools*). The PE consultant shared their expert knowledge based on past and current experiences that spanned most levels within the SEM of the PE community [i.e. interpersonal (parent), organizational (PE teacher), policy (government PE consultant)]. Knowledge gained from this meeting provided me with a point of reference as to where some of the teacher's emotionally fuelled language was coming from, with respect to discussions concerning lack of government support, which are expanded upon in Chapters 4 and 5.

Engaging stakeholders in the planning and execution of research is a practice supported by Ray and Miller (2017) and Stringer (2007), as it is intended to improve the quality of research through the incorporation of multiple perspectives beyond the traditional research team.

Recruitment Strategies and Participant Selection

There were two groups of participants in this study, Grade 8 students and PE teachers responsible for delivering the Nova Scotia Grade 8 PE curriculum. Participants from both groups were selected based on purposive sampling, which is a type of non-probability sampling where participants are selected because they meet a specific criteria relevant to the research question (Hastie & Hay, 2012). In this research, participants were selected on the basis that they could provide personal accounts of their recent Grade 8 PE experiences either as a student or as a teacher.

For both groups, recruitment relied primarily on social media postings on Facebook and Twitter (Appendix A**)** and printed posters placed on community bulletin boards inside public libraries, recreation centres and coffee shops (Appendix B). Radio and an online newspaper article also became inadvertent methods of recruitment after a local radio station aired an interview of me discussing my doctoral research. See Appendix C for a copy of the article. Additional participants were obtained through word-of-mouth from parents/guardians of already recruited student participants. Word-of-mouth recruitment also occurred amongst teacher participants. Potential participants were able to obtain my contact information from recruitment materials and from other participants if they were interested in knowing more about the research. Recruitment for all participants occurred outside of the school system.

Phase 1: Student Focus Groups

Eighteen Grade 8 students were recruited to participate in one of four semi-structured focus group discussions. Although the traditional data collection strategy for phenomenological research has been the individual interview, Bradbury-Jones et al. (2009)

and others (Palmer et al., 2010; Tomkins & Eatough, 2010) have argued that the focus group interview is an acceptable alternative, as it is possible to preserve an individuals' lived experience of a phenomenon within a group context (Bradbury-Jones et al., 2009). Tomkims and Eatough (2010) cautioned that if focus groups are to become an established option for IPA research, adopters need to be aware of possible epistemological issues that may arise, and at the very least, acknowledge that tensions exist with respect to new ways of doing phenomenological research. Moreover, I chose to use semi-structured focus groups over individual interviews with the student participants for three reasons: (1) adolescents are less willing to discuss their personal experiences with an unfamiliar adult in a one-on-one situation (Peterson-Sweeney, 2005), (2) focus groups minimize the power-relationship between researcher and participant (Heary & Hennessy, 2002), and (3) focus groups permit for the generation of rich data as a result of the interaction and stimulation that results from a group setting (Peterson-Sweeney, 2005).

Each focus group was defined by students' self-identified gender (female or male) and geographic location based on the region of the school they attended (urban or rural). For the purposes of this research, schools located in any region other than the Halifax Regional Centre for Education (HRCE) were considered rural. The goal was to recruit 3-5 students per group that were reflective of a typical Grade 8 public school class in Nova Scotia. According to Heary and Hennessy (2002), focus groups involving adolescent participants are easier to manage and maintain flow of conversation when group sizes are kept relatively small. To assist students in sharing their PE experiences openly, they were permitted to attend whichever focus group they felt most comfortable, based on their self-identified gender. To capture possible differences in perspective between urban and rural

settings, students were recruited from either urban (HRCE) or rural [Annapolis Valley Centre for Education (AVCE)] regions of Nova Scotia. These two regions were chosen in order to concentrate recruitment efforts, and to minimize burden on parents/guardians of student participants with respect to travel. According to Moore et al. (2010), the presence of community and environmental supports for physical activity may differ between urban and rural settings. Therefore, it was important to account for these factors as they could impact students' PE experiences.

The following steps were taken to recruit student participants: (1) initial point of communication was made by either an interested student or parent/guardian via phone, social media or email. Details about the study were discussed and a copy of the parental/guardian consent form (Appendix D) was sent via email; (2) if the parent/guardian and student were interested in participating, they were informed that an in-person consent session with the parent/guardian and an in-person oral assent session with the student (Appendix E) would occur with the Lead Researcher at the beginning of the focus group meeting; and (3) once a list of interested potential participants was compiled, the Lead Researcher communicated with the parents/guardians to coordinate focus group times and locations. Students were eligible to participate in the research if they were enrolled in Grade 8 at an English-first language public school either in the HRCE or AVRCE.

The purpose of the focus groups was to gather qualitative information about students' PE experiences and ultimately, gain a better understanding of how the current PE curriculum is being received by students. Focus groups were held in the community room of a local chain grocery store, located centrally within an urban (HRCE) and rural (AVRCE) community in Nova Scotia. The community rooms were chosen as the hosting

site as they were thought to be perceived by students as familiar and nonthreatening (Peterson-Sweeney, 2005). All focus groups were co-facilitated by me, the Lead Researcher, and a volunteer female undergraduate research assistant.

Based on Peterson-Sweeney's (2005) recommendations for facilitating focus groups with adolescent participants, the following steps were taken to ensure participant safety and comfort. At the beginning of each focus group, an ice-breaker activity was used to build positive rapport among the students and facilitators. Students were asked to share a personal artifact or memory that was reflective of their relationship with physical activity. Some students brought in various pieces of athletic apparel (e.g. shoes, sweatbands, shorts) and equipment (e.g. basketball, baseball glove), while others brought medals and plaques they received for various sport-related accomplishments.

During each discussion the facilitators and students were comfortably seated around a table in a horseshoe arrangement to allow for easy eye contact and students were provided paper and markers to create a desktop name tag for all to see (Peterson-Sweeney, 2005). After completing the oral assent process and agreeing to be audio-recorded, students were provided a $25 honorarium in the form of a gift card to a local sporting goods store as compensation for their participation.

The focus group protocol and semi-structured interview guide (Appendix F) involved a series of open-ended questions and probes which aimed to inquire about students' PE experiences and perceptions. Throughout the 60-minute discussions, the questions being asked became increasingly more difficult, as they were intended to address topics relevant to the five levels of the SEM including: attitude toward physical activity, perceptions of PE in comparison to core subjects, influence on lifestyle behaviours,

experiences within PE class, acquired transferable skills and perceived levels of physical literacy. Table 1 highlights the organization of questions and probes and specific learning outcomes from the PE curriculum as they relate to the five levels of the SEM. Knowledge gained from Phase 1 was used to inform the development of the semi-structured interview guide used with PE teachers in Phase 2.

Table 1. Relationship Between Data Sources and SEM Constructs

	Data source		
SEM constructs	Student focus groups	Teacher interviews	Curriculum analysis
Intrapersonal	Do you consider PE to be an important school subject?	What's the general mood of the class during PE?	A8.1, A8.4, A8.5 B8.1, B8.2 C8.3
Interpersonal	In general, are students having fun during PE class? Is it competitive?	How engaged are the students? Any differences between boys and girls?	B8.3 C8.1, C8.3
Organizational	What types of games or activities are being taught during PE class?	How are you supported (or not supported) in your role by your school?	C8.2, C8.3
Community	How do you see PE helping you in your everyday life?	What transferable skills do you hope students are taking from Grade 8 PE?	A8.2, A8.3, A8.5 C8.1
Policy	If you had the ability, what would you change about your PE class?	What suggestions would you give to PE policymakers around PE curriculum development/ implementation?	B8.3 C8.2

Note: The content listed under 'Curriculum analysis' correspond to the general and specific curriculum outcomes presented in Appendix I. SEM = Social-Ecological Model, PE = physical education.

Phase 2: Teacher Interviews

Six PE teachers responsible for delivering the Grade 8 PE curriculum were recruited to participate in a single semi-structured individual interview. The goal was to recruit 6-10

teachers that were reflective of public school PE teachers in Nova Scotia. These numbers were consistent with other interpretative phenomenological education studies that interviewed teachers (Bryant, 2018; Hall et al., 2016), as it was demonstrated to permit a range of perspectives and generate a sufficient depth of information.

The following steps were taken to recruit and enrol teacher participants into the study: (1) initial point of communication was made by an interested teacher via phone, social media or email. Details about the study were discussed and a copy of the teacher informed consent form (Appendix G) was sent via email; (2) if the teacher was interested in participating, they were asked to return the completed consent document and select a convenient time, date and location to be interviewed. Teachers had the option to interview via phone or in-person. All interviews occurred outside of regular school hours and off school properties. Teacher recruitment material did not target a specific sex, gender, race, ethnic background or geographic location for which their school was located. Teachers were eligible to participate in the research if they were currently employed in an English-first language public school in Nova Scotia, and they were responsible for delivering the current Nova Scotia Grade 8 PE curriculum.

The purpose of the semi-structured teacher interviews was to gather supplemental qualitative data about students' PE experiences from the perspective of the teacher, and to gain a better understanding of how PE is supported in Nova Scotia. Open-ended questions and probes asked during the interviews (Appendix H) were intended to address topics relevant to the five levels of the SEM including: teachers' perceptions of students' PE experiences, teachers' perceptions of the influence PE has on students' physical activity behaviours, and personal experiences delivering the Grade 8 PE curriculum. Teachers were

not compensated for their participation in this research. Interviews were audio-recorded with consent from teachers and transcribed verbatim by a trained transcriptionist.

Phase 3: PE Curriculum Review

The purpose of Phase 3 was to conduct a comprehensive review of the Nova Scotia middle school (Grades 7-9) PE curriculum via document analysis. This was done to provide context to students' and teachers' reported experiences and perceptions of PE and to shed light on any differences between participant-reported experiences and curriculum content. The PE curriculum was also examined for strategies to reducing physical inactivity amongst students and enhancing student physical literacy.

Data Management and Analysis

All data sources were managed and analysed within QSR International's (2018) NVivo 12 qualitative data analysis software. This included audio-recorded data collected during student focus groups and teacher interviews which were transcribed verbatim by a trained transcriptionist, and a pdf-version of the Nova Scotia 7-9 PE curriculum. Two methods of qualitative data analysis were used within this research. The first was a form of inductive thematic analysis, known as interpretative phenomenological analysis (IPA), and the second was document analysis.

Interpretative Phenomenological Analysis

The purpose of IPA is to organize patterns and commonalities that occur when participants interpret their personal and social world. This method of data analysis, as outlined by Smith and Osborn (2003), involves seven steps: (1) multiple reading and note taking, (2) notes to emergent themes, (3) connecting emergent themes, (4) producing table

of themes, (5) continuing to the next case, (6) producing a final table, and (7) writing up the research.

As previously stated, preliminary analysis of the student focus group data informed the development of the semi-structured teacher interview guide used in Phase 2. This took place during the first step in the IPA process, which involved multiple readings of the transcripts, relistening to the audio-recorded discussions and reviewing the field notes made during the student focus groups. While consuming these data I made notes about significant occurrences reported by students, and from this I was able to compile a list of questions and probes for teachers that were intended to capture their perceptions of students' PE experiences as well as their own. After the teacher interview guide was complete, I continued analysing the student focus group data.

The second step involved reviewing my notes and transforming them into concise phrases that were reflective of what was unearthed from the transcript, while making sure that they were still grounded in the student participant's initial narrative to allow for theoretical connections to be made. In step three, I began looking for connections between emerging themes and grouping them together according to conceptual similarities. As emerging themes were clustered, they become sub-themes and a descriptive label was provided. At this point, several themes were dropped as they did not fit well with the emerging structure. My intent was to find at least one theme per level within the SEM framework. The fourth step involved compiling my sub-themes into superordinate themes, which were then placed into a table. The table organized the sub-themes within their respective superordinate theme, along with relevant data extraction information (i.e., focus

group number, page number) and significant quote beside each theme. This allowed me to track the analytic journey from the primary source material to the table of themes.

The fifth step involved moving onto the next transcript and repeating the process. To do justice to the individuality of each new focus group, Smith and Osborn (2009) recommended ideas that may have emerged from earlier transcripts are bracketed; however, this was difficult to do because the focus groups were intentionally conducted in an iterative manner—each building off of the one prior. During this iterative process, the table of themes for each focus group was reviewed, and the original transcripts were revisited if necessary. Once each transcript was finished being analyzed, a final table of superordinate themes and their respective sub-themes was produced in preparation for step six. At this point, I stopped working with the student data and initiated analysis of the teacher interview data using the same steps (1-5) as previously described. The reason being, each Phase of data analysis was intended to occur sequentially.

Step six involved the merging of tables from the analyses of the student and teacher data for a comprehensive interpretative phenomenological analysis of both data sets. At this stage, a decision over which themes were prioritized and which were abandoned was made. The final step in the IPA was writing a narrative account of the research. This involved taking the themes identified in the final table and writing each one up individually, complete with a description and exemplified extracts from the student focus group discussions and individual teacher interviews. The narrative accounts (see Chapter 4) are then followed by a discussion (see Chapter 5) which relates the identified themes to existing literature.

Document Analysis

Similar to other methods of qualitative data analysis, document analysis involves the examination and interpretation of data in order to generate meaning and gain knowledge. This method of data analysis, as outlined by Bowen (2009), involves three steps: (1) superficial examination or skimming of the document, (2) thorough reading/examination of the document, and (3) interpretation. Although analysis of the PE curriculum was not part of the comprehensive analysis for the purpose of generating themes, this information was used to provide context to students' and teachers' reported experiences.

Ensuring Rigour and Trustworthiness

Individuals who read this body of research will interpret the findings and apply their own meanings to the data through a lens defined by their personal worldviews as shaped by their lived experiences. Naturally, some readers may not share or necessarily agree with the same interpretations as the ones I have provided; however, according to Koch (1994), readers should be able to determine how a researcher arrived at their interpretations. A qualitative researcher, therefore, is obligated to demonstrate: (1) that the research paradigm and theoretical framework(s) that they have chosen to align themselves with and guide their research questions are appropriate for the context; and (2) that their study design and methods used for data collection and analysis are consistent and reproducible (Ary et al., 2006).

Lincoln and Guba (1985) explained how early critics of interpretative research described it as 'undisciplined… [with] "sloppy" research, [and researchers] engaging in "merely subjective" observations' (p. 289). They argued that rigour can be appropriately

reported on in interpretative research, but it is not appropriate to use the same positivist standards of validity, reliability and objectivity, but rather that the concept of trustworthiness be used (Collier-Reed et al., 2009). Lincoln and Guba (1985) proposed four criteria that they believe should be considered by qualitative researchers in pursuit of a trustworthy study. These include credibility (in preference to internal validity), dependability (in preference to reliability), transferability (in preference to external validity/generalisability), and confirmability (in preference to objectivity). This study implemented multiple strategies for ensuring trustworthiness of the research process and its findings, as recommended by Collier-Reed et al. (2009) and Koch (1994).

Credibility

Lincoln and Guba (1985) aligned their notion of credibility with the "truth value" (p. 294) of research. Collier-Reed et al. (2009) argued that credibility in phenomenographic research is something that must be considered throughout the entire research process, as it not just an interrogative process of the research findings left to the reader. Cohen et al. (2000) described two approaches to establishing credibility throughout one's research, these include content-related and methodological credibility.

Content-related credibility relates to the researcher's comprehension or understanding of the phenomenon under investigation (Collier-Reed et al., 2009). As previously discussed, my former role as a middle school PE teacher gave me exposure to and experience teaching the current PE curriculum to Grade 8 students. This teaching experience was not only a great learning opportunity, but it provided me with "expert knowledge" (Lopez & Willis, 2004) that has informed my every decision throughout this entire research process.

Methodological credibility relates to how the goals of the research reflect its design and execution (Collier-Reed et al., 2009). In this research the goal was to gain examine students' PE experiences. To do this, I placed Grade 8 students at the centre of an interpretative phenomenological analysis and used supplemental information from teacher interviews and document analysis of the PE curriculum to support students' reported experiences. The goals of phenomenology are in line with the goals of my research, as it aims to understand lived experiences, which in this case is Grade 8 PE. Although focus groups are not the traditional data collection method of choice for IPA, rationale for choosing focus groups over individual interviews have already been discussed.

Other widely used techniques to ensure credibility include triangulation and member checking. Triangulation involves the use of multiple related data sources or data collection techniques for the purpose of reducing inherent bias associated with a single data source or method (Hadi & Closs, 2015). In this research, three related data sources of data were used to examine students' PE experiences (students' and teachers' reported experiences and the PE curriculum) and each involved a unique method of data collection/analysis (focus groups, individual interviews, and document analysis). Hadi and Closs (2015) added that triangulation should not be viewed as a tool to "check" the validity of data, rather it is a technique used to enhance the credibility research by confirming new information over the course of the data collection phase.

Member checking is often considered the most important technique to ensure a research project's credibility (Hadi & Closs, 2015; Lincoln & Guba, 1985). This technique involves ongoing formal and informal verification of data, analysis of themes, interpretations and conclusions with the participants from whom the data were originally

obtained (Korstjens & Moser, 2018). Although it was not possible to do member checking with the student participants, as it was would have violated my research ethics protocol to communicate with students after their completed focus group, several teachers were contacted via email to verify interpretations of their reported experiences. In addition, preliminary results from this research were presented at the 2019 TAPHE Conference and those who attended were able to provide feedback on the PE policymaker recommendations which were modeled after the six themes presented in Chapter 4.

Dependability

Lincoln and Guba (1985) aligned their notion of dependability with the "consistent, dependable, and predictable" qualities of reliability (p. 292). Korstjens and Moser (2018) explained that dependability has to do with the repeatability or "stability of findings over time" (p. 121). A common technique used to ensure dependability is the use of an audit trail. Audit trails involve a complete set of notes on the decisions made during the research process, including dates of meetings, tasks completed, memoirs, sampling strategies, research materials adopted and emergence of the findings (Korstjens & Moser, 2018). This information enables an auditor to examine the transparency of the decisions made by the researcher. As part of this study I maintained an electronic journal of all significant milestones and meetings relevant to the research process (Appendix I).

Transferability

Guba and Lincoln (1989) aligned their notion of transferability with applicability. Korstjens and Moser (2018) wrote transferability is the degree to which research findings can be transferred to other situations or settings with different participants. Transferability was achieved in this research by providing thick and rich descriptions of the research

settings, inclusion/exclusion criteria, characteristics of the data sources, and details about the data collection and analysis methods. This process assists the reader in being able to evaluate the extent to which study findings are transferrable to other students, teachers, schools or parts of the province.

Confirmability

Confirmability is the degree to which research findings can be confirmed by other researchers (Korstjens & Mosher, 2018). Guba and Lincoln (1989) stated that confirmability is established when credibility, dependability and transferability are achieved. Therefore, based on the signposts of the above standards of trustworthiness throughout this research, this entire thesis acts as an inquiry audit.

Reflexivity

A fifth criteria of trustworthiness is the notion of reflexivity. Reflexivity is the process of continual critical self-reflection about oneself as a researcher and their relationship to the research (Korstjens & Moser, 2018). It involves both implicit and explicit assumptions, preconceptions, values, and acknowledgement of how these affect decisions throughout the entire research process. In the methodology chapter of this thesis, I dedicated a section to explicitly stating my paradigmatic position and philosophical assumptions, as well explained how my personal experiences, identity, values and perspective have shaped this research. Furthermore, I occasionally reflected on these assumptions during the periods when I was interpreting and analyzing the data, as this gave me clear insight on my expectations and role as a qualitative researcher.

Ethical Considerations

Ethics approval for this research was received from the Dalhousie University Social Sciences and Humanities Research Ethics Board (REB), which follows the ethical guidelines set out by the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (Government of Canada, 2018).

All participants, including parents/guardians of students, completed an informed assent/consent session prior to participating in the study. Participants were briefed on the nature of the study and their role in it. A concern for some, given the subject matter of the focus group discussions and interviews, was the risk of their confidentiality being compromised. Participants were informed that confidential information shared would remain private and were advised that any names or identifying details shared would be deleted during the transcription process. Students were continually reminded that information shared during the discussion should not be repeated to others outside the focus group. Participants were also informed that they could withdraw from the study at any time without reason or repercussion, and students could keep their $25 honorarium. All participants were provided an electronic copy of the informed consent form containing research team contact information, as well for Dalhousie University's Director of Research Ethics.

For the interest of student safety and adherence to the Nova Scotia public school Research and Information Sharing Request Guidelines (Government of Nova Scotia, 2019), I was accompanied by a female research assistant for all student focus groups. In addition, I submitted results from a criminal record and vulnerable sector check to the REB

and had copies readily available with me during data collection had participants (or their parents/guardians) requested a copy.

Chapter Summary

This chapter outlined the research methodology and procedures used to conduct this study. It began with an explanation of my position to the research, in terms of personal views, experiences and expectations. A description of Heidegger's hermeneutic phenomenology as the chosen methodology and its associated philosophical underpinnings were provided. Next an outline of the procedures used to recruit and select participants, collect and analyze data, and techniques used to ensure rigour, were discussed. Finally, ethical considerations relevant to the research were explained.

Chapter 4: Results

In Chapter 3, details about the research methodology and study design were presented. This included an overview of interpretative phenomenology and its philosophical underpinnings. A description of the methods used to recruit and select participants, collect and analyze data, and techniques used to ensure rigour and trustworthiness, were explained. The purpose of Chapter 4 is to present an interpretative phenomenological analysis of the PE experiences of 18 Grade 8 students. This information is supplemented with interview data from six PE teachers' perceptions of students' experiences and document analysis of the provincial PE curriculum. This chapter begins with a presentation of the data sources, including socio-demographic information about the student and teacher participants and a descriptive profile of the Nova Scotia Grades 7-9 PE curriculum. Finally, six emerging themes that represent the key issues that influence students' PE experiences as they relate to the various social and environmental levels within the SEM are presented. These themes include (1) student engagement, (2) varying views of PE's purpose, (3) role of the PE teacher, (4) low status of school PE, (5) comprehensive school health, and (6) red tape policies.

Data Sources

This study gathered qualitative data from three sources, including student focus groups, teacher interviews and the provincial PE curriculum. Analysis of the focus group and interview data was conducted using IPA and document analysis was used to analyse the curriculum.

Student Focus Groups

Eighteen Grade 8 students (7 females and 11 males) participated in one of four focus group discussions in April 2019. Each focus group was defined by students' self-identified gender (female or male) and geographic location (urban or rural). Each focus group was approximately 1-hour in duration and was held in the community room of a chain grocery store located in an urban and rural community in Nova Scotia.

The urban-female group consisted of five students, including a pair of siblings, from four different schools. The urban-male group consisted of seven students, including two pairs of siblings, from four different schools. The two urban focus groups captured the views and experiences from 12 students in total, representing seven unique PE programs within the Halifax Regional Centre for Education (HRCE).

The rural-female group consisted of two students from the same school and the rural-male group consisted of four students from three schools. The two rural focus groups captured the views and experiences from six students in total, representing four unique school within the Annapolis Valley Regional Centre for Education (AVRCE). See Table 2 for a summary of student participant information.

Table 2. Student Participant Information

Gender	Location		
	Urban (n)	Rural (n)	Total (n)
Female	5	2	7
Male	7	4	11
Total	12	6	18

Teacher Interviews

Six PE teachers (4 females and 2 males) from six unique schools located within three school regions (1 urban, 2 rural) were recruited to participate in individual interviews.

None of the teacher participants were responsible for teaching Grade 8 PE to any of the student participants. Five of the interviews were conducted via telephone and one in-person. In order to protect the confidentiality of the teachers, pseudonyms were assigned and only select non-identifiable information of the teachers and their PE programs are presented, including gender, geographic location of their school (urban or rural), approximate number of years of teaching experience and details pertaining to class size and quantity of weekly PE instruction (see Table 3). In total, there was approximately 70 years of combined teaching experience, with an average of around 12 years per teacher.

Table 3. Teacher Participant Information

Pseudonym	Gender	Experience (years)	Location	Description
Melissa	Female	5+	Rural	Average size of Grade 8 PE class is 24 students. Students receive 120-150 min of PE instruction in a six-day cycle.
Theresa	Female	10+	Rural	Grade 8 classes range from 20-30 students. Two classes in the gym at a time (upwards to 60 students) delivered by two PE teachers. Students receive 120 min of PE instruction in a six-day cycle.
Barbara	Female	10+	Rural	Combined classes of 50+ students in a shared gymnasium with two PE teachers. Students receive 180 min of PE instruction in a six-day cycle.
Carl	Male	25+	Rural	Less than 25 students in Grade 8 PE. Students receive 180 min of PE instruction in a six-day cycle.
Mark	Male	5+	Rural	Community oriented school. Small class sizes of 18-20 students. Students receive 180 min of PE instruction in a five-day cycle.
Gail	Female	5+	Urban	Students receive 120 min of PE instruction in a five-day cycle.

Note: PE = physical education.

PE Curriculum Document Analysis

The current Nova Scotia middle school (Grades 7-9) PE curriculum was implemented from September 2015 (Government of Nova Scotia, 2014b), replacing the previous curriculum from 1999. It is a 126-page document, organized into ten major sections. The curriculum was obtained via email request from a senior-level government employee within the Nova Scotia Department of Education and Early Childhood

Development (DEECD), as it was previously not accessible from the DEECD's public government website.

The *Introduction* section of the curriculum provides background information about the review team and the development process, along with the stated aim of the curriculum, which is presented in a series of bullet points:

> The aim of this curriculum document is to provide physical educators with a set of learning outcomes that:
>
> - Educate the whole child – psychomotor, cognitive, and affective;
> - Support the development of physical literacy in students;
> - Recognize the needs of a 21st century learner;
> - Recognize the importance that Nova Scotia students participate in a quality physical education program at least 3 days a week for a total of 150 minutes;
> - Understand the different demographics and cultures throughout Nova Scotia; and,
> - Allow for cross-curricular planning and implementation. (Government of Nova Scotia, 2015b, p. 7)

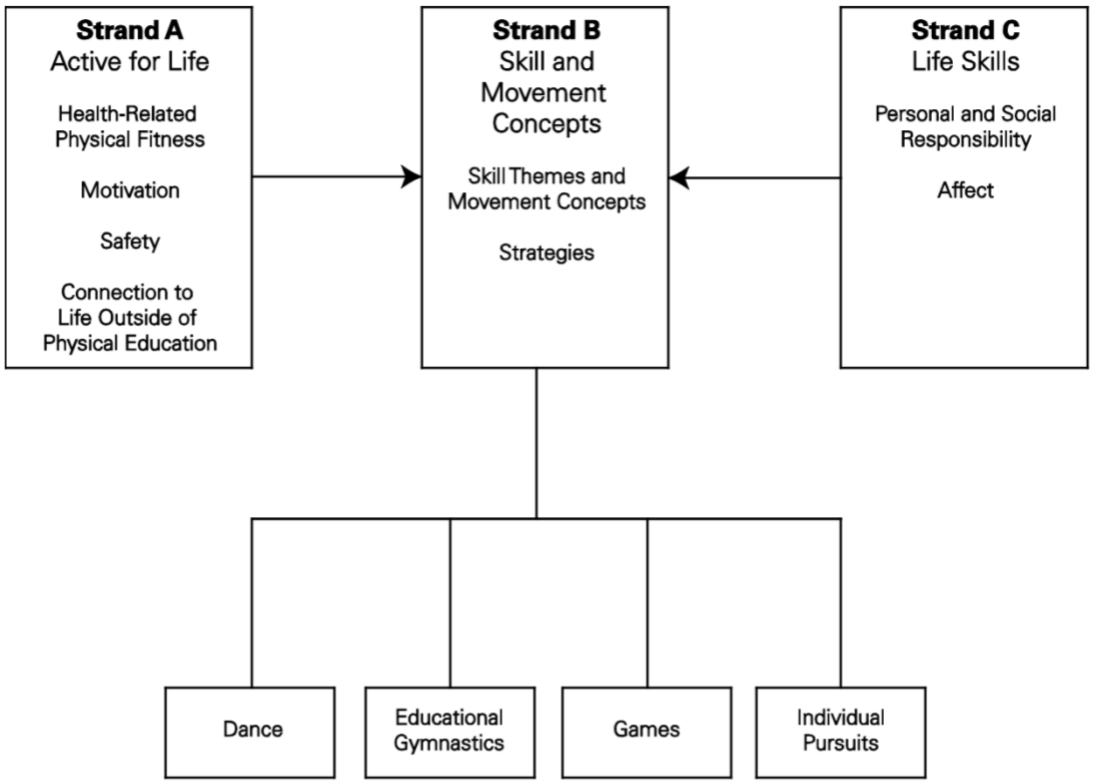
The curriculum review team, consisted of 26 individuals, including two PE teachers from each Nova Scotia school board, three PE teachers with part-time administrative duties or past administrative experience, government staff of education and health promotion, university professors responsible for teaching PE teacher education (PETE) programs, and PE and exercise psychology consultants. It is worth noting, no youth representatives for which the curriculum is intended for, were involved in the curriculum development or review process.

The *Course Design and Components* section introduces the three curriculum strands (Active for Life, Skill and Movement Concepts, Life Skills) and the four movement

categories (dance, educational gymnastics, games, individual pursuits) for which the curriculum is meant to deliver upon (Figure I). This section of the curriculum describes how the curriculum is intended to be delivered to students.

The *Assessment and Evaluation* section highlights the importance of measuring students' performance in all three domains of learning (psychomotor, cognitive, affective), and a list of key terms and definitions related to assessment are presented. This section of the curriculum describes why assessment and evaluation are critical to a quality PE program.

Figure 3. Curriculum Strands and Movement Categories



Note: Figure adapted from Nova Scotia 7-9 PE curriculum (Government of Nova Scotia, 2014f, p. 9).

The *Outcomes* section presents the intended learning outcomes (Appendix J) as they fit within each of the three curriculum strands. Each strand is tied to a single general

curriculum outcome (GCO) and several specific curriculum outcomes (SCO), which are intended to guide the PE teacher's lesson plans and act as a framework for their assessment rubrics. This section of the curriculum presents the transferable skills the curriculum is intended to provide students.

The *Contexts for Teaching and Learning* section outlines the parameters for which the curriculum is intended to be delivered. This includes information on how to address the needs of a 21st century learner while being cognizant of the many differences between female and male adolescent learners, particularly during a period defined by pubertal growth and maturation. The role of the PE curriculum as it relates to the continued development of students' physical literacy and the importance of inclusive PE practices are also presented. Information on how to create motivational climates, methods to celebrate Nova Scotia's rich culture and heritage, insert cross-curricular connections, use technology to promote motivation, and plan for a successful year-long quality PE program were also presented. This section aimed to address the many roles PE teachers are required to fulfill.

The *PE (Grade 8)* section builds on the general and specific curriculum outcomes presented in Appendix J. It provides sample assessments, teaching and learning activities that could be used to meet stated outcomes. This section also includes weblinks and references to additional resources to assist teachers plan and deliver a quality PE program.

Emerging Themes

Six themes representing the key issues influencing the PE experiences of Grade 8 students were identified within the intrapersonal, interpersonal, organizational, community and policy levels of the SEM and across participant groups. The first theme 'student engagement' is situated within the intrapersonal level of the SEM. It describes how

constructs such as competition and gender can impact students' participation levels, and therefore possibly impede students' physical literacy development. The second theme, 'varying views of PE's purpose' highlights the many different views on the purpose of PE held by participants. The third theme 'role of the PE teacher' illustrates the extent to which a PE teacher can influence numerous aspects of a child's life, creating an argument for why PE teachers need more opportunities for professional development. The fourth theme 'low status of PE' emerged as a result of reported widespread lack of allocated PE resources, which impacts teachers' ability to deliver quality PE programs and in-turn, students' PE experiences. The fifth theme is 'comprehensive school health' which highlights the critical role PE has in the core curriculum, and the urgency to make students' physical activity participation a priority and shared responsibility of the entire school community. Finally, the final theme 'red tape policies' demonstrates how policy can act as a barrier to physical activity by either causing missed opportunities for students to participate in community-based learning or creating challenges for teachers to meet certain learning outcomes.

Student Engagement

Intrapersonal factors that influenced student engagement during PE were the central focus of this theme. Students spoke about the general mood and participation levels in their respective PE programs. They described the types of activities performed during class and discussed their perceived barriers to participation. Inversely, teachers described the Grade 8 PE programs they teach, in terms of content delivered, interpretations of students' mood, students' activity preferences and participation motives.

The general mood of PE programs, as reported by students, varied significantly. One urban-female said her peers were generally "excited" to participate during PE class, namely due to the playful nature of her classmates:

> …we always make a competition out of whatever we're doing, so like if we're playing volleyball… who can make the most serves over the nets and stuff. And like normally everyone is just so excited to get in and start playing.

An urban-male reported the mood of his PE class as poor, indicating that his classmates do nothing more than complain:

> I think the general mood is why can't we just play the actual sport? Like… we did… these skills last year, we know how to play it, why can't we just like get equipment refresher and then get into the game?

While others reported the mood was dependent upon the games or activities being performed that day:

> I think like it depends what activity we're doing like if they don't like hockey or something, they'll just sit out and not do anything, but if they're doing something they like, they tend to like join in and do it. (rural-male)

> I would say it depends on like what games we're playing cause I would say some of the games that we play a lot of kids don't enjoy them. (rural-female)

Students were asked to comment on the overall engagement levels of their peers during PE class. Some students reported low levels of engagement, which appears to translate into low levels of participation:

> At my school probably like 50% of the people aren't paying attention and just talking. Phys. Ed. for some students is more like a free class where you can just hang out with your friends, talk. (urban-female)

> It's like probably like 30, 40% of people not doing anything because… I'm like one of the only sportsy girls in my class and then there's like a few boys who are like involved in sports, so like me and a few of the boys are the only ones like getting

> involved in stuff. And like the other ones are just sort of standing there, like ah this is stupid, like why are we doing this. (rural-female)

In contrast, most teachers reported the mood and engagement levels of their PE classes to be exceptionally high. Gail believed her students' high level of engagement are due to the higher than average socio-economic status of families in her schools' catchment area, which provides an added layer of support and encouragement to students' participation:

> The attitude and expectations with Phys. Ed. at [my school] I would say is well above average… we have a ton of kids who come from athletic families… they come from supportive families who their parents aren't writing them notes to give them an excuse to be out of Phys. Ed. They understand all the benefits that come with being physically active so I would say that the attitude is very positive… On an average, I would have zero people sitting out, 100% participation.

Theresa described her Grade 8 PE class as high-energy and easy to please:

> They seem to be having so much fun they don't want to stop and listen. I think, as frustrating as it is, I think that's a sign that they're engaged in what they're doing... Even some of the simplest little activities that I'll do with them I think oh yah they're going to think this is silly but they just, they run with it and it's like o.k. they still are kids at heart, so they still like to play those fun little games. If I took the parachute out, it's something they do in elementary school but they'd be like gaga for it.

Barbara described her Grade 8 students to be a little challenging by times. She explained how maintaining open lines of communication with students and parents has shifted the mindset of PE participation over the years:

> …when students come in we ask them if you're not 100% you just do a check-in at attendance with your teacher and you say I'm not 100% and I say that's o.k., what percent are you? And if they're on their menstrual cycle or if their cat died or if you know they're just not mentally there, they can give me like a can I do 75% today? … And so even our parents are starting to get the language too. Like I'll get a note now from some of my parents that will say Jimmy Bob sprained their ankle in soccer, so they can participate to the best of their ability. And so the language is starting to trickle home with the kids because of that but you still get, no matter

> what, no matter what I tried and tweaked over the years, you'll always have one to two students minimum, who will just buck whatever you do. And the parents will give the supporting notes. Suzie Jane is not feeling well today, please excuse from Phys. Ed. And you have to respect it because you don't know what's going on and you don't want to be held liable if you force the situation but you often know that the excuse is probably just that, an excuse to avoid moving.

When students were asked to describe the types of activities typically performed during PE, many students' responses were reflective to those of a traditional multi-activity sport-based PE model, focused on teaching sport-specific skills in a "seemingly socially irrelevant manner" (Gerdin & Pringle, 2015, p. 1):

> Our typical gym class we always have a unit that we study and so we've been doing volleyball for the past few weeks and we don't really do a warm-up or anything, we just study like one skill per class and every week it's different. (urban-female)

The most commonly reported activities performed during PE by students, included: traditional team sports (e.g., basketball, floor hockey, volleyball and soccer); learning sport-specific skills (e.g., practicing free throws in basketball); partaking in elimination games (e.g., dodgeball and tag); and performing health-related fitness activities, such as calisthenics (e.g., push-ups, jumping jacks, burpees and crunches) and running. Additionally, many students reported having performed the "beep test" multiple times during Grade 8 PE, which is a criterion-referenced performance test used to predict students' cardiorespiratory fitness. Some students reported learning about S.M.A.R.T. goal setting as it relates to improving one's personal health and fitness.

Some students said they preferred playing non-traditional games and activities during PE, rather than traditional team sports, whereas others said it didn't matter so long as they were "just moving":

> I love all the running stuff… and always keeping my heart rate up… I just like… just moving. I guess [I don't like] the games that you don't really move a lot in, so like hand/eye coordination ones, I hate that cause I can't catch. (rural-female)

Teachers described the PE programs they were responsible for delivering as inclusive and non-traditional. Melissa explained how she modifies all activities to create a more inclusive experience for students, while being cognizant that students often prefer non-traditional forms of PE instruction:

> So here we tend to stay away from traditional sport, we never play the traditional, if we were doing soccer, we would never just play it like seven a side soccer. We would modify everything to try to help put everyone on an even playing field. The fact of the matter is some people and typically I would say more girls than boys… are probably less interested, sometimes in team activities.

Carl described how he incorporates aspects of outdoor education into his PE program, also commenting on students' preferences:

> We have a fairly big space, you know we can do the tarped shelters, we can do fire building, we've been mountain biking which we go off school property… They like doing something that's not traditional. They still like traditional activities but if you can provide something different that they haven't done, they usually appreciate that.

Gail also described her Grade 8 PE program as non-traditional. She spoke about some of the social issues that arise from teaching traditional sport:

> I tend to do a lot more of non-traditional sports and activities because in the traditional sports like your basketball and soccer and everything, the gap for skill level is just too big. And it's really discouraging to a lot of kids so I think that's something that keeps them really positive is that you know if it's basketball that kids are passionate about well they have their kind of warmup and their time to do that, and you know they play on our basketball team and what not but we're not going to spend you know five Phys. Ed. classes doing basketball because I've got kids that are playing that four nights a week and other kids who are still struggling to dribble a ball. And then that's not fun right. It kind of disengages all the rest of them.

To add to the analysis of content delivered during PE, the curriculum categorizes games and activities performed into four movement categories: dance, educational gymnastics, games and individual pursuits. Throughout the student focus groups, only two students reported participating in dance or gymnastics, both of whom were in the urban-male focus group. By contrast, most teachers described incorporating dance and gymnastics into their PE programs. Games and individual pursuits represented the bulk of PE experiences reported by students and teachers.

When the students were asked what prevents them (or their peers) from partaking in physical activity during PE, responses included a range of social and environmental barriers. A rural-male suggested "injury" as a possible barrier to participation. This led to others describing how their PE teachers respond to students claiming to be injured. One student explained how his PE teacher is very proactive in keeping his injured students engaged:

> At my school say you walk in with crutches, there'll be weights in the other room that you can lift with your arms. Or say you've hurt your arm so you can't play dodgeball then there'll be a bike in there, like a standing bike you can bike on.

An urban-male described how school-wide events can sometimes interfere with PE, therefore acting as a barrier to participation. Although his response was not quite what I was expecting, it builds on the theme 'low status of PE':

> Sometimes you get presentations at school and… they have to take up the gym and that's where the stage is so typically, recently actually, we had some hypnotists doing a little performance for us and… people that had gym that day… weren't allowed to go in because they had to set everything up… sometimes… they just take us down and just watch movies instead of doing something [more active]. (urban-male)

One female student reported social barriers such as feeling self-conscious about performing in front of others. I interpret her inhibitions to be a possible reflection of the student's low physical literacy as it relates to the physical competence domain:

> Confidence and being like self-conscious also prevents me in volleyball. I'm not very strong in volleyball and all my friends, well a lot of my friends play volleyball so in gym class I feel like I kind of hold back from trying and learning new things… it's just what other people will think of me. (urban-female)

While another urban-female described how the boys in her class make some girls feel uncomfortable, due to acts of inappropriate behaviour:

> They'll like say they're uncomfortable with the guys, like they feel like the guys are like staring at them and start saying stuff they shouldn't be when it's gym class for teenagers.

Also, some female students described how competition can prevent students from wanting to participate, particularly girls:

> For, the guys are very competitive with each other but the girls are more, they just do it for fun and they're more the people who drop out and just go to the side and do their own thing. (urban-female)

While other students felt competition promoted participation during PE class, particularly boys:

> I like when we play game sports and we get to choose our teams and it's really like a competitive sport and we're actually moving around, like king ball for example, you have to move and stuff and I like that aspect of it. (urban-male)

Two students offered advice on how teachers could make PE more engaging for students. Both students recommended teachers find ways to grant students more autonomy when selecting the types of activities performed during PE:

> Let the students be a bit more vocal in what they're learning. Some of us may not be the greatest at it but… if you let the students speak about it, and like tell you their concerns you can put them at more ease and even if it's not like competitive

> games, make it fun games for badminton, make it like just rallying, get to the people in competitive work. For soccer my gym teacher splits the gym in half and does competitive side, and just for fun side. (urban-female)

> For the teachers I'd give them like a suggestions box on what they could do, so the kids could write down on a piece of paper like for example if they wanted to play basketball. (urban-male)

However, it appears some teachers have their own ways of incorporating student input. Theresa explained how she believes providing students options during PE class, positively influences student engagement levels:

> We just finished a territory games unit and I know there's one class that has a couple of lacrosse players in it. Well I'll do lacrosse with them, but maybe I'll just do handball with the other classes. And so just providing like options so like net games we won't just do badminton, we'll do pickle ball, we'll do a little mini tennis so that it's not just one like activity or sport for the entire unit. And then there's times where we just give them options and say give us your input, what would you prefer, we kind of take like a bit of consensus and go with it… because the outcomes are broad enough you can work with, like you give them a category… and because they have the option I think they feel a little bit more comfortable in saying, oh yeah, this is something that I chose to do.

Teachers reported similar barriers to participation as described by students, including competition, social pressures and lack of motivation. Melissa also added technology to the list, specifically, cell phones. She believes cell phones serve as a distraction to students and detract from their ability to be engaged during PE class:

> They lack… the responsibility to know when they can use it [cell phones] and when they can't… I would say technology is a huge factor here because you go in the gym, you get changed, oh can I go to the washroom, they go to the locker room use their cell phone, come back out. Like that's a huge problem. (Melissa)

Barbara blamed Grade 8 students' lack of intrinsic motivation (Gillet et al., 2012), as a barrier to PE participation for some. She described how activities during PE need to be "social" and "fun" in order for this specific age-group to be engaged:

> The age grouping of grade eights, from my humble experience, has been that's the age where they start to spread their wings per se, and they start to get their own personal opinions on life… So it's a tricky age to convince. Like you have to lead them with a sugared donut and then they realize that they're actually walking and wow they're getting exercise and that it is fun. So social and fun are the two crucial elements to grade eight. If they can't talk to somebody or if they can't make fun of themselves with their friends and each other, they don't want to do it. Wrestling is awesome cause they love making fun of each other as they wrestle with their friends. A safe learning environment.

Varying Views of PE's Purpose

In general, there was some alignment between students' and teachers' views regarding the purpose of PE. Students viewed PE as an opportunity to have fun while being active and learn a variety of health-related concepts that can be transferred to the real world. Teachers viewed PE as an opportunity to develop students' physical literacy, expand their social, emotional and personal skills, and expose them to a variety of activities in hopes that students will choose one to continue being physically active for life. Conversely, there was a discrepancy between views held by students and what teachers perceived to be views held by students. The majority of teachers believed students are unable to make the association between the 'physical' and 'educational' aspects of PE, however, this did not seem to be the case.

Based on focus group discussions, many students were able to make the connection between activities performed during PE class and the real world. One student believed the purpose of PE is to gain transferable skills from sport that can be applied to everyday life:

> I think PE is to kind of get in like contact with your body and know how your body works, and also to… teach you like how to be confident in sports and take that confidence to the real world. (urban-female)

Another student felt PE serves as the foundation to being physically active for life, where PE classes focus on teaching students the "basics" which they can then incorporate into physical activities on their own:

> I feel if you have the basics… like different types of warm-ups, push-ups and all that type of stuff… Like if you're going to do track and field or something, you can [include] what you learned in your gym class doing like ten-minute runs and things and then go do track and field or something. (rural-female)

One student explained how the financial costs associated with organized sport could act as a barrier for some. He suggested that PE might be some students' only opportunity to participate in structured physical activity; therefore, PE served as an accessible platform for children to be active:

> Maybe some kids can't afford to do physical activity outside of school, like maybe their parents have bills to pay and they can't pay for a sport and Phys. Ed. might help them to have the time and space. (urban-male)

Some students viewed the purpose of PE through a more health-focused lens. A rural-male student explained the purpose of PE is to get "kids active" and gain a "basic understanding" of health. He used the dose-response relationship between physical activity and health to better explain himself:

> It gets kids active and sometimes give you like a basic understanding of different things… cause if you don't exercise that it can and will affect your health, whereas people who are more physically active are more healthy. (rural-male)

Finally, one student viewed PE as an opportune time, albeit "very short", to break from the routine of doing sedentary schoolwork:

> Even though it's very short, it still gets you active and out of doing paperwork and… it gives you a break. (rural-male)

Similar to students, teachers also viewed PE in a variety of ways. Theresa described PE as an opportunity to instill confidence and establish physical competence in students. She also explained how PE can have a positive impact on the greater community:

> By the time they graduate Grade 12 I would want my students to be competent and confident to move in a wide variety of ways and be confident in choosing ways to move that they… will actually act on… Because then on a broader scale that creates more healthy people within our community and just kind of feeds in on itself… The skills, not just physically but socially, emotionally, personally that you learn through movement that you can use in every aspect of their life.

Melissa, viewed PE as an opportunity to expose students to a variety of new activities, in hopes that they find a personal connection to one and make it their own:

> I want to be able to help my students become like physically active for their whole life. So my goal is to do a variety of things in hopes that they will pick up at least one activity that they like, that they'll be able to do it for the rest of their life… I want them to really know their body better… My ultimate goal is so that they live longer and happier.

Barbara and Gail, both viewed PE as a time and space to focus on developing students' personal skills. Barbara highlighted the importance of cooperation and communication:

> It's providing students the opportunity to move their bodies, to build personal skills that right now… are not being taught necessarily in the home. Cooperation, the ability to communicate effectively, being able to stand up and advocate for themselves and find their voice, the ability to explore movement in ways that they're not getting by sitting in front of a television and playing video games or computer. It's all of it. I think it's one of the most, if not the most, important academic subject that you teach. And I call it academic subject because it needs to be valued like that.

Gail believed PE has the ability to teach students how to be better human beings, describing qualities such as "compassion" and "empathy":

> The program itself I would say there's a big focus on… collaboration, fair play… so when they're within the gym space, making sure that they're… compassionate and empathetic and working as a team and using fair play… regardless of what it is that you're doing.

Additionally, Gail also viewed PE as an opportunity to safeguard children from leading a life of sedentariness:

> But also I think as like a gateway to exposing them to what else is out there because it's just such a small piece of the puzzle for them to actually to be engaged and be active for life and healthy and all those good things… because statistically… we're going to lose so many of them and it's when they're going to start to become disengaged so I feel in Phys. Ed. one of the most important things is kind of keeping them, pulling them back in, holding them there, coming up with new things, whatever to make sure that they're going to stick with it, not be gamers for life.

In contrast, teachers perceived students' views to be largely focused on the physical aspect of PE. Some teachers disputed student's ability to make the association between movement and learning. Melissa believed students viewed PE solely as a time and place to have fun. She doubted their ability to acknowledge and value the educational aspect. It seems her perceptions are derived from personal PE experiences as a junior high student:

> They just want to have fun. And that's huge. If you're not having fun, you're not going to do it. I don't know if they see the end like I see it. I wouldn't have in junior high, that's for sure, I just wanted to go play sports. So for them it's a time during their day that they get to go be active and not you know put pen to paper, and not have to you know sit there and be lectured at, it's really time for them to be active and be moving. So I hope that the students I teach, I mean I say this to them all the time, so I hope they get why I want them to be physically active, and not stand around, and I think they start to get that by the end of grade nine but for them I think it's just time to play.

Similarly, both Mark and Gail perceived students to associate PE with play through movement. Mark explains how he has been working toward changing the culture of PE in his school, which is less focused on play and more on educating students about the benefits of physical activity:

> I know a lot of the students in our building, or initially, early in my career… thought Phys. Ed. was like movement, they thought it was just let's play, Phys. Ed. is play… I've been trying to change the perception of… what it looks like, and what it feels like. But that was one of the big things they looked at was Phys. Ed. is movement in the gym. But the last few years we've been movement everywhere. I've tried to

> bring in a little more outdoor education stuff the last little bit and I think they're starting to realize that Phys. Ed. is preparing them for a lifetime of movement and a lifetime of enjoyment through movement.

Gail introduced aspects of physical literacy into her perceptions. She also believed students view PE as an opportunity to have fun, but

> I would say from the student perspective, they… see that Phys. Ed. is a time to you know work on some fundamentals but more so to have fun and to play and I really try to take out the competition out of most of the stuff that we do so I would hope that they would say that if you ask them, that you know it's not about winning/losing competitiveness it's about being engaged, participating and having fun.

Theresa, believed some students are making the connection between PE and education; however, her perceptions of students' views were still movement-based:

> I think a lot of them do still come with the thought of well when I go to Phys. Ed. I need to be moving and I need to be active. But the fact that they don't push back on all of the other things that we do, I think they do understand that the other piece is a part of it too.

Barbara, also associated students' views of PE with movement; however, she believed that PE teachers are partially to blame, as not enough is being done to transfer lessons learned during PE class to the real world:

> We don't do a very good job as physical educators in advocating for all that they're learning… I kind of blame that on that whole… push for maximizing movement in Phys. Ed. You need to take a breath with your students and give them the value behind what they're learning. And so, telling them… we're going to do speed ball today and these are some of the things you're going to be doing and this is what I want you focusing on and did you know that… being able to pass and receive is working on the peripheral vision. So doing an illustration of what that is, put your hands out and see how far you can see your fingers. And allowing them to learn what their peripheral vision is and then talk to them and say guess what? When you're driving a car, you need your peripheral vision because that's when you see a deer or a child on a bike or a cat run out into the road, that's what your peripheral vision is really for in the real world.

Finally, Carl, was uncertain as to what his Grade 8 students believed was the purpose of PE, although he seemed very interested in asking them:

> The kids probably see it as something that they have to do… Not all of them are overly excited and not all of them are athletes but they all try and they have fun and they learn some social skills… I don't know what they think to tell you the God's honest truth. It would be interesting to ask them. I'm going to have to ask them.

Role of the PE Teacher

This theme acknowledges the influence PE teachers have on student's PE experiences. Students spoke directly and indirectly about the impact their PE teachers have had on their physical activity participation both during PE class and outside of school. This included lessons learned and transferable skills acquired. Teachers discussed their personal teaching philosophies as it relates to students' physical literacy development. This theme includes a personal story shared by Barbara, who described how a single incident during junior high PE had a lasting impact on her physical literacy development.

When students were asked to describe their Grade 8 PE teachers, many reported them to be "encouraging", "enthusiastic", "fun to be around" and "pretty awesome". One student explained how her PE teacher goes out of his way to entertain students:

> I love my gym teacher, he's so fun. He does really weird things, he'll just show up in school and he'll have like his… pants under his basketball shorts, he just like makes a fool of himself, like socks or like really cool sneakers, and he's really easy to scare which is really fun when you come into gym class… he's very open to ideas also which helps. (urban-female)

Some students reported their PE teachers occasionally give advice on how to improve a particular skill, whereas others did not recall a time when feedback was given. Some students recalled moments when their PE teachers joined in to play during PE class, particularly when teams were "short a player" or if one of the teams "got stacked":

> My gym teacher will join in if one of the teams somehow got stacked, like had all the good players to one team. (rural-male)

One student playfully joked about his PE teacher's ability to no longer contribute as a valuable player:

> He'll try to join in but most of the time, since we're in Grade 8 now, we can keep up with him so it doesn't really help. (rural-male)

These student reports were aligned with Melissa's views, where she recommends PE teachers to actively engage with their students as way to increase participation:

> One of the biggest things I have found to get kids active in my Phys. Ed. class is to be active with them. They have the most fun no matter what you're doing if you're doing it with them.

Many students described PE experiences reflective of a multi-activity sport-based PE program (Gerdin & Pringle, 2015), where classes are arranged by units lasting three to five weeks in duration, and each unit is focused on learning/playing a traditional team sport such as basketball, volleyball or floor hockey. One student described how his entire PE class was unable to "just play the game" because of "one kid" who was unable to demonstrate a sport-specific skill. His narrative illustrates why these types of sport-focused PE programs are not recommended, as they highlight student differences, which become amplified in a competitive sport environment:

> We're doing a lot of units that people are like good in… except for like a few kids who aren't active so everybody's like can we just play the game, but we have to go over everything like learn how to dribble a basketball again because one kid doesn't know how. (urban-male)

During the focus groups, students discussed the types of lessons learned and transferable skills acquired as a result of Grade 8 PE. An urban-female explained how her PE teacher has taught her to be resourceful when playing with her neighbourhood friends:

> I have a teacher who likes doing gym classes like random ones where he uses like things you could buy from [a popular store]… He like teaches us that like even if you don't have these, these are things you could substitute with if you don't have the materials to play… you could use this ball or this racquet instead and… you don't need all this expensive equipment. Like even street hockey, I play street hockey all the time up at my house with my friends… and we didn't know where to buy a puck at the time so we used like just a simple like tossing ball. (urban-female)

A second urban-female added that her Grade 8 PE experience has taught her to be less confrontational, which suggests her PE teacher may have been incorporating aspects of the Teaching Personal and Social Responsibility (TPSR) model into their PE program:

> I feel like in my Phys. Ed. personally, it teaches us that maybe even if we don't want to be with these people every day or if we don't see eye-to-eye, there's always something you can work out and not everything has to be solved with violence, it can be more verbal and polite.

An urban-male described participation and teamwork as his two main takeaways. He explained how lessons learned during PE may benefit him later when he needs to "work well" with others when starting a new job:

> I think participation in team work is a big part of it, but that is when you play team sports, typically they divide out the teams, and people you might not want to be on a team with and you have to work well with the people in order to succeed at what you're doing, and I think that's good team building. Like if you go off to a job you get in and you don't know anybody there, but you have to work well with them, I think we can take that in our Phys. Ed. class.

Likewise, an urban-female also made the connection between PE class and the real world, only she recommended PE to be "more inclusive" rather than "automatic competition":

> But if we could change it to be a more inclusive kind of thing, instead of just automatic competition it could help you a lot more with your team building in the real world, when you're in jobs and/or in high school.

Several other urban-males attributed PE to helping them refine sport-specific skills, such as improving their "step work" in basketball. When I asked this group to very quickly list the five most commonly played games or activities during PE, a student responded:

> Playing games, basketball, floor hockey, dodgeball, and bench ball.

From this exercise I learned bench ball is an elimination game derived from dodgeball, where participants stand on benches and throw balls at each other. When I asked the student what types of transferable skills might emerge from playing these types of games, he responded in the form of a question, "How to catch a ball? How to be more competitive?" Some of the students laughed in response, including himself. Interestingly, the PE curriculum forbids teachers from playing elimination games during PE class:

> A quality physical education program is one that is participatory and not exclusive. Elimination games do not belong in quality physical education as they exclude many from opportunity to practice and grow in their skill competence, creativity, confidence, and strategic thinking. (Government of Nova Scotia, 2014b, p. 7)

Melissa described how the current PE curriculum provides little guidance on how to teach a physical literacy-based PE program. She attributed much of her knowledge surrounding physical literacy to her B.Ed. program. Melissa and I discussed PE teachers who have been practicing for longer than herself. I asked if she knew how these teachers have adjusted their PE programs to be reflective of the 2015 curriculum, which was intended to be a shift away from sport to a holistic, active living approach that incorporates physically literate students as an outcome. Her response left me feeling unsettled:

> There's some people that still just you know do your typical sports… I feel like they think it's something that if you teach them sports, physical literacy will just come. And it's like a by-product of teaching Phys. Ed.

Similarly, Theresa believed there were many PE teachers in the system who were exposed to the concept of physical literacy for the first time when the Nova Scotia Department of Education and Early Childhood Development (DEECD) released the curriculum in 2015. Whereas for her, physical literacy was just coming about when she started teaching, therefore she was able to immerse herself within it from the beginning. I asked Theresa if she thought the new curriculum is being delivered in the way that it is meant to be, she replied:

> Depending on where the teacher is in their career and how much they value professional development and change in program… I like to hope that most are onboard and current with things cause most people that I surround myself with are, but that's not to say that everyone isn't… and if you step into high schools it's a whole other world.

When I asked Carl, who has been teaching PE for 25+ years, about his views on the current curriculum and how he met the challenge of adopting physical literacy into his program, he replied:

> Oh yeah that word didn't exist. I mean it wasn't a big jump for me just because of the way that I did things I guess… it made sense, it combined outcomes where they should have been combined in the first place. And it cut them from whatever thirty some to I think eight but all of the eight had indicators which were the old outcomes so it was similar in a way, it just made them flow together I guess.

All teacher participants reported having attended the provincial TAPHE conference that Fall (October 2018). For many HPE teachers in Nova Scotia, the TAPHE conference serves as their only form of professional development for the year. As Theresa explained, anything beyond the once per year provincial meeting needs to be self-initiated:

> The only PD [professional development] I've had, has been my First Aid Recert which is great, like it's good that they're making that a priority, but any PD I do needs to be self-initiated. So if I wanted to, like I'd applied for national conferences and do the TAPHE conference but anything else is just do your own thing.

Melissa explained how she felt little support is available for PE teachers to attend professional development opportunities outside of the province:

> If they can go to the national conference [PHE Canada] awesome, but… you know money for that is slim. Our board just changed things so we can only go once every three years to get that money instead of two… And no more than two people from your building can go… so if you have three Phys. Ed. teachers, well one of them is not going. So I think there's a heck of a lot of barriers for any Phys. Ed. teacher that wants to get any PD… This profession is pretty taxing.

Carl believed teachers from other subjects are provided more opportunity to network and learn from each other:

> I know that… math teachers get pulled out for PD [professional development], LA [Language Arts] teachers that have gotten pulled out… there are definitely teachers pulled out for more than just that one conference day during the year and I don't remember ever being pulled out as a Phys. Ed. teacher. Actually, when the new curriculum came out, I think we were, maybe for a day.

These narratives highlight the urgent need for more professional development opportunities for PE teachers, as well access to financial support.

Barbara described her PE program as an "appetizer tray of physical education." She explained how she intentionally incorporates a variety of games and activities into her program for the purpose of exposure:

> I think it's important to introduce a variety to our students at the junior high level to encourage and allow them comfort to try new scenarios in their adult life and in university and so forth.

Barbara shared a personal story about an experience during junior high that significantly impeded her physical literacy development and continued to influence her physical activity experiences throughout university. She begins with a description of her junior high PE program, where students' PE experiences were shaped by "gender-appropriate activities" (Waddington et al., 1998) as dictated by her male PE teacher:

> When I went through [junior high] the wall was always up. The guys were on one side of the gym, the girls were on one side of the gym… And the girls went to the cafeteria to do step aerobics while the boys had the gymnasium to do wrestling. I approached the male Phys. Ed. teacher and said, "could I please learn how to wrestle?" And he's like, "absolutely not." I'm like "but I would love the opportunity to learn that cause I'm very interested". He said, "absolutely not", shut me right down, there was absolutely no way a girl was going to be allowed in his program.
>
> So I went off to university and I tried out for our university basketball team and I didn't make the university basketball team… Then I tried out for the soccer team and didn't make the soccer team… So I was like okay, I like being active, I like moving, what am I going to do? So I started playing in dorm sports and it was boring, oh so boring. Half were drunk, half didn't show up and it just every time fell apart, almost every game.
>
> So I decided to join a club. So one of my girlfriends was joining the wrestling team and she's like you should come out and try. I'm like no it scares me, I don't know anything about it. But I went and joined the cheerleading team… which I didn't know anything about either but I felt safer and more confident there because I had some experience in gymnastics.
>
> After three years of being at the university, I found out our school had like one of the best national league accredited wrestling teams and… they were begging for female wrestlers at the time… so looking back and reflecting I'm like if I had have had an opportunity to have some basic knowledge in wrestling, it probably would have given me the personal confidence to go and try something new and put myself in a vulnerable position to you know be uncomfortable and try it.
>
> So that's I guess where my passion comes for allowing students to experience multiple opportunities because you never know what down the road will bring and where that will take you. I never would have been a cheerleader, I wouldn't have, asked me in junior high school that I would have been on university level cheerleader competing at nationals, I would have been like you're foolish, I'll never be a cheerleader, they have pompoms.

Barbara credits many of her current teaching practices including a multi-activity approach to PE programming, in hopes of preventing similar obstructions to physical literacy development from ever occurring to her students.

Low Status of PE

With respect to other subjects in the Nova Scotia public school curriculum, the status of PE seems to be much lower in terms of allocated time for instruction, dedicated resources and support from government. The students spoke about the variation of PE programs being delivered in their respective schools, with regards to class size, format and quantity, while teachers described experiences of having to defend their profession, compete for resources, all while making do with limited resources. Furthermore, there was a clear difference between students and teachers, regarding how the word "gym" is used in reference to school PE, which adds to the argument surrounding the low status of PE.

Students reported class sizes ranging from 19 students in a single class, to upwards of 80 in combined classes. One student described how his school navigates the combination of three Grade 8 classes into one large PE class, adding that it can be frustrating by times:

> Sometimes we have gym three times a week, sometimes we just have the two. They combine all three classes so it's typically they split the gym into two and one class goes down to this other room they have and it varies with the teachers what you do in the little room… It's every three classes we go down and then the next class goes down and... whenever we go down it's like cup stacking like in different formations and sometimes it gets a little frustrating. (urban-male)

When students were asked what they would change about their school's PE program, the most common response was to increase the quantity of PE instruction, in terms of both duration (minutes per class) and frequency (classes per week). Student reports of PE quantity ranged from two classes per week for 30-minutes per class (60 minutes/week) to four times per week for 45-minutes per class (3 hours/week). A student receiving PE instruction 2-3 times per week for 30-minutes per class (60-90 minutes/week) stated:

> I would change like how we have the half hour classes because I find they're like almost a waste of time because by the time you get there and get your shoes on and

> everything, we only have like 15 minutes left because everyone is like doesn't want to do gym cause it's almost no time. So, I would probably make more hour classes than half hour classes. (urban-female)

Even though this student is trying to make a case for more time allocated to PE instruction, it seems she is also providing justification for her peers' lack of engagement by referring to it as a "waste of time". Similarly, a student who received PE instruction 3-4 times per week for 45-minutes per class (135-180 minutes/week) stated:

> I prefer gym throughout the whole week rather than one of the days off… at our school we get four out of five days of gym. I'd prefer the whole week. (rural-male)

Without hesitation, a second student enviously added:

> I only get [PE] two out of five [days per week].

When asked what the ideal amount of PE instruction is, he responded:

> At least three days of having gym. And our class is only half hour, so we only get an hour of gym a week.

Interestingly, the only reference to allotted time for PE instruction in the curriculum, is a loosely written guideline within the aim statement:

> The aim of this curriculum document is to provide physical educators with a set of learning outcomes that… recognize the importance that Nova Scotia students participate in a quality physical education program at least 3 days a week for a total of 150 minutes. (Government of Nova Scotia, 2014b, p. 7)

There was agreement amongst all teachers that the profile of PE in Nova Scotia needs to be raised. Several teachers discussed how they believed the Nova Scotia government was not doing enough to support students, teachers or schools. Theresa explained how more attention needs to be given to students' overall wellness in the school system, as she believes health is a better predictor of success than intellect:

> Literacy and numeracy should not be the number one focus of our public education system… an individual's well-being is going to be a much larger determining factor as to whether they're going to be successful in other areas of their life… there's been so much time and money and efforts put towards increasing literacy and numeracy scores… I don't ever remember a year where it has improved. It just always seems to be getting worse… whereas if we put the wellness of our learners first, learners who are well physically, emotionally, mentally will be able to learn. Those other things will be better. I would think there would be a difference.

Similarly, Carl argued for more attention to be given to physical literacy, as he believes PE is considered second class to other school subjects:

> I think they're more worried about academics rather than physical literacy. They're worried on how we're looking with test scores in math and literacy. I don't know how much they value or how much they care about whether the kids are physically active.

Melissa described how government cuts to PE programs and support personnel are negatively influencing the public's perception of school PE. She argued for a more balanced curriculum, where physical literacy has an equal role:

> Our province doesn't seem to care about it. If you're going to cut the physical, like the physical and health mentor you're just telling people that it's not as important as math and ELA [English Language Arts]. If you're going to not put as many hours into Phys. Ed. that are supposed to be there, you're telling people it's not as important. Right now what's important to the province is math and ELA, it's, that's what it is. It's literacy and math and ELA. I argue that and say why can't physical literacy be part of that?

When teachers were asked where improvements were most needed, the majority reported time, money and respect. Barbara believed real "change" will occur, when sustainable funding to purchase adequate resources is made available. She describes her experiences as having to beg, borrow, steal and scrounge:

> Put your money where your mouth is. If you really want to make change, and you really want to see positive change in the school, and with the students, you need to back it with funding. You need to back it with tools and equipment and resources,

> not books necessarily, that teachers can use and access without begging, borrowing, stealing and scrounging.

Similarly, Theresa believed additional resources would help change the public's perception of PE, perhaps even those of her colleagues:

> I just like would love for Phys. Ed. to have its importance raised. It's not just a time for kids to go and get active, it's not just a time for teachers to get their preps, like it's a core subject that needs to be valued more with time, with money, with resources. And not just thrown at it to say oh you want more money, here's more money, do with that what you will. Like it needs to be solidly like kept up I guess.

Carl shared a conversation that he and his PE mentor once had, where they joked about the role of a PE teacher:

> My mentor who was my former Phys. Ed. teacher jokes, you know our job is to provide the other teachers with their planning time. And because he's a former Phys. Ed. teacher he knows that's not the case, but we still joke about it.

There was a clear difference in how students and teachers used the word "gym". Students interchangeably used it when referring to physical education (PE or Phys. Ed.) and related items (e.g., gym teacher, gym class, gym shoes), as well when referring to a gymnasium – a building or large room designed and equipped for indoor physical activity or PE instruction. Here is an example of how one student used the word "gym" interchangeably:

> What I like least about gym class is how the gym teacher makes us pass to the people who aren't participating. Like the people that are just like standing at the edge of the gym. (rural-male)

Whereas, the interviewed teachers reserved the word "gym" exclusively for their classroom, the physical space for which PE instruction takes place.

Several teachers expressed their concerns over the interchangeable use of "gym" as they viewed this practice as disrespectful to the profession and demeaning to the academic subject. Melissa presented her view on the topic:

> Well, I think the whole province is working through this one. Again, it's a knowledge piece, it's an advocacy piece for me. People thinking that Phys. Ed. is gym, it's throwing a ball, you're playing tag and dodgeball and not really doing anything. So making sure that people understand that you know it's physical education and I care about physical literacy and making sure that students can live longer…. I'm a big advocate and my students will tell you they don't get to call it "gym", I'm very serious about that. They all call it Phys. Ed.

Mark described how it took him several years to change the culture of PE in his school:

> It takes time to change the system, it takes time to change how people look at Phys. Ed. … it took me five to six years in this building to change, how people viewed Phys. Ed. … When I was in Phys. Ed., if you were a good athlete you had a great grade, and that's probably why I got into teaching was that I loved the gym, I love Phys. Ed., I love movement and I did, I had 100% in it, and I'll use my fingers as quotation marks "gym" class, I felt like I belonged there. So then as I went through the programs, I realized that Phys. Ed. is a lot different depending on your lens.

Comprehensive School Health

The implications of this final theme are less focused on PE, and more so on incorporating movement into other aspects of students' school day. Students shared details about their typical school day schedules, including patterns of physical activity and non-movement behaviours, and explained how physical activity impacts their physical and emotional well-being. This theme also highlights the work of two teachers, Melissa and Mark, both of whom demonstrate a clear understanding and appreciation for the comprehensive school health framework. Melissa explains some of challenges she has experienced over the last several years as she tries to incorporate pillars of the comprehensive school health framework into her school community seemingly on her own,

while Mark highlights some of the successes he has experienced due to help from the greater PE community.

During the focus group discussions, students were asked if they considered PE to be an important part of the school curriculum. Their responses contribute to the second theme 'varying views of PE's purpose', but also illustrate how students perceive school in general. One student agreed that PE is an important school subject as it provides her an opportunity to "let loose" and "break" from being "trapped in a building". Her choice of words could be inferred to be her interpretation of the public school system at large, suggesting she feels like a prisoner wanting to be released:

> I think it's important cause it kind of gives you a chance to let loose, like in class cause you're trapped in a building, well not trapped but, you're in a building for like six hours. We get like a break but we're not allowed to go outside and then at lunch time most people stay inside so it's a pretty nice break and it's good to get some exercise, especially in the winter. (urban-female)

Similarly, another student described how most of his school day is spent being sedentary and PE serves as his only opportunity to be active, however, it appears the student may be discrediting PE as an academic subject by stating "it gives your mind a break on *actually* learning", suggesting learning does not occur during PE:

> At our school we have an hour break for lunch and free time, and if gym is taken away that's the only… break you have that you can run around and play sports. So if you're stuck in a chair the whole time you can kind of get loose and it gives your mind a break on actually learning, where you can actually just run around and play sports instead of just using your brain to answer questions. (urban-male)

These narratives bring attention to the significant amount of time students are expected to sit and learn each day, despite the large body of research recommending otherwise. They also highlight the fact that other school subjects do not incorporate movement into their

lessons. Finally, these narratives also demonstrate that students value PE, as it provides them an opportunity to move in an otherwise sedentary environment.

To explore the knowledge component of physical literacy, students were asked to explain their understanding of the benefits of school PE. One students' response was very insightful, as she was cognizant of her peers' sedentary tendencies and recognized the far-reaching impact physical activity can have on one's life:

> I think it's important because… not a lot of people in my school actually do sports so having a chance for them to actually get some physical activity in their day is like I think really important because if not then it's going to impact your life and in ways that you don't even know. (urban-female)

Another student acknowledged the positive effect PE can have on behaviour:

> I have a student in my class that kind of acts up sometimes but he's pretty good in gym class, cause it's like a break for him, he's not like trying to sit still. (rural-female)

Similarly, the same urban-male who expressed his frustrations towards cup stacking, recognized a difference in how his body feels on days that he is physically active during PE in comparison to days spent being less active. It is apparent from his narrative that he is searching to find the correct words to describe how energy expenditure can improve ones' energy-levels:

> Sometimes I feel really like, like I need to get a lot of energy out, particularly on the days where I don't have Phys. Ed. I'm really jumpy in class and like I just want to get up and do something. Then on the days where I have Phys. Ed. I have a place to let it out and on the days where we don't really do anything, we're cup stacking for example, I just feel more like energetic after cause I didn't do anything and I'm still just like resting up I guess. Then sometimes I just feel like really tired so I'll sit after some class cause we just don't do anything, and it's just basically sitting there for like an hour straight and that just gets really boring and your bloodstream like slows down so much, you just have no energy for it.

These narratives demonstrate that students understand the physical and emotional benefits of physical activity, as experienced from their respective PE programs.

Based on the nature of semi-structured interviews, in-depth conversations surrounding the comprehensive school health approach to increasing students' physical activity levels were had with two teacher participants. During interviews with Mark and Melissa, both described how they strive to work collaboratively with the greater school community to ensure students' health and well-being is a priority. Mark shared some of his successes with community partnership building and cross-curricular planning with teachers from other school subjects, while Melissa, described some of the challenges she has come up against over the last several years.

Mark explained how physical activity plays a big part in his school's culture. He credits much of this success to the supportive relationships that have been developed in the community, and supports inside the school:

> It's kind of like if you build it they'll come… we've been trying to deliver the best possible experience so that students can stick with it [physical activity] and stay with it and like I said the partnerships that we've built in the community and the supports that we've placed from the admin and other teachers.

He provided some background information about the community partnerships he has helped established and explained why he believes his community has a vested interest in its youth:

> We're rural, we're a small area… a lot of our parents are former graduates so they're always interested in what the school is doing… We have a curling rink, we have baseball fields and soccer fields but we don't have a… community space, so that's one that the school is kind of an essential piece to our community… So they see benefit to not only a big school but they have personal benefit in, they have a personal stake in it.

Mark explained how local industry partners donate resources to the school, and in exchange, the school uses social media to give thanks and keep them informed. He described this as a positive relationship for all parties involved:

> We use social media for let's show parents what we're doing, let's show the community what we're doing… We have some industry in the area that donate funds for… technology and… equipment in Phys. Ed… We're locked and loaded in that and we put a lot of energy in that and our principal, our mayor, are awesome. They see the value in people that give back and that do things so they, I might get a few more funding allocation than maybe other subject areas but they see the value in our program which is kind of nice.

As for relationships inside the school, Mark described how he collaborates with teachers from other subjects to incorporate cross-curricular planning into his lesson plans. He explained how this collaborative approach benefits not only students, but the entire school community:

> We do a lot of cross-curricular stuff in our building, so where there's only [a small number of] teachers and a lot of teachers teach the same groups… so they see the kids after class and they see the benefits of it… there's no better spot to teach connectedness and school belonging than in Phys. Ed. and that kind of follows the TPSR [teaching physical and social responsibility] kind of model-based practice that's been I think underutilized in a lot of schools.

Mark finished by acknowledging the success of his PE program, which he proudly takes credit for. He described high levels of student engagement at all grade-levels and outright rejected the notion that physical activity levels decline during adolescence:

> So as a result of the work that I've put in the first couple of years in this community, it's kind of like, oh wait until you get to Grade 7! And I've been kind of been taking advantage of that where kids are really looking forward to Phys. Ed., they're really looking forward to the program. So I try, and as a result, when you hold yourself to… the golden standard of what Phys. Ed. should look like it's kind of like when you get amped up for a race or a hockey game or a soccer game, you try to deliver that every class. So one thing I tell students is I'll always bring energy and I'll always bring excitement about Phys. Ed. So if you don't have it, it will resonate from me to you.

In contrast to Mark's successes, Melissa shared some of the challenges she has experienced in recent years when trying to adopt a more comprehensive school health approach at her school. She explained how she tries to maximize movement time during her PE classes, as she recognizes students are not moving nearly as much as they should throughout the day:

> I try to move them as much as possible because until I take over the world, which is my next plan, and actually create or help create, and I think this will come out with the next curriculum as far as I know, to create movement in every other class. Once I do that, I will feel comfortable having my students sit and listen to more direction than I give now.

Melissa explained how she's been trying to collaborate with teachers from other subjects in hopes of incorporating movement into other areas of the school day, but to no avail:

> For the last six years I've been trying to change the fact they have a reading period for 20 minutes and I've been like well why can't we make it movement for 20 minutes? And the ELA [English Language Arts] teachers get really mad at me… I would love to see us work more with like the course subject areas to be able to better mesh the two. Like if we could have PD together so that I could sit down with the math teacher… I'd say show me your curriculum. Let's pick out three outcomes and see how we can incorporate movement into those three outcomes. Like we can sit and preach all we want about trying to get people moving and we can go to the TAHPE conference and give a presentation on it, but what we need to do as physical educators is we need to go the ELA conference and show them and tell them how they can incorporate movement into their subject. That's the only way that this is going to work.

Melissa also noted other barriers to ensuring students' health is a priority.

> I think physical educators are passionate about what they do, I think they do a great job. I think health education gets the shaft. I think it ends up on getting pegged onto people's course load as an extra course. Most of them no training in health education and they're teaching kids about mental health and sex ed. and stuff that they have no training in. So I don't know how to fix that aside from making physical and health ed. one subject and making sure that a PE specialist is teaching it since they are trained in it. Other than that, I'm not sure how to solve that problem, but we need to start putting an emphasis on health and we do a, pardon my language, we do a shitty job at it.

Toward the end of Melissa's interview, I could sense in her voice that her frustrations were wearing on her, as she was growing tired of working in a silo. She provided her honest thoughts about the current state of PE in Nova Scotia:

> My ultimate goal to be honest, is a more comprehensive school health approach… I don't think we can do it by ourselves. I think we're struggling as Phys. Ed. teachers to try to do it by ourselves. I need more outside people buying in to help us out.

Red Tape Policies

The restrictive impact that the PE Safety Guidelines have on students' PE experiences were the focus of this theme. Although students from the rural-male focus group did not directly address the influence of policy in their narratives, it was evident that they were experiencing some restrictions to their PE programs. Students described how most of their PE experiences have taken place inside their school gymnasium with little to no exposure to resources off school property. Several teachers shared their frustrations regarding restrictive policies and provided some creative solutions as to how they continue to engage their students in a quality PE program.

Due to the nature of semi-structured focus groups, only students in the rural-male focus group were asked what types of community resources are being accessed during their PE classes. I used swimming pools and ski hills as examples to add context to the question. Two students from different schools provided the following responses:

> We used to have a ski trip but we haven't done that in a few years. And then other than that we don't do much. (rural-male)

> Yeah… we don't have anything that goes outside our gym class really. We might have one or two outdoor classes a year… Like in the summer-time we have a ball park right behind the school so we can go play baseball or like tag or something behind there. (urban-male)

Questions concerning restrictive policies were a sore spot for some teachers. Melissa described how the recent adoption of the safety guidelines have caused her additional roadblocks to providing students fun outdoor educational experiences:

> I get why they're there, but you know I can't go sledding without helmets. Well I don't have… 25 helmets so that takes away sledding. I can't really go in the water because I can't afford to pay for a lifeguard and have them do their water safety, like it just takes too much time where we would have to travel to do it.

Barbara expressed her frustrations concerning the time-consuming processes involved in organizing field trips as a result of school policy. She acknowledged my 'red tape' idiom in her reference to the tape getting "stickier and bolder" – meaning existing policies have become even more restrictive:

> I don't know if the red tape changed but it just got stickier and bolder, like so I think the rules of the permission forms and this, that and the other thing, have always been there, they just got more emphasis and more detail and more steps. Like our former principal wanted every single trip form sent to SIP [School Insurance Program] to get vetted before we could go on a trip and so the time and processing time to get that done to go, it just becomes ridiculous, and deflating cause you don't want to do it. You just want to, I don't have time for all this.

Similarly, Theresa felt both the SIP vetting process and PE Safety Guidelines might be a bit too much:

> I know broadly speaking school insurance program can be very like limiting. Our safety guidelines for Phys. Ed. are becoming a bit more progressive as far as like what teachers need and the realities and what we're seeing.

Gail described how recent school safety policy changes have forced her to completely revamp her PE and athletic programs, as she's no longer allowed to leave school property with her students. Even though her urban school has little to none outdoor space for recreation use and is within short walking distance to several municipal parks that would be accessible if policies permitted:

> The year that I came, we were told that to leave school property… it would need to be categorized as a field trip, so I'm not able to take any of my classes because the 1-15 ratio doesn't exist in our school. So, I cannot take my Phys. Ed. classes outside of our building. So, from September until June we run all our Phys. Ed. classes in the gym. And that is not just a barrier for the Phys. Ed. program but also the athletic program. Because trying to have tryouts for all our sports teams, or you know track and field or whatever, is very limiting.

Gail sarcastically added:

> And I always say the risk of them not doing these types of activities outside is far less than the risk of them going to a soccer field down the street, you know what I mean? Like where is the real risk when these kids are on the cusp of not even being kids anymore.

Fortunately, Gail's school is equipped with modified equipment that allows her to continue teaching most outdoor activities inside. However, it is not without limitations:

> We do use modified indoor equipment, but… until they get out to the field, they don't see what an actual javelin looks like cause we're using one that's you know about a foot and a half long and weighted on one end and it's totally modified for being indoors and then they get there and they're holding like the big long javelin and trying to make it stick in the ground.

Melissa shared her creative solution to exposing her students to physical activities that they would not normally be able to experience during PE:

> I would say we do a good job in making sure that kids can go out, be active, and not get hurt. I think we introduce them to more activities than I was ever introduced to… I know sometimes we can't do certain things during Phys. Ed. so what we've done is started a wellness day. So every year… I try to get as many people in the building and outside of the building, that have activities that I can't allow them to do during Phys. Ed. class... So we bring all that stuff in so that we can actually introduce them to a lot of, a variety of different activities. So I think we introduce them to everything we have in the surrounding area.

These narratives highlight some of the limitations PE teachers are left to problem solve as a result of red tape policies.

Chapter Summary

This chapter presented the results from an interpretive phenomenological analysis of 18 Grade 8 students' PE experiences. It included the narratives from six PE teachers and results from document analysis of the current PE curriculum. Six themes that represent the key issues that influence students' PE experiences as they relate to the various social and environmental levels within the Social-Ecological Model were presented.

Chapter 5: Discussion

In Chapter 4, six themes representing the key issues that influenced middle school students' PE experiences were presented within an interpretative phenomenological analysis. The purpose of Chapter 5 is to further discuss these themes and provide meaning to them as they relate to the research questions and relevant literature. This chapter will also discuss the implications this research may have on the future of PE programming in Nova Scotia. Next, two lists of recommendations are presented, the first is for policymakers on behalf of the PE teacher participants, and the second is for PE teachers on behalf of the student participants. Finally, the limitations of this research are discussed.

Revisiting the Research Purpose and Questions

The purpose of this research was to examine the PE experiences of Grade 8 students, with the goal of gaining a better understanding of how PE is supported and implemented in schools throughout Nova Scotia. Woven throughout the discussion of the aforementioned themes, I aimed to shed light on the guiding research questions with which I began: (1) What social and environmental factors influence students' PE experiences? (2) How does the current Nova Scotia Grade 8 PE curriculum contribute to the continued development of students' physical literacy? and (3) Where do gaps exist between students' experiences, PE teachers' perceptions of students' experiences, and the PE curriculum content?

After revisiting these research questions, it is important to remind the reader that the presented themes are based on analysis of all data sources including student focus groups, teacher interviews and document analysis of the PE curriculum. Together these

results allow for a more comprehensible understanding of the factors that influenced students' PE experiences.

Factors That Influenced Students' PE Experiences

The findings from this study supported much of the previous research that has examined students' experiences and perceptions of PE. In particular, Beni et al.'s (2017) six characteristics of meaningful PE, as presented in Chapter 1, are all evident throughout the six themes of this research. Theme 1: "Student Engagement" represents some of the most predominant barriers and facilitators to students' PE participation found in the relevant literature in the field. Some of the factors identified as barriers included competition (females), cell phone use and social pressures from peers. In contrast, factors identified as facilitators included competition (males), choice in activities and non-traditional PE games and activities. These factors are all situated within the intrapersonal level of the SEM, as the impact of each are based on a students' individual characteristics (i.e., gender, interests, socio-economic status, etc.). For example, students experience competition differently, according to their gender and skill-level. More specifically, some males reported they enjoy competitive games during PE as they felt it motivated them to participate, whereas some females reported competition as a barrier to participation. These findings are supported by Beni et al. (2017), who also reported that competition can contribute in both positive and negative ways to students' engagement levels. Gibbons and Humbert (2008) also noted that the female middle school students in their study preferred non-competitive activities. Other researchers cautioned against the use of competition in PE as it creates a divide between high- and low-skilled students (Bernstein et al., 2011).

Some teachers reported students' lack of control over personal communication devices (i.e. cellular/smart phones) as a barrier to student engagement. Although personal devices as a barrier to PE was not identified in the literature that I read, it does not mean this finding is lacking merit, it may perhaps be due to the range of publication dates of the research examined (mid-1990s to 2011), as cellular/smart phone technology has only become available/affordable to younger audiences in recent years. Considering the obvious student privacy concerns associated with smart phone use in school locker rooms, I was surprised when Melissa stated students "go to the locker room use their cell phone, come back out". To this end, the only time "cell phone" or "communication device" were referred to in the Nova Scotia PE Safety Guidelines document (Government of Nova Scotia, 2015b) is under accessible equipment in case of emergency.

Social pressure as a barrier to students' PE participation refers to some students' hesitation to try new activities, as they fear that they might embarrass themselves in front of their peers. Beni et al. (2017) reported that social interaction is a criterion for meaningful PE experiences; however, it comes in both positive and negative form. In this instance, when students do not feel confident or physically competent to perform a particular skill or movement pattern, social interaction can act as a barrier to participation for some students. This was demonstrated by the urban-female who was hesitant to play volleyball with her high-skilled friends: "I feel like I kind of hold back from trying and learning new things… it's just what other people will think of me." PE teachers should be mindful of the social situations they create during PE, particularly when students are in the early stages of acquiring new skills.

Choice in activities was identified as a facilitator to students' participation in PE. El-Sherif (2014) wrote extensively about the benefits of providing students input and choice over the activities performed during PE. Similarly, Gibbons and Humbert (2008) reported "Variety and Choice for a Lifetime" as one of the four identified themes amongst female students. Despite evidence supporting PE programs that expose students to a range of lifetime activities (e.g., dancing, walking, cycling) and developmental movement patterns, many students reported their PE programs to be reflective of a multiactivity sport-based model that incorporated competitive games and focused on practicing sport-specific skills. These findings support Randall et al.'s (2014) descriptive profile of PE teachers and programs in Atlantic Canada, which suggests not much has changed over the last five-years. Interestingly, teachers' self-reported pedagogical practices differed significantly from those experienced by students, as the majority of them acknowledged that students preferred non-traditional forms of PE, and thus, their programs were more reflective of QPE standards. This is possibly due to bias within the sample of teachers that volunteered to participate in the research, considering most self-identified as being passionate PE teachers who regularly engage in self-initiated professional development and learning opportunities.

The importance of this theme cannot be underestimated. Doolittle (2016) wrote that middle school is the most important time in a young person's life to foster engagement in physical activity. Understanding factors which may impede a student's ability or willingness to participate during PE is critical to their future participation in physical activity and physical literacy development (Lubans et al., 2010).

The "Varying Views of PE's Purpose" noted in Theme 2 also provides important information to physical educators and PE policymakers. Understanding students' views on the purpose of PE provides researchers insight into the types of pedagogical practices PE teachers are using, as well as the quality of health messaging that is being disseminated to students. In general, students viewed PE as an opportunity to take an active break from "actually learning" while having fun with their friends, and to learn about a variety of health-related concepts that can be transferred to the real world. These findings support the work of Lyngstad et al. (2020) based in Norway, who reported students to view PE as "the movement moment" (p. 230) in their everyday school life.

Teachers' views on the purpose of PE were near textbook worthy. The majority of them viewed PE as an opportunity to develop students' physical literacy, expand their social, emotional and personal skills, and expose students to a variety of activities in hopes that students will choose one to continue being physically active for life. These views were similar to those reported by Kretschmann (2014), who categorized the many purposes of PE according to health, value and developmental education. Conversely, there was some discrepancy between views held by students and what teachers perceived to be views held by students. The majority of teacher participants believed students were unable to make the association between the 'physical' and 'educational' aspects of PE; however, as previously discussed, the students were capable of understanding the many purposes of PE, and perceived it to be more than just an opportunity to "play" (Papageorgaki, 2018) and be social with friends. This theme spanned the intrapersonal, interpersonal and organizational levels of the SEM, as views on the purpose of PE are held at the individual level, shared

amongst the interpersonal level, and influenced by the organizational (and higher) levels of the SEM.

While the priorities of our social, political and educational systems influence the content taught and lessons learned in schools, the role teachers have on students far exceeds any textbook or curriculum. Theme 3: "Role of the PE Teacher" highlighted the extent to which a PE teacher can influence the many aspects of a child's life beyond the basketball court. Students described their PE teachers as being "encouraging", "enthusiastic", "fun to be around" and "pretty awesome". In many cases, PE teachers are known to wear many hats: educator, cheerleader, volunteer coach, event coordinator, and in many cases, they are often responsible for teaching additional school subjects. Similar to other subjects, the role of the teacher is to provide students with feedback on how to improve their academic success. Only some of the students recalled receiving feedback from their PE teachers. This is concerning, considering students should be evaluated based on personal growth, acquired skills and physical literacy development. When students are not provided adequate feedback from their PE teachers, they are unable to correct skills or address movement patterns that are not being executed appropriately. Similar findings were discussed by Silverman and Subramaniam (1999) in their review of literature examining students' attitude toward PE and physical activity. The authors reported low-skilled students do not receive adequate feedback from their PE teachers to improve their skill level, which ultimately leads to students blaming themselves for being unsuccessful. It is a cyclical process that needs to be addressed through proper PE teacher education training and professional development specific to PE assessment.

This theme forms the basis of the argument for why PE teachers need more opportunities for professional development and training. Physical education is a subject that aims to address the psychomotor, cognitive and affective domains of learning, while being attentive to students' physical, emotional and social well-being; therefore, PE teachers need to be privy to many health-related concepts and equipped with a range of innovative pedagogies that can effectively relay information to students in a non-traditional form of teaching. Teachers reported systemic barriers to attend professional development opportunities within their discipline, including access to funding and lack of opportunity for professional development. This theme addressed the organizational (school) level of the SEM.

The theme "Low Status of PE" is both disconcerting and unsurprising. It refers to the lack of allocated time, space, priority and respect given to the subject, in comparison to other academic disciplines in the school curriculum. Students reported low weekly quantities of PE instruction, both in terms of minutes per class and frequency of classes per cycle, ranging from 60-180 minutes per cycle. The low end numbers are comparable to the work of Randall et al.'s (2014) descriptive profile of PE programs in Atlantic Canada, which are also well below PHE Canada's (2020b) 30 min/day QDPE recommendations.

In 2015, the same year the current PE curriculum was implemented, the Nova Scotia DHW released a *Population Health Profile* of the province (Government of Nova Scotia, 2015a), which compared prevalence data of modifiable health behaviours and related chronic diseases between Nova Scotia and national averages. Results from this report indicated Nova Scotia had higher prevalence rates for all listed conditions (overweight or obesity, diabetes, hypertension, arthritis, heart disease, respiratory disease),

performed higher on negative health behaviours (heavy drinking, smoking) and lower on positive health behaviours (fruit and vegetable consumption). Randall et al. (2014) pointed out, for a region that has some of the lowest indicators of health and wellness, "certainly, they deserve better than to have the least amount of time for PE instruction" (p. 61).

Several students described combined PE classes of up to 80 students with 2-3 PE teachers negotiating for time, space and equipment. Some teachers described how their classroom (i.e. the gymnasium) is commonly taken from them for special events without much notice ahead of time. This practice is quite troublesome for PE teachers as they are then left to find alternative classroom space, which often results in students performing some sort of unplanned sedentary activity. Furthermore, the message this sends to students is concerning, as it is clear that PE is not viewed as important as other school subjects.

Some teachers spoke about the improper use of the word "gym" in place of "physical education". When reviewing the student focus group and teacher interview data, there was a clear difference between how students and teachers used the word. Some teachers stressed how they make it a priority to educate their students about the negative connotation the word "gym" brings to the subject. The marginalized status of PE was also discussed by Kilborn et al. (2016) in their analysis of Canadian PE curricula, who stated the low status of PE is a key barrier to implementing quality PE programs in schools. Similarly, Silverman and Subramaniam (1999) found that the marginal status of PE in the school curriculum negatively impacts students' beliefs and attitudes toward the subject matter. This theme starts at the organizational level but quickly spreads across all five, as it is influenced and perpetuated by the widespread lack of attention that it receives.

The potential impact a "Comprehensive School Health" approach to promoting physical activity in schools was the focus of Theme 5. As previously discussed, CSH models aim to enhance students' health outcomes by supporting the entire school community. Beddoes and Castelli (2017) outlined the components of a comprehensive school health program that promotes physical activity: (1) quality PE; (2) physical activity before and after school; (3) physical activity during the school day; (4) involvement from teachers and staff; and (5) family and community engagement. Unfortunately, students described their school days as being primarily sedentary, particularly on the days that they did not have PE. While teachers reported desires for adopting a CSH framework in their schools, support from the whole school was often lacking. This theme addressed the organizational, community and policy levels of the SEM.

Finally, Theme 6: "Red Tape Policies" highlights the influence that PE rules and safety guidelines have on students' PE experiences. Students reported a dearth of community-based PE experiences in recent history. Teachers expressed their frustrations regarding the increased amount of "red tape" that prevents them from providing their students relevant learning experiences. In Nova Scotia, there is no provincially mandated daily physical activity policy that ensures students are meeting a minimum daily dose of physical activity. There are, however, several policies that prevent students from engaging in physical activity. For example, the Nova Scotia PE safety guidelines implemented in 2015, require extensive training and certification above and beyond PE teacher training to take students for a bicycle ride during PE class. While the safety of our students is of utmost importance, it has to be balanced with the disservice we are causing by not developing policies that *facilitate* physical activity.

Recommendations

From the knowledge gained based on students' and teachers' reported experiences and perceptions of PE, it is possible to offer some recommendations to Nova Scotia PE teachers on behalf of Grade 8 student participants, and to PE policymakers on behalf of the PE teachers involved in this study. Recommendations for teachers were not able to be member checked by student participants due to REB protocol surrounding communication with youth following data collection. The recommendations for PE policymakers were presented at the 2019 TAPHE Conference to nine PE teachers who had registered for the presentation titled, *Exploring how Grade 8 PE is Supported and Implemented in Schools Across Nova Scotia*. Throughout the presentation, teachers were tasked with using their smartphones to provide their anonymous feedback (strongly agree, agree, undecided, disagree, strongly disagree) concerning each recommendation. Feedback was captured using Poll Everywhere, an interactive plugin for PowerPoint and were broadcasted live within the presentation. In general, the majority of attendees were in agreeance with each of the original recommendations. This platform created an opportunity to further discuss each recommendation as a group, where I was able to take notes based on teachers' feedback and make revisions to the final list of recommendations.

For PE Teachers (by Students)

The following list of recommendations are intended for PE teachers from the perspective of the Grade 8 student participants. They are based on students' reported experiences and perceptions of school-based PE:

1. More time allocated to PE instruction in the core curriculum.

This recommendation is based on students' recognition that PE is not given the same level of respect and attention as other subjects in the general school curriculum. It was evident that students are capable of understanding and valuing the many psychomotor, cognitive and affective learning outcomes that PE has to offer; however, they also realized that semi-regular 30-minute periods of scheduled PE instruction is not enough time to accomplish all that PE intends to offer. As such, students have requested that more time in the core curriculum be allocated to PE instruction, both in terms of duration (minutes per class) and frequency (number of classes per cycle).

2. Increase time spent being physically active during PE.

Students recognized that the time they have with their PE teacher is limited; therefore, finding ways to optimize the quality of PE instruction they receive and to maximize their time spent being physically active is a priority for some students. Students have requested that PE teachers find innovative ways to effectively communicate their class expectations and instructions so not to interfere with their limited time spent being physically active.

3. Establish innovative solutions to engage students in meaningful QPE experiences.

As much as students appreciate PE for the enjoyable social break it provides, they also recognize the value QPE experiences have to offer. Students expressed their preferences over the types of games and activities performed during PE, many of which preferred non-traditional games and activities over traditional team sports and practicing sport-specific skills. Moreover, some students voiced their opinions about the negative impact competition has on their ability or interest to participate during PE class. Beni et al. (2017) defined meaningful PE experiences as ones that are fun, challenging, involve social

interaction with others, result in increased motor competence and are relevant to students' personal learning. As such, students have requested that PE teachers think outside the box when it comes to selecting games and activities that support and encourage their participation and result in meaningful PE experiences.

3. Give students opportunity to provide input and choice over activities.

Recognizing that no two students are the same and each student brings a unique set of personal values, beliefs, motivations and expectations to the classroom/gymnasium, students have expressed their appreciation when they are provided an opportunity to have input over the types of activities performed and lessons learned during PE. Research has shown that PE teachers in Atlantic Canada often chose activities that they felt most comfortable teaching (Randall et al., 2014); however, these activities do not always align with students' interests. Participation during PE increases when students are interested in the activities they are being tasked to perform (Chen, 1996; Cothran & Ennis, 1999) and when they are provided choice in the selection of activities (El-Sherif, 2014). As such, it is in the best interest of the students and teachers to provide opportunity for student input over PE program design and content.

5. Make other classes more active.

Although this recommendation does not directly involve PE teachers, students wanted it to be known that being confined to a desk and chair for endless hours does not contribute to their academic achievement or positive classroom behaviours. Students have requested that other subject teachers find innovative ways to incorporate physical activity into their daily lesson plans, or at the very least, provide students with regular movement breaks where they are permitted to stand-up and move around during class.

For PE Policymakers (by Teachers)

The following list of recommendations are intended for Nova Scotia PE policymakers from the perspective of the PE teacher. They are based on teachers' reported experiences and perceptions of students' PE experiences.

1. School PE needs to be a priority at all levels: organizational, community and policy.

Considering the low public health status of Nova Scotia and consistent reports of declining levels of physical activity amongst students in Grades 3, 7 and 11, the Nova Scotia government should be doing everything in its power to educate and support young people in the early promotion of physical activity. School-based PE aims to equip students with the necessary knowledge and skills to live active healthy lifestyles. If PE is not given the same level of attention or priority as other school subjects, what kind of message are we sending youth? Making PE a priority at the organizational, community and policy levels would require a significant shift in both thinking and action.

2. Physical education teachers need more opportunity for professional development.

Teachers are central to the education system. Their ability to deliver evidence-based pedagogical practices is dependent on them receiving high-quality PE teacher education training and regular professional development opportunities. Each year, TAPHE hosts a one-day conference where all health and PE teachers in Nova Scotia are invited to share and learn from one other; however, this is not enough. Physical education is a subject that aims to address the psychomotor, cognitive and affective domains of learning, while being attentive to students' physical, emotional and social well-being; therefore, it is not practical to address all of these outcomes in a one-day conference. The DEECD and NSTU should strive to better support its health and PE teachers, with additional funding and opportunity

to attend high-quality professional development and training. Because when we invest in our teachers, we are investing in the future health of Nova Scotia. This recommendation addresses the organizational (school) level of the SEM.

3. Students meeting the 24-Hour Movement Guidelines needs to be a collaborative effort.

It is common knowledge that a large percentage of Canadian school-age children and youth are failing to meet movement guidelines and Nova Scotia youth are no different. Some teachers and school administrators claim that increasing demands on the education system (i.e., pressures to raise standardized assessment results) limits the overall support they can give to health promotion activities (McIsaac, Read, et al., 2017), despite the large body of evidence demonstrating that physical activity contributes to academic success (Álvarez-Bueno et al., 2017). Finding innovative ways to incorporate physical activity into students' daily school schedule needs to be a shared responsibility of the entire school community. This includes parents/guardians and personal responsibility of the student to be active outside of school hours, as school accounts for approximately only half of a student's waking hours. As such, teachers have requested all teachers should be educated about the health benefits of meeting the 24-Hour Movement Guidelines and assisting students to meet the Guidelines needs to be made a priority. The recently developed UpLift partnership, is an example of how student health is a shared responsibility that spans all levels of the SEM.

4. Health and PE should be complementary and taught by an HPE specialist.

Nova Scotia is one of the few provinces that mandates PE specialists to have formal training in an exercise science-related field of study (e.g., physical education, kinesiology, human kinetics) (Cameron et al., 2003); however, the same rule does not apply to teachers

responsible for delivering the health education curriculum. Consequently, some students are being taught highly sensitive information by teachers who may not feel comfortable, confident or arguably qualified, in doing so. This is concerning due to rising rates of mental illness and risk of sexual assault and substance use among young people. Ensuring that accurate information is being delivered to students from highly qualified individuals, should be a priority. As such, teachers have requested that the responsibility of teaching the health education curriculum be reserved for highly qualified HPE specialists.

Limitations

Despite sharing these recommendations, there are some limitations concerning this research that rightfully need to be acknowledged. First, a main limitation comes from my position as a novice qualitative researcher. While I followed the recommendations and guidelines for conducting interpretative phenomenological research from the many available texts and resources (Bowen, 2009; Creswell, 2013; Friesen et al., 2012; Palmer et al., 2010; Smith & Osborn, 2003), I recognize that my work may lack the necessary depth and detail to be considered a high-impact interpretative phenomenological study. In part, my lack of experience facilitating focus group discussions with youth and conducting interviews in general, has contributed to this lack of depth and detail. Having relistened to the audio-recorded focus group discussions and individual interviews several times, I recognize that I frequently interrupted participants or finished their sentences during moments of silence. This made it difficult for me to give meaning to their interpretations of their lived experiences, as I often felt the need to insert my own personal views into the conversation(s). Moreover, learning how to better bracket some of the personal "baggage"

(Scheurich, 1995) that I bring to the research, will assist me in conducting future interpretative research.

A second limitation addresses the difficulty in accessing the student voice. Sanders (1996) wrote the main reason why students' voices are missing from educational research is due to the time and effort it takes to gather their reports. I would add – and accessing those voices who need to be heard the most, is even more difficult. Although I tried to recruit a sample of students that was reflective of a typical Grade 8 public school class in Nova Scotia. The recruitment strategies that I used in this student-centred research were admittedly based on several assumptions: (1) potential student participants and their parents/guardians had regular internet access for communication purposes, (2) students were willing to share their perceptions and experiences of PE, regardless if they were positive or negative, and (3) potential student participants and their parents/guardians were not intimidated by the research process. I recognize that the 18 students who volunteered to participate in this research, in general, all fit these assumptions; therefore, their views may not be reflective of a typical Grade 8 student in Nova Scotia. In an ideal situation, I would have captured a range of PE experiences, including those students who view PE negatively, live in marginalized communities, and represent minority groups that are often underrepresented in research. As a result, students' focus group responses and the associated themes from this research should not be generalized to the broader student population.

Similarly, PE teachers' interview responses and associated themes also cannot be generalized beyond this research. In general, the six PE teachers who volunteered to participate in this study, were all passionate about PE. The majority of them described

partaking in self-initiated professional development opportunities including attending the PHE Canada National Conference, pursuing PE-related graduate degrees and using Twitter as a forum for PE content – which is how most of them learned about this research and contacted me for details about participation. Therefore, a third and significant limitation to this research is the extent to which these findings can be generalized to the broader PE community within Nova Scotia.

Another limitation to this research is the exclusion of a possible seventh theme involving PE assessments. Many student and teacher participants expressed their perceptions of PE assessment and concerns over evaluation processes; however, I chose not to elaborate on this particular area of the data because I was not comfortable explaining the complexities involved and I was unsure of how it directly influenced students' PE experiences.

Finally, some teacher participants were contacted for member checking, others did not respond. All who responded approved of the interpretations I had applied to their reported experiences. Having all teachers member check their interviews may have increased the trustworthiness of the research findings.

Implications for the Future of PE in Nova Scotia

With a new Grades 7-9 PE curriculum being piloted in several schools throughout Nova Scotia, one of the most important findings that came from this research is that, regardless of how good or strong a PE curriculum is said to be, it is only as strong as the supports available to the teachers responsible for delivering it.

Based on the findings from this research and relevant literature, the planning and development of future PE curriculum in Nova Scotia, first and foremost, must be based on

the needs and interests of students for whom it is intended (El-Sherif, 2014). To do this, researchers, educators and policymakers need to consult with students using a variety of data collection methods that allow for accurate reporting of their perspectives. Second, new curriculum should only support evidence-based pedagogical practices that promote and support inclusive learning opportunities, which result in meaningful PE experiences for students (Beni et al., 2017). Third, new curriculum should align with the internationally-acclaimed *QPE Guidelines for Policy Makers* which strive for gender equality, safeguarding of children, and meaningful participation (UNESCO, 2015). Fourth, new curriculum should be reflective of the past and present cultures of Nova Scotia. It should remain a flexible document where contemporary changes in society can be explored and experienced through personally relevant ways of learning. Finally, curriculum documents need to be made publicly accessible and clearly categorized according to date of publication, and grade-level for which they are intended (Kilborn et al., 2016; Thomson & Robertson, 2014)

The processes involved in the implementation of a new PE curriculum need to be well-planned, coordinated and strategic, as it should involve all levels of the SEM. The DEECD needs to plan for and provide adequate training to ensure all PE teachers are equipped with the necessary knowledge, skills and confidence to deliver the curriculum as intended. Administrators need to work with teachers to allocate adequate time in their school timetable for PE instruction to ensure all learning outcomes are able to be met, and to ensure PE is contributing to students' meeting the recommended *24-Hour Movement Guidelines*. The implementation process should also include a formal evaluation plan where students, parents, teachers and administrators are encouraged to provide feedback

and recommendations for change. The new curriculum should also be equipped with a succession plan for future updates and reform to ensure students are receiving the most relevant and evidence-based learning experiences. Furthermore, new PE curriculum should be integrated within a comprehensive school health framework that aims to support the whole child, whole school and whole community.

Finally, PE teachers need to be held accountable for delivering the PE curriculum as it is intended. Due to the nature and essence of PE, learning outcomes are often broad and open for interpretation (Dwyer et al., 2003). In order to maintain high levels of student engagement/participation, it is critical for PE teachers to continually reflect on their pedagogical practices, and remain conscious of the skills and activities they choose to teach during PE (PHE Canada, 2020b; UNESCO, 2015). Physical education teachers need to be supported and encouraged by their administrators and the DEECD to partake in regular government-supported and self-initiated professional development and training opportunities, which may include attending the PHE Canada National Conference, Nova Scotia TAPHE Conference, or engaging in online discussions (e.g., Twitter) for the purpose of acquiring new ideas or skills related to the field.

As previously discussed, there are as many views on the purpose of PE, as there are methods of delivery; therefore, the art and science of teaching PE becomes a balancing act of delivering fun and challenging activities, that are both age- and ability-appropriate, are competitive enough to stimulate interest, but not too competitive to discourage participation, all while ensuring students are being exposed to a variety of games and activities that result in meaningful, personally relevant learning opportunities; hence,

reason for PE being referred to as the "chameleon of all curricula" (McKenzie, 2001) with a "muddled mission" (Pate & Hohn, 1994).

Directions for Future Research

Given that many of the research implications and recommendations that I have presented are grounded in the planning, development, implementation and delivery of new PE curriculum, I have focused my directions for future research on developing innovative ways to better support teachers for the purpose of enhancing students' health outcomes.

New Curriculum Implementation Training

As previously stated, there absolutely needs to be a better way to introduce new PE curriculum to teachers to ensure everyone has had an opportunity to review its content, ask questions, and experience being a student of the curriculum in a role-playing situation. Teachers need to experience the curriculum from both perspectives to fully understand what is expected from them as teachers as well from their students. Therefore, I suggest the DEECD should provide teachers with a formal curriculum implementation training workshop delivered by trained staff, complete with a plan to evaluate the training process. This could involve a 4-month follow-up survey following the first term/semester of implementation to assess any potential challenges that have arisen.

Whole School Professional Development

Based on students' and teachers' reported conversations, health-related content continues to be delivered using the traditional classroom topic approach. The goal of adopting a Health Promoting Schools framework is to integrate health into all aspects of school and learning (Halifax Regional Centre for Education, 2020). Rather than spending more time and resources on educating PE teachers about the benefits of regular physical

activity, also known as preaching to the choir, it might be more productive to develop resources for educators responsible for teaching non-health related subjects about innovative ways to incorporate physical activity into their lesson plans. Such resources could include, podcasts, short instructional videos or premade lessons plans.

Mentorship Program

During the teacher interviews, there was some conversation about interest in creating mentorship opportunities for PE teachers in Nova Scotia. The idea would be to create a platform where teachers who identify as having advanced-level knowledge, competence, confidence and/or skillset in delivering a particular area of PE are paired with a teacher who identifies as having less experience or knowledge. As a trained NCCP Learning Facilitator with the Coaching Association of Canada, I have experience facilitating formal mentorship training with community coaches and facilitating the current provincial Coach Mentorship program, which aims to pair experienced community coaches with upcoming, committed coaches who are looking to grow in their roles. This unique program was the result of a community engagement tour, where coaches identified the need for more professional development and training opportunities. The program is now into its second year and many participants, some of whom are also PE teachers, have provided positive feedback based on their experiences.

I believe it would be worth investing in the development of a similar platform created for PE teachers, as it would offer a low-cost, high-impact professional development opportunity for teachers to learn from experts within their own PE community. A multi-mode research study could be attached to the platform, where participants would complete pre- and post-surveys comparing their knowledge, competence, confidence and skill

associated with teaching PE before and after enrolling in the mentorship program. Participants could then volunteer to participate in one-on-one semi-structured interviews or focus group interviews to provide input on their experiences and provide post-program feedback.

Combined Health & PE Curriculum

I believe it would be worth exploring the impact of a combined health and PE curriculum in Nova Scotia. As previously discussed, some teachers expressed concern over the lack of formal training and certification required to teach health education in Nova Scotia. I believe it would be worth examining students', parents', teachers' and administrators' experiences with the current health education curriculum, to gain insight on how it is being received by students, as well as by parents. Results could then inform the planning, development, implementation and delivery of a new combined health and PE curriculum.

Chapter Summary

This chapter further discussed the six themes providing meaning to them as they related to the research questions and relevant literature. Next, the implications this research may have on the guidance of future PE curriculum planning, development, implementation and delivery in Nova Scotia were discussed. Two sets of recommendations were presented, the first set was for policymakers on behalf of the PE teachers involved in this study, and the second set was for PE teachers on behalf of Grade 8 student participants. The limitations of this research were discussed and finally, directions for future research were presented.

Chapter 6: Conclusion

In Chapter 5, a discussion of the results as they relate to the research questions and relevant literature was presented, as well as the implications this research may have on the future of PE in Nova Scotia. Two sets of recommendations were put forward, the first set was for PE policymakers on behalf of PE teacher participants, and the second set was for PE teachers on behalf of student participants. Finally, the limitations of this research were discussed. The purpose of Chapter 6 is to provide a summary of the key findings and contemplates what a reimagined PE program in Nova Scotia could look like. Finally, a statement summarizing my final thoughts and impressions regarding this research journey is shared.

Summary of Key Findings

The key findings from this research include: (1) the students' physical, emotional, and social well-being are the shared responsibility of the entire school community. In a comprehensive school health model, all levels of the SEM play a critical role in the promotion of physical activity, it should not all fall on the shoulders of the PE teacher; (2) there is a lack of support for PE teachers in Nova Scotia in terms of continuous professional development and training opportunities; (3) the status of PE in Nova Scotia is low in comparison to other school subjects and it is not provided the level of respect and attention that it deserves; and (4) as challenging as it is to obtain, the student voice is incredibly valuable and fundamental to educational research.

This research contributes to the literature related to student voice in school-based PE, in that it highlights students' capacity to connect the physical and educational aspects. It also emphasized how much students value PE and the need to put additional resources

into delivering quality PE experiences. Finally, this research provides concrete recommendations for improvement from the organizational to policy-level within the PE community.

Pie in the Sky… or P(i)E in the Sky?

Picture a school-based PE program that takes place outside of a traditional gymnasium. What would it look like? What types of activities or learning outcomes would students be expected to partake in? Would they be required to learn and recite the rules of an arbitrary game that serves no purpose other than to declare a winner and a loser? Would they be expected to practice and be tested on complex tasks that offer no transferrable skills? The status of our children's health is changing. Why are we not stepping up to the plate and changing our ways of PE delivery? What is it going to take to break out of the 30-year 'traditional PE' mold and show our children that PE is more than running around a gymnasium and jumping over lines? PE is a lifetime investment that starts with (i)nnovative school communities - P(i)E in the sky thinking. Although I do not know the answers to all of these questions, I do know that it starts with listening.

Final Thoughts

Four years ago, I set out on a new path. I had just made the decision to put my small business on the backburner, in hopes of finding stability and clarity in my professional life. My partner and I had just started our young family and had a vision for what we wanted our life to look like. We made the joint decision that pursing a PhD for me was the next turn in our journey. That said, it was not an easy decision, from what I heard and read, there were more people with doctoral degrees than there were jobs and I did not have a clear vision of where I wanted to focus my research attention. I knew I wanted to merge all my

previous educational training and professional certification – health promotion, kinesiology, and coaching, but how exactly was unclear. Nevertheless, I arrived on campus in September 2016 with the drive to learn and explore. Given lower than expected funding, I ended up accepting a part-time job, which not only provided me a source of income, but formed the basis for a new research project. On this alternate path the stars aligned, as they often do, and I found myself stepping into a gymnasium of a local independent school as the grade 7-12 PE teacher. I was not formally trained as a teacher, never mind a PE teacher, but why take on only one new career path, when you can take on two? So that September, I became both a student and a teacher. As the weeks went on, I began to find my footing in both roles, but it was not until I was tasked with writing a research proposal in my first-year research methods class that I discovered the symbiotic relationship of my two positions. I was experiencing firsthand the day-to-day challenges of delivering a quality physical education program and was situated within a research unit that aims to improve the student's experience from a comprehensive school health perspective.

My research really took form as the school year went on and my naive assumptions of what it would be like to teach middle school PE whacked me over the head. It was hard. Students (even at an independent school) were not always engaged. Policies meant to keep students safe, were also the policies that prevented them from moving enough throughout their day and exploring their community. I wanted to do more as a PE teacher and the only thing that made sense in my mind was to go straight to the source – the students. They became the central focus of my doctoral research, specifically the more rebellious of the bunch, Grade 8s. I wanted to know what they thought about PE. What can we be doing better to make PE a foundation of lifelong health and wellbeing? As Kennedy (1960) said

“Intelligence and skill can only function at the peak of their capacity when the body is healthy and strong” (p. 16). We owe it to our children to nourish their brains and their bodies and as a PE researcher, I am in a privileged position to explore ways to make this happen.

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Appendix A – Sample of Student Recruitment Post on Social Media

Appendix B – Teacher Participant Recruitment Poster

Are you a Grade 8 physical education (PE) teacher currently working in Nova Scotia?

A research team at Dalhousie University is looking for 6-10 public school PE teachers responsible for delivering the Nova Scotia Grade 8 PE curriculum, to participate in a 30-45 minute one-on-one audio-recorded interview to discuss their perspective on students' PE experiences. Interviews will take place at a convenient time and location outside of regular school hours, either in-person or via telephone or video call.

To participate or learn more, contact:
Jeffery Zahavich, Lead Researcher
Email: zahavich@dal.ca
Phone or text: (902) 818-9931

HEALTHY POPULATIONS INSTITUTE

DALHOUSIE UNIVERSITY

Social Sciences and Humanities REB file #: 2019-4693, Version 2.0, February 7, 2019

Appendix C – Online News Article

Dalhousie researchers looking to speak with Grade 8 phys-ed students

Groups of 3 to 5 students attending English first-language public schools will meet for a one hour focus group

Meghan Groff

(stock photo)

Groups of 3 to 5 students attending English first-language public schools will meet for a one hour focus group

A team at Dalhousie University is looking to speak with Grade 8 students about their experiences with physical education at school.

Groups of 3 to 5 students attending English first-language public schools will meet for a one hour focus group.

"We're really interested in how they are experiencing physical education," explained lead researcher Jeffery Zahavich. "What are they taking from that class and bringing into their own life outside of school."

He told NEWS 95.7's The Rick Howe Show, that age group was picked because the kids are right in the middle of their adolescent years.

"Statistics in Nova Scotia show Grade 8 is roughly when we see that biggest drop off in being physically active and obviously there's a number of influences out there, so we're looking at trying to explore and figure out what's going on or what's not going on."

This is phase one of the study; phase two will focus on the experiences of teachers.

He hopes to have all the data collected before the end of the school year so he can spend the summer and analyzing the information.

"My goal for this research is to have some sort of tangible report that's easy to read, and hopefully from there, have some recommendations that can be implemented," Zahavich said.

Those who participate will get a $25 gift card for SportChek.

Anyone interested can get more information by emailing zahavich@dal.ca.

Appendix D – Informed Consent for Parents/Guardians of Students

DALHOUSIE UNIVERSITY

Written Informed Consent for Parent(s)/Guardian(s) of Student Participants

Project title: A qualitative phenomenological exploration of students' experience with a quality physical education curriculum in Nova Scotia

Lead researcher: Jeffery Zahavich, PhD Health (candidate)
School of Health & Human Performance, Dalhousie University
Email: zahavich@dal.ca
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Other researchers
Sara Kirk, PhD (Principal Supervisor), Dalhousie University, sara.kirk@dal.ca, (902) 494-8440
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Angie Kolen, PhD, Saint Francis Xavier University, akolen@stfx.ca, (902) 867-3540
Lillie Cyr, Research Assistant, Dalhousie University, ll251033@dal.ca

Introduction
We are inviting your child to take part in a research study being conducted by Jeffery Zahavich, PhD Health candidate, as part of his doctoral program training within Dalhousie University's School of Health & Human Performance. Taking part in this research study is completely voluntary. Whether or not your child takes part in this research is entirely up to you and your child, and in no way will impact their school grades. The information below tells you about what is involved in the research, what your child will be asked to do, the expected time needed to participate in the study, and explains any benefits, risks, and inconveniences or discomfort that your child might experience. Please ask the lead researcher to clarify anything you do not understand or would like to know more about. Make sure all your questions are answered to your satisfaction before deciding whether your child will participate in this research study.

Your child is being asked to take part in a focus group discussion with the lead researcher and a research assistant, as part of the research study that will explore Grade 8 students' experiences of school-based physical education (PE). A focus group is a small group of representative people who are asked by a facilitator to speak about their experiences as part of research. The focus group will be audio-recorded for data analysis purposes.

What is the purpose of this study?
This research study aims to build knowledge on how the current Grade 8 PE curriculum is being supported and implemented in public schools in Nova Scotia. We would like to learn more about the social and environmental factors that may influence your child's PE experiences.

Who can participate?
If your child is currently enrolled in Grade 8 at an English-first language public school in Nova Scotia either in the Halifax Regional or Annapolis Valley Centre for Education, they are invited to participate in a single 1-hour focus group discussion, along with 2-4 other Grade 8 students, to share their personal PE experience. It is anticipated that approximately 12-20 Grade 8 students will participate in one of four groups. Two of the groups will take place in Halifax (date, time and location to be determined), for students attending public schools within the Halifax Regional Centre for Education. Of these, one group will be for students who self-identify as male, and the other for students who self-identify as female. The other two focus groups will take place in Wolfville (date, time and location to be determined), for students attending rural schools within the Annapolis Valley Centre for Education. Of these, one group will be for students who self-identify as male, and the other for students who self-identify as female. On the signature page of this document, student participants will be asked to select which gendered focus group they feel most comfortable attending.

What will your child be asked to do?
The lead researcher will arrange a convenient time and location outside of regular school hours to facilitate the focus group discussion. The focus group will take approximately 1-hour to complete. Before the focus group begins, the lead researcher will discuss the study details with your child to ensure they are fully informed and are given the opportunity to provide their oral assent. As a prompt to initiate conversation, your child will be asked to bring an artifact (i.e. a picture, personal belonging, or item of interest) that represents what PE means to them. The focus group will begin with each student introducing themselves and describing the connection between their chosen artifact and PE class. Questions asked during the focus group will address perceptions of PE, experiences within PE class, acquired skills and perceived levels of physical literacy. The focus group will be co-facilitated by Mr. Zahavich, the lead researcher, and Ms. Cyr, the research assistant. The focus group discussion will be audio-recorded to allow for transcription and data analysis.

What are the possible benefits, risks and discomforts?
Participating in the study might not benefit your child personally, but we might learn things that will help to support school-based PE programs. An indirect benefit is that your child will be contributing to our understanding of how the current Grade 8 PE curriculum is supported and implemented in schools throughout Nova Scotia. There are few anticipated risks related to your child's involvement in this study. Your child may become uncomfortable during the focus group while discussing their PE experiences. If at any time your child feels uncomfortable answering any questions, they may choose not to answer them. The facilitators will remind your child after each question that they may leave the focus group at any point. If your child decides to leave the focus group early, anything that was recorded up to that point will be used for research data, as it will be very difficult to identify and extract who said what during the transcription process. Transcription is the process of typing word for word audio-recorded conversation. As with all research, there is a chance that confidentiality could be compromised; however, we are taking precautions to minimize this risk. For example, the discussion may disclose information that may identify people or facilities. To minimize such risk, the facilitator will encourage participants to refrain from using names.

Furthermore, any names or identifiers that are mentioned, will be deleted during the transcription process. While all care will be taken, your child may experience embarrassment if one of the group members were to repeat things outside of the focus group. To minimize this risk, the focus group facilitators will continually remind student participants that the information shared is private and should not be repeated outside the focus group. Your child will also be reminded that any confidential information they share during the focus group will not be reported to their school or teachers by the research team.

Will my child be compensated for their participation?
Your child will be compensated with a $25 gift card to SportChek for their participation in the focus group. If your child chooses to leave the focus group early, they will still receive the $25 gift card.

How will my child's privacy be protected?
Protecting your child's privacy is an important part of this research. Every effort to protect your child's privacy will be made. When results of this study are presented to the public, nobody will be able to tell that your child took part. All names and identifying information will be deleted during the transcription process. This includes removing any identifying information from direct quotes that may be used in study reports. Transcription is taking the spoken words of participants on the audio-recording and typing it word for word. We will not repeat any confidential information with your child's school or teachers, however, there is no guarantee that other participants will maintain confidentiality. That said, the focus group facilitators will continually remind participants that the information shared during the focus group is private and should not be repeated outside the focus group. Furthermore, we will not disclose any information about your child's participation in this research to anyone unless compelled to do so by law. That is, in the unlikely event that we witness child abuse, or suspect it, we are required to contact authorities. Only the researchers involved in the study will have access to the names of study participants and privacy will be respected throughout the analysis and reporting of the results. No data or direct quotes will be reported, presented, or published that will identify your child or their school. For the duration of the study, all digital data containing participant confidential information will be stored on the lead researcher's password protected account on Dalhousie University's secure network. All paper-based research documents will be kept in a locked filing cabinet in the Principal Supervisor's (Dr. Sara Kirk) research office on Dalhousie University campus. After five years all data will be securely destroyed or deleted.

How can I obtain results?
The entire study is expected to take about four months to complete and the results should be known in one-year. If you or your child are interested in obtaining a summary of the findings from this study, please include an email address at the end of the signature page.

Who can I contact for more information if I have questions about this study?
Lead Researcher: Jeffery Zahavich, PhD Health (candidate)
Phone: (902) 818-9931
Email: zahavich@dal.ca

If you have any ethical concerns about your child's participation in this research, you may also contact the Social Sciences and Humanities Research Ethics Board (REB) of Dalhousie University, who make sure that research is done with the highest ethical standards. You may contact Catherine Connors, Director, Research Ethics, Dalhousie University for assistance at (902) 494-1462, or email: ethics@dal.ca (and reference Social Sciences and Humanities REB file # 2019-4693).

Written Informed Consent for Parents/Guardians of Student Participants – Signature Page

Project title: A qualitative phenomenological exploration of students' experience with a quality physical education curriculum in Nova Scotia

Lead researcher: Jeffery Zahavich, PhD Health (candidate)
School of Health & Human Performance, Dalhousie University
Email: zahavich@dal.ca
Phone: (902) 818-9931

I have read the explanation about this study. I have been given the opportunity to discuss it with my child and my questions have been answered by the research team to my satisfaction. I understand that my child has been asked to take part in a focus group discussion that will be audio-recorded. I understand direct quotes from my child may be used in study reports but their name and identifying information will be removed. By signing this I agree to let my child take part in this study. I understand that their participation is voluntary, and that they are free to leave the focus group at any time without repercussions.

_____	_____	_____
Name	Signature	Date

Which gendered focus group would your child feel most comfortable attending? (Please select one)

☐ He/they would feel most comfortable attending a male focus group.

☐ She/they would feel most comfortable attending a female focus group.

If you or your child would like to receive a summary report of the research findings please provide an email address: _____

Appendix E – Oral Assent Script for Student Participants

The following oral script is meant to be read in-person to each student participant on the day of their scheduled focus group prior to beginning the discussion.

Hello. My name is Jeff Zahavich and I am a student researcher at Dalhousie University and the lead researcher for this research project. Both myself, and my research assistant [insert name], will be facilitating today's focus group discussion.

Today you are being invited to take part in a 1-hour audio-recorded focus group discussion along with [X number] other Grade 8 students, to discuss your experiences of school-based physical education. A focus group is a small group of representative people who are asked by a facilitator to speak about their experiences as part of research. We will be asking you questions about the types of activities you do during physical education class and how these activities carry over into your everyday life. Our goal is to learn more about what you're learning from PE class.

There is some important information that I need to share with you before you agree to participate in today's focus group discussion, such as what you will be asked to do, as well as any benefits, risks, or discomfort that you might experience as a result of your participation.

First, taking part in this research study is completely voluntary. Whether or not you decide to take part is entirely up to you, and in no way will it impact your school grades. You can leave the focus group at any point without consequence. Should there be any questions that you do not feel comfortable discussing, you can 'pass' or simply remain silent – there is no pressure to respond. I will be providing all participants with a $25 gift card to Sport Chek at the beginning of the focus group as a 'thank you' for participating. If you decide to leave the focus group early, the gift card is yours to keep. No questions asked.

Second, protecting your privacy is an important part of this research. Every effort to protect your privacy will be made. That said, we will be audio-recording today's focus group

discussion and then transcribing it to text to be analysed later. Transcription is the process of typing word for word audio-recorded conversation. If you decide to leave the focus group early, anything that you said up to that point will be used for research data, as it will be very difficult to identify and extract who said what during the transcription process. When results of this study are presented to the public, nobody will be able to tell that you took part. Your name and any identifying information will be deleted during the transcription process. This includes removing any identifying information from direct quotes that may be used in study reports. So, for this reason, I will be reminding all participants to avoid using the names of real people and places.

Finally, it is important to note, that our researcher team will not repeat any confidential information that you choose to share during the focus group with your parents or teachers, however, there is no guarantee that other students will maintain confidentiality. That said, the focus group facilitators will continually remind all participants throughout the focus group that whatever is said during the focus group is private and should not be repeated outside the focus group. Furthermore, we will not disclose any information about your participation in this research to anyone unless we are compelled to do so by law. That is, in the unlikely event that we witness child abuse, or suspect it, we are required to contact authorities.

Do you have any questions?
Note: Answer questions.

Do you agree to participate in this study?
Note: If potential student participant says ‘no,’ thank them for their time and conclude the conversation. No $25 gift card will be provided.

Student name: _____

_____ _____

Signature (Lead Researcher) Date

Appendix F – Student Focus Group Protocol

Facilitator's welcome, introduction, and ground rules (5 min)

Welcome (1 min): Welcome and thank you for agreeing to participate in today's focus group. As you already know, my name is Jeff Zahavich and I am the lead researcher for this research project. I would like to introduce to you, [Research Assistant (RA)]. RA is a research assistant for this project, who has agreed to co-facilitate today's focus group discussion with me.

Introduction (2 min):

- This focus group is meant to explore your most recent school-based PE experiences. Today's discussion will help us better understand how the Nova Scotia Grade 8 PE curriculum is being supported and delivered in schools in Nova Scotia. As a small 'thank-you' for your time and input, we will be providing you with a $25 gift card to Sport Chek.
- As a reminder, today's focus group will be audio-recorded to allow for transcription and data analysis. Protecting your privacy is an important part of this research. To do this, all names and identifying information will be deleted during the transcription process. This includes removing any identifying information from direct quotes that may be used in study reports. However, to help us protect your identity, please refrain from using the real names of people and places, including school names, during the audio-recorded discussion.
- Also, our research team will not repeat any confidential information that you choose to share during the focus group with your parents or teachers, however, there is no guarantee that other students will maintain confidentiality. That said, the information shared during the focus group is private and should not be repeated outside the focus group.
- Finally, your participation is completely voluntary, and your participation (or not) will in no way impact your school grades. You are allowed to leave the discussion at any point without consequence. However, anything that you said up to that point will be used for research data, as it will be very difficult to identify and extract who said what during the transcription process. If you decide to leave the focus group early, the $25 gift card to Sport Chek is yours to keep – no questions asked. Should there be any questions that you do not feel comfortable discussing, you are allowed to 'pass' by simply remaining silent.

Ground Rules (2 min):

- The most important rule is that only one person speaks at a time. There may be a temptation to jump in when someone is talking but please wait until they have finished.
- There are no right or wrong answers
- You do not have to speak in any particular order, nor does each person need to respond to every question.

- Be mindful of allowing other participants to speak as it is important that I capture the views from everyone who wants to share.
- You do not have to agree with the views of others, however, we do ask that you be respectful, as we want to encourage an open discussion.
- We have five (5) broad questions and one (1) concluding question. I am hoping we will get to all of them, so we may need to move the conversation along at times. Please do not be offended.
- Does anyone have any questions? [answers].

Note: At this time, the RA will distribute the $25 gift cards, turn on the audio-recording device(s) and begin note taking (i.e. participant non-verbal).

Explanation of ice breaker activity and introductions (10 min)

Explanation (1 min):

- First, so everybody knows each other's names I would like to go around the circle and take 30 seconds to introduce yourself (i.e. your name, which school do you attend and describe the item you chose to bring today and how it represents what PE means to you.

Activity (9 min; 1 min/participant):

Focus group discussion (42 min)

Note: Approximately 5-7 minutes/question – monitor time accordingly. Probes are to be used in the case when participants are not speaking or to provide natural follow up to something that was said.

1. **Describe for me what a typical Grade 8 PE class looks like at your school?**

Prompt: For example, how many students are in your class, how many classes per week/cycle, how long are your classes?
Probe 1: What types of games or activities are being taught during class?
Probe 2: Why do you think your PE teacher makes you do those specific types of games/activities?
Probe 3: What's happening during class, are students mostly listening to instruction or mostly moving?
Probe 4: What's the general mood during class, are students having fun? Is it enjoyable? Is it competitive?
Probe 5: Aside from learning rules and playing games, does your PE teacher ever provide you the opportunity to try different roles, such as coaching, score keeping or refereeing?

2. **What do you like most/least about PE class?**

Probe 1: What have been some of your favourite games or activities that you learned during PE class?
Probe 2: Do you consider PE to be an important school subject? Why or why not?
Probe 3: In other school subjects, grades are based on reports and test scores, do you know how or what your PE teacher is using to grade you?
Probe 4: Does your PE teacher ever provide you feedback on ways to improve?
Probe 5: If you had the ability, what would you change about your PE class?

3. **What valuable lessons have you learned from PE? For example, we learn how to do math in school to help us with banking, telling time, keeping score. We use math every day in the real world.**

Probe 1: How do you see PE helping you in your everyday life?
Probe 2: Do you see value now or in the future for learning those types of skills?

4. **In your opinion, has PE impacted your ability to be physically active outside of PE class? If so, how?**

Probe 1: Has PE provided you new ideas on how to be active outside of school?
Probe 2: Has PE class increased your motivation to be active outside of school?
Probe 3: Has PE class increased your confidence to be active outside of school?

5. **Moving away from PE for a moment, what do you like to do in your spare time outside of school?**

Probe 1: What types of sports, games or physical activities do you do outside of school?
Probe 2: What do you like most/least about being physically active?
Probe 3: Do you prefer being physically active by yourself or with friends?
Probe 4: What are some things that prevent you from being physically active?

6. **Of all the things we have discussed today, what would you say is the main purpose of school-based PE?**

Conclusion (3 minutes)

- Thank you for participating. This has been a very successful discussion! Your opinions are an asset to this study. We hope you have found the discussion interesting.
- If there are any follow-up questions, please do not hesitate to contact me directly.

Note: Turn off and collect the recording device. Date and label written notes with the focus group #. Both facilitators should do a brief debrief immediately after the focus group, highlighting the key themes or overriding impressions.

Approximate total time (60 min)

Appendix G – Informed Consent for Teacher Participants

DALHOUSIE UNIVERSITY

Written Informed Consent for Teacher Participants

Project title: A qualitative phenomenological exploration of students' experience with a quality physical education curriculum in Nova Scotia

Lead researcher: Jeffery Zahavich, PhD Health (candidate)
School of Health & Human Performance, Dalhousie University
Email: zahavich@dal.ca
Phone: (902) 818-9931

Other researchers
Sara Kirk, PhD (Principal Supervisor), Dalhousie University, sara.kirk@dal.ca, (902) 494-8440
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Antony Card, PhD, Mount Saint Vincent University, antony.card@msvu.ca, (902) 457-6736
Angie Kolen, PhD, Saint Francis Xavier University, akolen@stfx.ca, (902) 867-3540

Introduction
We are inviting you to take part in a research study being conducted by Jeffery Zahavich, PhD candidate, as part of his doctoral program training within Dalhousie University's School of Health & Human Performance. Taking part in this research study is completely voluntary. Whether or not you take part in this research is entirely up to you. The information below tells you about what is involved in the research, what you will be asked to do, the expected time needed to participate in the study, and explains any benefits, risks, and discomfort that you might experience. Please ask the lead researcher to clarify anything you do not understand or would like to know more about. Make sure all your questions are answered to your satisfaction before deciding whether you will participate in this research study.

You are being asked to take part in a one-on-one interview with the lead researcher, as part of a research study that will examine physical education (PE) teachers' experiences of delivering the current Nova Scotia Grade 8 PE curriculum, as well teachers' perceptions of Grade 8 students' PE experiences. The interview will be conducted by Mr. Zahavich, the lead researcher, and will be audio-recorded for data analysis purposes.

What is the purpose of this study?
This research study aims to build knowledge on how the current Grade 8 PE curriculum is being supported and implemented in public schools in Nova Scotia. We would like to learn more about your experiences delivering the current Grade 8 PE curriculum, as well your perception of how Grade 8 students experience school-based PE.

Who can participate?
If you are a PE teacher currently responsible for delivering the provincial Grade 8 PE curriculum at an English first-language public school in Nova Scotia, you are invited to participate in a one-time semi-structured interview to offer a rich, detailed, first person account of your experiences. It is anticipated that approximately 6-10 Grade 8 PE teachers will participate in this study. The length of this study for teacher participants is a single 1-hour interview.

Social Sciences and Humanities REB file # 2019-4693, Version 2.0, February 7, 2019

What you will be asked to do?
The lead researcher will arrange a convenient time and location outside of regular school hours to conduct the one-on-one interview, either in-person or by telephone or video call. The interview will take approximately 1-hour to complete. Before the interview begins, the lead researcher will discuss the study details with you to ensure you are fully informed and are given the opportunity to ask any questions you may have. Questions asked by the lead researcher during the interview will address teachers' perceptions of students' PE experiences, and personal experiences delivering the current Grade 8 PE curriculum. The interview will be conducted by Mr. Zahavich, the lead researcher, and will be audio-recorded for data analysis purposes.

What are the possible benefits, risks and discomforts?
Participating in the study might not benefit you directly, but we might learn things that will help to support school-based PE programs. An indirect benefit is that you will be contributing to our understanding of how the current Grade 8 PE curriculum is supported and implemented in schools in Nova Scotia. There are few anticipated risks related to your involvement in this study. You may become uncomfortable during the interview while discussing your experiences teaching PE or describing your perception of students' experiences. If at any time you feel uncomfortable answering any questions, you may choose to pass on the question and move to the next, and you always have the option to end the interview early. If you decide to end the interview early, you have the option to allow the research team to use the recorded data up to the point of withdrawal, or you can choose to have the entire interview discarded. As with all research, there is a chance that confidentiality could be compromised; however, we are taking precautions to minimize this risk. For example, the interview may disclose information that may identify people or facilities. To minimize such risk, the lead researcher will encourage you to refrain from using names. Furthermore, any names or identifiers that are mentioned, will be deleted during the transcription process. Any confidential information that you share during the interview will not be reported to your employer, colleagues or students.

Will I be compensated for participating?
There is no compensation for teachers participating in this research study.

How will my privacy be protected?
Protecting your privacy is an important part of this research. Every effort to protect your privacy will be made. When results of this study are presented to the public, nobody will be able to tell that you took part. All names and identifying information will be deleted during the transcription process. Transcription is taking the spoken words of participants on an audio-recording and typing it word for word. This includes removing any identifying information from direct quotes that may be used in study reports. Only the researchers involved in the study will have access to the names of study participants and privacy will be respected throughout the analysis and reporting of the results. No data or direct quotes will be reported, presented, or published that will identify you, your students, or your school. For the duration of the study, all digital data containing participant confidential information will be stored on the lead researcher's password protected account on Dalhousie University's secure network. All paper-based research documents will be kept in a locked filing cabinet in the Principal Supervisor's (Dr. Sara Kirk) research office on Dalhousie University campus. After five years all data will be securely destroyed or deleted.

How can I obtain results?
The entire study is expected to take about four months to complete and the results should be known in one-year. If you are interested in obtaining a summary of the findings from this study, please include an email address at the end of the signature page.

Who can I contact for more information if I have questions about this study?
Lead Researcher:
Jeffery Zahavich, PhD Health (candidate)
Phone: (902) 818-9931
Email: zahavich@dal.ca

If you have any ethical concerns about your participation in this research, you may also contact the Social Sciences and Humanities Research Ethics Board (REB) of Dalhousie University, who make sure that research is done with the highest ethical standards. You may contact Catherine Connors, Director, Research Ethics, Dalhousie University for assistance at (902) 494-1462, or email: ethics@dal.ca (and reference Social Sciences and Humanities REB file # 2019-4693).

Written Informed Consent for Teacher Participants – Signature Page

Project title: A qualitative phenomenological exploration of students' experience with a quality physical education curriculum in Nova Scotia

Lead researcher: Jeffery Zahavich, PhD Health (candidate)
School of Health & Human Performance, Dalhousie University
Email: zahavich@dal.ca
Phone: (902) 818-9931

I have read the explanation about this study. I have been given the opportunity to ask questions and my questions have been answered to my satisfaction. I understand that I have been asked to take part in an hour-long in-depth interview that will occur at a time and location convenient to me, and that the interview will be audio-recorded. By signing this I agree to take part in this study. I understand that my participation is voluntary, and that I am free to end the interview early and can choose to have my audio-recorded interview discarded without negative repercussions.

_____	_____	_____
Name	Signature	Date

If you would like to receive a summary report of the research findings please provide an email address: _____

Social Sciences and Humanities REB file # 2019-4693, Version 2.0, February 7, 2019

Appendix H – Teacher Interview Guide

1. Describe for me what a typical Grade 8 PE class looks like at your school?
Probe 1: How many students are in the class?
Probe 2: How many minutes per class? How many classes per week?
Probe 3: How engaged are the students? Noticeable differences between boys and girls?
Probe 4: What's the general mood of the class? Are the students having fun?
Probe 5: Percentage of active time versus instruction time?

2. What are some barriers/facilitators that impact your ability to deliver PE?
Probe 1: Access to equipment? Condition of equipment?
Probe 2: Quality of facilities on school property (e.g. indoor/outdoor)?
Probe 3: How do you balance students' PE preferences with curriculum outcomes?
Probe 4: Are you impeded by any specific policies (e.g. red tape)?
Probe 5: How are you supported (or not supported) in your role by your school?

3. What do you believe is the purpose of school-based PE?
Probe 1: In your opinion, what does a quality PE curriculum look like?
Probe 2: In your opinion what do you think, students believe is the purpose of PE?
Probe 3: What are your thoughts on the current PE curriculum?
Probe 4: Do you like it? Do you find it easy to use?
Probe 4: How does the current PE curriculum influence your general PE lesson plans?

4. What impact do you believe PE has on Grade 8 students outside of school?
Prompt: "The following questions are meant to gain insight on your perceptions."
Probe 1: Does PE provide students new ideas on how to be physically active?
Probe 2: Does PE improve students' confidence to be physically active?
Probe 3: Does PE increase students' motivation to be physically active?
Probe 4: Does PE enhance students' knowledge about benefits of being physically active?

5. What type of supports have been made available to you regarding curriculum implementation since the 2015 curriculum was released?
Probe 1: Have you taken advantage of any of these available supports?
Probe 2: Are there additional supports you wish were available?

6. Why do you think adolescents are not meeting Canada's 24-Hour Movement Guidelines?
Probe 1: What transferable skills do you hope students are "taking away" from their Grade 8 PE experience?
Probe 2: How do you see PE helping students in their everyday life?

7. Of all the things we have discussed today, what recommendations would you suggest to Nova Scotia policymakers around PE curriculum development and implementation?

Appendix I – Audit Trail

Provided below, is a timeline which summarizes the dates in which different aspects of the research was completed.

Date	Task	Outcome or status
2018, February 07	Stakeholder engagement meeting with DEECD	Discussed existing challenges and barriers to middle school PE curriculum implementation
2018, December 02	Research proposal submitted to Committee for review	Complete
2018, December 12	Research proposal presentation with Committee	Committee approved proposal for submission to REB pending minor revisions
2019, January 02	Completed TCPS 2 CORE training	Complete
2019, January 07	Research ethics application submitted to Dalhousie REB for review and approval	REB requested revisions (2019, January 29)
2019, March 05	REB revisions submitted	Approved (2019, March 26) Expires: 2020, March 26
2019, April 05-23	Phase 1: Student recruitment	Recruited 18 students from HRCE and AVRCE for selection to participate
2019, April 20-24	Phase 1: Data collection	Complete
2019, April 21-May 12	Phase 1: Early data analysis; Phase 2: Interview guide	Early analysis of focus groups used to inform development of teacher interview guide
2019, April 29	REB amendment #1 submitted Request to hire transcriptionist	REB amendment approved (2019, May 03)
2019, May 13	REB amendment #2 submitted Submitted interview guide	REB amendment approved (2019, May 28)
2019, May 07-June 17	Phase 2: Teacher recruitment	Recruited 6 PE teachers for selection to participate; Data saturation achieved

Date	Task	Outcome or status
2019, May 22-Jun 26	Phase 2: Data collection	Complete
2019, May 30	Stakeholder engagement with PE consultant	Discussed current state of PE in Nova Scotia
2019, July 01-November 30	Phase 1-3: Data analysis	Ongoing
2020, January 13	Started writing thesis	Complete
2020, February 11	REB annual renewal submitted	REB annual renewal approved (2019, February 19) Expires: 2021, March 26
2020, February 24	FGS approved external examiner for PhD defence	Complete
2020, March 31	Drafts of Chapters 1 (Introduction) and 2 (Literature Review) sent to SFLK for review	Feedback provided: 2020, April 04
2020, May 07	Draft of Chapter 4 (Results) sent to SFLK for review	Feedback provided: 2020, May 12
2020, May 26	Thesis (draft) submitted to committee for review	Complete
2020, June 04	Thesis (draft) submitted to FGS for format check	Complete
2020, June 07	Thesis submitted to FGS for distribution to external examiner	Complete
2020, July 10	Thesis defense	Complete

Note: DEECD = Department of Education and Early Childhood Development, PE = physical education, REB = Research Ethics Board, TCPS 2 CORE = Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans Course on Research Ethics, HRCE = Halifax Regional Centre for Education, AVRCE = Annapolis Valley Regional Centre for Education, FGS = Faculty of Graduate Studies, SK = Dr. Sara F.L. Kirk (PhD supervisor).

Appendix J – Nova Scotia Grade 8 PE Curriculum Outcomes

Table I.

Students will be expected to:

	Strand A: Active for Life
SCO	GCO: demonstrate knowledge, skills, and attitudes necessary to be active for life
A8.1	analyze and evaluate SMART goals for their health-related physical fitness, and develop SMART goals for a peer through a case-study approach
A8.2	analyze and evaluate the impact of their participation in physical activities at moderate to vigorous intensities on the local community
A8.3	analyze opportunities for social experiences during different types of physical activities, in school and the local community
A8.4	analyze their behaviours related to optimizing learning readiness, and set SMART goals related to learning readiness to optimize academic performance
A8.5	analyze ways to manage risk while being physically active in various settings
	Strand B - Skill and Movement Concepts
SCO	GCO: demonstrate competencies of skill and movement concepts and strategies through participation in diverse physical education pursuits
B8.1	demonstrate competency in skill combinations and movement concepts within dance, educational gymnastics, games, and active pursuits
B8.2	demonstrate competency in skill combinations and movement concepts while applying various strategies
B8.3	analyze decision-making skills while applying skills, skill combinations, and movement concepts as adaptations are placed on settings, space, time, rules, and tasks
	Strand C - Life Skills
SCO	GCO: participate in diverse physical activities that will foster personal, social, and emotional growth and responsibility
C8.1	apply an understanding of compassion toward others and the environment, and analyze how compassion can impact school climate and their community
C8.2	apply an understanding of personal and social responsibility that values diversity and analyze how personal and social responsibility relates to social justice
C8.3	demonstrate effective collaboration skills, behaviours that promote fairness, and analyze the impact of fair play on self and others

Note: Adopted from the Government of Nova Scotia 7-9 PE curriculum (2014b, p. 26). PE = physical education, SCO = specific curriculum outcome, GCO = general curriculum outcome.