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Abstract

Physical inactivity is a growing concern in North America, it is estimated that this will be the first generation of parents to outlive their children. Schools provide an opportunity for children to learn living skills that transfer into everyday contexts of their life. This is evident as Ontario has mandated Policy/Program Memoranda No. 138: Daily Physical Activity in Elementary Schools as part of a Healthy Schools Framework. This framework recognizes the importance that healthy children are better prepared to learn (Ontario Ministry of Education, 2014). This research addresses teacher's personal identity and how it influences their integration of daily physical activity (DPA) in their school. Three teachers from the Peel District School Board were interviewed to learn about their strategies as well as the impact they perceive DPA to have on student learning. Findings indicate that there are systemic, and professional practice barriers that impede DPA implementation, however school staff recognize the associated benefits it has, and thus provide strategies for formal and informal physical activity opportunities. These findings signify the need for accountability to enable systemic, structural and development opportunities for teachers. Ultimately this study promotes the need for further research to identify how schools and teacher education programs can promote physical activity to emphasize its connection to living skills.

Key Words: Daily Physical Activity; Identity; Living Skills; Barriers; Benefits, Strategies, Professional Practice
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Chapter 1 – Introduction

Background of the Research Study

Physical inactivity among children is a growing trend in the world, and this is evident especially in North America, because there is an increasing number of children who are overweight, or at risk of becoming overweight (Vazou, Gavrilous, Mamalaki, Papanastasiou, & Sioumala, 2012). It is quite alarming that this might the first generation of children that may not outlive their parents due to early onset of cardiovascular diseases, and type II diabetes. (Ontario Medical Association, 2015). In 2013, a study performed by People for Education found that students in the Greater Toronto Area were not receiving the minimum 20 minutes of physical activity every day at school (CBC News, 2013). This is quite striking as twenty minutes falls below the recommended sixty minutes of moderate to vigorous physical activity (MVPA) every day for health benefits (Canadian Society for Exercise Physiology, 2014). Similarly Active Healthy Kids Canada (2014) released a report card in 2014 titled “Is Canada in the Running” which grades physical activity behaviours among Canadian children and compares it to other countries. Focusing attention on elementary school aged children (5-11 years old) the study reported that only 7% of them achieved the recommended physical activity requirements. In spite of these low grades, schools provide student’s access to the gymnasium, playing fields, and areas with playground equipment; however these opportunities are not being used as Canada’s overall activity levels are graded as a D-. Specifically schools are graded at a C+ for sophisticated policies, places and programs however levels of physical activity are extremely low and about half (55%) the schools in Canada have a fully implemented policy for daily physical education and physical activity opportunities, let alone the fact that physical education has been adversely affected by budget cuts (Active Healthy Kids Canada, 2014; Robinson & Melynchuk, 2008).
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There are a lot of resources available for physical activity opportunities however we live in a “culture of convenience”, as we have it built (referring to places and programs) however “they are not coming” (Active Healthy Kids Canada, 2014, p. 2). Relating back to the study performed by People for Education it was found that about 45% of Ontario schools have a specialist health and physical education teacher, and Principals stated that it is hard to fit in physical activity in an already dense school day especially when many teachers aren’t trained enough (CBC News, 2013). Schools have the resources however these resources are policies need adherence and more personnel for success. It is crucial for children aged 5-11 to minimize the amount of sedentary activity every day; this includes activities with little physical movement such as sitting for prolonged periods of time (ParticipACTION, 2013). This is where the Ontario Daily Physical Activity Policy factors in since children spend a significant amount of their day at school where they have the resources to engage in moderate to vigorous physical activity (MVPA) and avoid sedentary behaviours. In fact, students spend an average of six hours a day, for five days a week for twelve to fourteen years of school which makes schools an optimal setting for physical activity, mental health, and healthy eating (People for Education, 2013); These elements are all tied to the holistic development of a child outlined in the Foundations for a Healthy School framework and highlights the importance of intervention for school aged children.

The current policy in Ontario is known as Policy/Program Memorandum No. 138: Daily Physical Activity (DPA) in Elementary Schools. It involves twenty minutes of moderate to vigorous physical activity every school day and is to be planned during instructional time, with a warm up and cool down component; however it must not replace teaching the health and physical education curriculum (Ontario Physical and Health Education Association, 2006).
The purpose of this phenomenological and narrative study is to investigate how teacher’s personal identities influence their implementation of physical activity throughout the school day for elementary school children. Moreover, gaining insight as to how students living skills and motivation are affected by daily physical activity.

**Purpose of the study**

As a result of the growing physical inactivity concerns in Canada the Ontario Ministry of Education (2005) introduced Policy/Program Memoranda No. 138 which mandates that all elementary schools in Ontario must do their best to ensure their students participate in twenty minutes of physical activity every day; however recent public health research has found that “fewer than half of participating children were provided with DPA every day and not a single child engaged in sustained moderate to vigourous activity for twenty minutes or more” (People for Education, 2013, p.7). This is partly due to the fact that in the field of education, academic content overpowers the time for DPA since the curriculum is very rich in content and teachers battle time constraints (Patton, 2012). However, as an effort to recognize the importance of physical activity at school, Premier Kathleen Wynne announced an initiative to help and recognize schools achieve sixty minutes of physical activity a day (CBC News, 2014). This initiative is lead by Active at School, and the Ontario Physical Health Education Association (OPHEA), but also includes other partners such as ParticipACTION, Active Healthy Kids Canada, Canadian Olympic Committee, Maple Leaf Sports and Entertainment, and Canadian Tire Jumpstart to name a few. It will strive to develop programs, and provide advice to promote 60 minutes of physical activity a day. Furthermore Active at School will recognize teachers, principals, students, and parents who encourage physical activity at school (Active at School, 2013; Office of the Premier, 2013).
attention to the greater need of gathering data regarding the implementation of physical activity within the school environment.

Furthermore, literacy is a term used in academic subjects such as language arts, math, and science to define students who can identify, understand, interpret, and create printed and written materials (UNESCO, 2005 as cited by Corlett, and Mandigo, 2012). If this definition is carried over to the physical education world it is defined as physical literacy which is the “ability to move with competence in a wide variety of physical activities that benefit the development of the whole person” (Higgs, Balyi, Way, Cardinal, Norris, and Bluechardt, 2008 as cited by Corlett, and Mandigo, 2012, p. 27). In order to achieve physical literacy, schools provide an ideal avenue for the holistic development of children, and DPA is an optimal opportunity.

In this view, the goal of this research is to learn how teachers who have an exceptional background in physical activity apply this into their school environment. This includes methods used before, during, and after school both in informal and formal settings, which involves classroom spaces, extra-curricular activities/clubs, recess, and sport teams. However it should be noted that DPA is to be implemented during instructional time but opportunities outside of instructional time also promote holistic development, learning, and healthy schools. Therefore for the purpose of this study formal will be used to define DPA strategies used within instructional time, and informal will be times and spaces outside of instruction. Altogether, these best practices will be shared within the education community in order to dispel aspects that set aside DPA from academic content.

Researchers Background

My desire for physical activity has derived over the course of my life. Growing up I have always been involved with sports, and physical activity, thus physical education has always been
my favourite subject in the curriculum. That is why I completed my undergraduate degree in Kinesiology and Health Science and through those years I focused on children’s pedagogy relating to sport and physical activity and that is what I found the most engaging and applicable research and knowledge for myself. The Daily Physical Activity Policy enables me to combine my interests of advocating for children’s physical activity, and student learning in the curriculum.

In addition to being highly active as a child I carry this passion for physical activity and sport participation into the community and recreation division. I am a fitness trainer, I have worked as a children’s sport camp director and leader, and I am a former varsity athlete having played ice hockey at the university level. Furthermore, I am also involved with the Toronto 2015 Pan/Para Pan American Games as a Youth Advisory Council member. These experiences highlight my personal identity through sport and physical activity. As a result, my experiences with sport and physical activity allow me to see the positive role in development it plays in a child’s life and I can draw upon many examples using myself and peers. For example, being a part of various types of teams has pushed me to stay in school, create lasting social relationships, taught me about teamwork skills, time management, perseverance, and commitment. Furthermore, goal setting in sport has carried over to many facets of my life. As I reflect, I realize these are all part of Ontario Ministry of Education’s Health and Physical Education curriculum as living skills. (Ontario Ministry of Education, 2015). In addition my participation in sport and physical activity has exposed me to much diversity. My active lifestyle exposed me to individuals who were of different races, ethnicities, class, and abilities and this enabled me to view different socio-cultural perspectives in sport. Those are among the many aspects that display how sport and physical activity has impacted my life, my peers, and the children I have
been involved with. With this reference I believe that sport and physical activity plays a large role in developing living skills, and holistic development.

In addition to working at camps and my involvement in sports I have also used my practice teaching as an opportunity tool to integrate lessons with DPA. Some examples I have used include: “Rock, paper, scissors multiplication”; in this whole class activity students start in one corner where they rock paper scissors with another student, and display a number on their hands using their fingers. The students then proceed to multiply the numbers together, and whoever answers first correctly advances to the next corner by a dictated type of motor activity. The other student waits in the corner performing an exercise (for example jumping jacks) until another student reaches the corner to repeat the activity. The goal of the activity is to make it around the classroom as many times as possible within a set time frame. Another minds on active lesson I have used is “division and multiplication atoms” in which the students move around the classroom performing various loco-motor movements (skipping, hopping, crab walk, etc.). The teacher then calls out a number and students have to get into groups of that number. When in their groups they have to figure out the division sentence, and/or the multiplication sentence for the class, and possibly if there are remainders. To hold students accountable the teacher records their answers. These games that integrate DPA with diverse subject content are examples of how to combat the “time barrier” many teachers experience and often list as a reason why they do not implement DPA (Patton, 2012). They also can be implemented as great minds on activities, and facilitate students’ use of mental math strategies. Finally, reflecting on my practice I enjoy these lessons, and the smiles, comments, and repeated number of times I have been asked to repeat the game signify that my students enjoy them as well.
Fortunately since I have been engaged with children for numerous years in a mostly sports and physical activity setting, I have been privileged to see the joy and energy that children can exhibit when actively engaged; it is one of my goals to bring this passion to the classroom. My research will unpack how teacher’s personal identities influence how they implement physical activity in the school environment, and how they see it to impact student living skills, and motivation.

Central Research Question

The guiding question for my research will be: How does personal identity influence a sample of elementary teachers daily physical activity practices through an integrated curricular approach that includes both formal and informal instructional time and spaces?

Furthermore, this central question will be supported by the following sub-questions:

- How do these teachers integrate physical activity across subject areas?
- What do these opportunities for learning look like during formal and informal instruction time as well as outside of classroom space?
- What impact do these teachers perceive their instruction to have on students learning motivation and engagement?

Overview

Chapter one includes the introduction and purpose of the study, the research questions, as well as how I came to be involved in this topic and study. Chapter two contains a review of literature particularly looking at the current state of physical activity in schools which entails Policy/Program Memoranda 138 – Daily Physical Activity in Elementary Schools (PPM 138), teacher’s opinions, implementation strategies, and the known benefits that physical activity has on children in the classroom. Chapter three provides the methodology and procedure used in this study which includes information about the participants, data collection instruments, how the
data was analyzed, as well as the strengths and limitations in the methodology. Chapter four presents the findings and describes the data as it addresses the research question. Chapter five includes the discussion with implications of the study as it relates to the researcher, and the education community, as well as the connections to literature, recommendations for practice, limitations of the study, and future questions for research. Following at the end, is the references, appendices, and tables.
Chapter 2 – Literature Review

Introduction of Daily Physical Activity

In 2004 Ontario’s Chief Medical Officer Dr. Sheela Basrur released the Healthy Weights, Healthy Lives health report where she states “the number of obese children in Canada between the ages of seven and thirteen tripled…many young people do not have the opportunity to be physically active every day” (Chief Medical Officer of Health Report, 2004, p. 2). These trends signify that obesity is becoming a childhood epidemic (Ontario Health Association, 2015). With this information Dr. Basrur made a call to all levels of government which required the collaboration of the health sector, food industries, workplaces, schools, families, and individuals to change all factors that contribute to unhealthy weight (Ontario Ministry of Education, 2005). As part of this process Policy/Memoranda 138 (PPM 138): Daily Physical Activity in Elementary Schools, Grades 1-8 was introduced in October 2005 (Ontario Ministry of Education, 2005) which further contributes to a framework for healthy schools in Ontario (Ontario Ministry of Education, 2014).

The implementation of PPM 138’s goal is to foster a healthy school environment, while having a positive impact on academic achievement and a student’s readiness to learn (Ontario Physical and Health Education Association, 2006). It further combats inactivity and sedentary behaviours by providing students a unique opportunity to learn, while creating a total learning experience which embodies holistic development (Ontario Ministry of Education, 2005; Gaus & Simpson, 2009).

Equally as important as physical benefits, academic goals are an essential component in the DPA policy, and it should not be overlooked by educators and the administration (Vazou & Gavrilous, 2012). They continue to state that motivation for academic subjects can be shaped
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by physical activity (Vazou & Gavrilous, 2012). Integrating the two can increase a student’s intrinsic motivation for academic achievement and physical activity participation. Intrinsic motivation is defined as engaging in something for enjoyment and interest while extrinsic motivation is defined as engaging in something due to pressure or the possibility of reward (Ryan, & Deci, 2000 as cited by Vazou, & Gavrilous 2012). This is important because, according to self-determination theory, intrinsic behaviours align with increased levels of perceived competence, positive academic achievement, and other adaptive motivational outcomes (Boiche, J. C., Sarrazin, P.G., Grouzet F.M., Pelletier, L.G., & Chanal, J.P. 2008 as cited by Vazou & Gavrilous 2012). Furthermore, individuals who are more intrinsically motivated experience enjoyment, better concentration, persistence, a sense of competence, and are likely to exert more effort during lessons with less pressure (Castelli, & Ward, 2010; Vazou, & Gavrilous, 2012). If educators provide students the opportunity to engage in activities that promote competence and confidence it is likely that they will be more motivated to participate in such activities. The benefits associated with DPA are important information for educators to know as it directly pertains to student learning. As a matter of fact, motivation and enjoyment are listed in Ontario’s Health and Physical Education Curriculum in the Active Living strand which are all connected to living skills (Ontario Ministry of Education, 2015).

Physical activity serves as a motivator for academics with students; however as students’ progress throughout the school years, their intrinsic motivation declines (Digelidis, & Papaioannou, 1999 as cited by Vazou & Gavrilous, 2012). Academic intrinsic motivation is more malleable between the ages of nine and eleven, and beyond thirteen the ability to shape student’s motivation decreases (Cox, Smith, & Williams, 2008 as cited by Vazou & Gavrilous, 2012). Stone et al. (2012) states that the goal of DPA is “to enable all elementary students to improve or
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maintain their overall health and wellness” (pg. 170). Elementary education offers a unique opportunity for consistently implementing DPA because teachers have their students for most of the day, whereas secondary school teachers are on rotary and see their class for one period at a time. This makes implementation of DPA at the secondary level more difficult. An issue that arises is that Canadian guidelines state that children need to attain 60 minutes of physical activity a day (Canadian Society for Exercise Physiology, 2014). DPA provides an avenue to help achieve this goal, but may be insufficient for children to achieve the recommended guidelines (Robertson-Wilson & Levesque, 2009). With this in mind it is important for schools to achieve the minimum amount of DPA.

It is believed that a healthy school will foster positive learning outcomes (Ontario Ministry of Education, 2005) therefore educators and administration need to strive for successful implementation. This is why Ontario has revised The Foundations for a Healthy School to focus on the whole child’s development which includes their cognition, emotional, social, and physical development. There are five areas that contribute to a healthy school which are: curriculum, teacher & learning, school & classroom leadership, student engagement, social & physical environments, and home, school & community partnerships. Of the five areas PPM 138: Daily Physical Activity in Elementary Schools falls under school & classroom leadership since this area involves implementing school policies (Ontario Ministry of Education, 2014).

The Current State of Physical Activity programs in Schools

As previously mentioned in the introduction academic material often prevails over implementation of physical activity programs in schools (Patton, 2012) even though the majority of schools have the resources to implement quality physical activity lessons and programs, yet about half of Ontario schools have fully implemented policies to support daily physical activity.
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for students (Active Healthy Kids, 2014). Qualitative research performed by Robertson-Wilson and Lévesque (2009) investigate the implementation of PPM 138 using a framework developed by Hogwood and Gunn (Hogwood and Gunn, 1984 as cited by Wilson, and Lévesque, 2009). This model identifies ten preconditions that are considered important for perfect implementation of policies (Roberston-Wilson, and Lévesque, 2009) and it is displayed in Appendix C. Perfect implementation of a policy is difficult and this research addresses the gaps for each pre condition as it pertains to PPM 138. In this model Hogwood and Gunn list precognition 2: “that adequate time and sufficient resources are made available to the programme” (Hogwood and Gunn, 1984 as cited by Wilson, and Lévesque, 2009, pg. 126). As it pertains to PPM 138 Robertson –Wilson, and Lévesque suggest resources, facilities, equipment, and qualified personnel for DPA implementation may not be satisfactory.

Precondition four and five strongly focus on utilizing a cause and effect approach to the theory suggested by the Ontario Ministry of Education: “The goal of DPA is to enable all elementary students to improve or maintain their physical fitness and their overall health, and wellness and to enhance learning opportunities” (Ontario Ministry of Education, 2005). As mentioned in the previous section, the policy strives for students to achieve twenty minutes of physical activity a day; however the Canadian Society for Exercise Physiology recommends that positive outcomes would increase if partnerships are created with organizations, parents, and public health units (Roberston-Wilson, and Lévesque, 2009). This is also reflected in the Ontario’s Healthy Schools Framework as one of the four pillars for a healthy school under community partnerships where it is encouraged that schools work with community partners to build an overall healthier community (Anonymous, 2010). Furthermore, each person’s role needs to be made explicit and all objectives must be articulated, and finally effective communication
should be used that information is disseminated from the Ministry to the school board and to the schools. (Roberston-Wilson, and Lévesque, 2009). The next section will consider teacher’s opinions regarding physical activity in their schools as it relates to the Daily Physical Activity Policy.

**Teachers Opinions of Physical Activity in the Classroom**

DPA has not been a priority for classroom teachers, it has been viewed as a burden; despite the many benefits it has the potential to accomplish academically (Patton, 2012). This is because teachers face dense curricula to cover throughout the school year, and competing curricular demands have been found to be barriers to DPA (Patton, 2012). Furthermore, time constraints have been listed as the biggest barrier to DPA delivery; this is due to the fact that some teachers view it as an impediment for instructional time allotted for academic subjects (Patton, 2012). Therefore, physical education, and policies like DPA are not perceived as valuable subjects among teachers in schools, they are often minimized or completely absent (Vazou & Gavrilous, 2012). In the United States there have been reductions in physical activity opportunities due to budget costs and increased academic accountability (Gaus, & Simpson, 2009). Recently, in 2013, Ontario experienced a teacher strike resulting in a ban on extra-curricular activities within the school. These situations underscore the lack of priority given to physical activity within schools; this raises questions regarding the importance of commitment to DPA by school administrators.

Further studies have been conducted to investigate the factors that influence teaching practices: For example, a study conducted by Cothran, Kulinna, and Garn (2010) found that there are three presses or factors that influence teaching practices: 1) stakeholders such as parents, administrators, colleagues, and students, 2) how the teacher’s own values relate to teaching,
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learning, and their students, and 3) institutional standards set forth by professional organizations, including the curriculum, and standardized testing. They interviewed twenty-three teachers from ten schools and found that stakeholders and factors at the personal level were positive factors for physical activity implementation (Cothran et al., 2010). These teachers were interested in the holistic well-being of their students, and were committed to motivating them academically. They also held strong personal values related to health and fitness (Cothran et al., 2010). For example, teachers with a strong background in physical activity and health were found to more likely implement DPA into their classrooms, as they share that passion for movement, and can relate to it personally (Cothran et al., 2010). Personal values also encompass teacher identity; and this is important when making an educational change (Cothran, et al., 2010; Fletcher & Termertzoglou 2010). Also, the desires and beliefs of educators and administrators play an important role in the implementation of DPA (Robinson, D.B., & Melnychuk, N.E., 2008). Even though stakeholders, including administrators and teachers, are a positive influence, further support of these individuals is required for changes in daily schedules, curriculum, and professional development to train teachers how to safely and appropriately implement DPA (Castelli, & Ward, 2012). In order to be taken more seriously, it is also important that teachers be held accountable for implementing DPA in the classroom just like other academic subjects because it is built into the curriculum (Chorney, 2009).

In comparison, negative factors that affect teachers implementing DPA were found to be at the institutional level (Cothran, et al., 2010). Time is the largest barrier for implementing DPA and the magnitude of its effect is higher in high school where teachers spend less time with their students (Cothran, et al., 2010). Teachers also face the urgency to meet academic standards, and therefore teach what is necessary for their students to meet grade level for standardized testing.
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(Cothran, et al., 2010). Although there is a significant amount of curriculum material to cover, it is possible for classroom teachers to integrate DPA into their classroom in order to maximize learning time (Castelli, 2012).

As described previously, time has consistently been reported as the main reason for inhibiting DPA. Patton (2012) surveyed teachers from The Thames Valley District School Board in Ontario to view their perspectives on DPA. He found that over half the teachers in this region reported rarely or never having time to conduct a DPA program, with 45% reporting they do not have enough time to plan DPA on a regular basis. Time does not only effect instructional time but also the teacher’s planning and prep time throughout the school day. Furthermore, space constraints are problematic when trying to conduct DPA activities and active learning (Patton, 2012). In addition to space and time constrictions Patton (2012) found that teachers lacked knowledge in the DPA guidelines. These perspectives relate back to Robertson-Wilson and Levesque’s (2009) study which investigated the pre-conditions for successful policy implementation. In this circumstance pre-condition two is lacking which specifies the need for time and sufficient resources (Roberston-Wilson, & Levesque, 2009). Teachers need to be aware of appropriate developmental activities for their students to administer DPA with confidence (Robinson, & Melynchuck, 2008). This builds on Cothran’s (2010) research which demonstrates that factors at the personal level are a positive factor in the implementation of DPA. It would be useful to offer courses for student-teachers to learn strategies to carry out DPA into their future practices, as well as offering professional development for existing teachers to understand the importance of DPA into their classroom.

Although teachers face dense school schedules, many teachers would agree that DPA creates a better learning environment (Patton, 2012). Many of the teachers that Patton (2012)
interviewed enjoyed the freedom of incorporating DPA into their own schedules however if there was a specific institutional structure for delivering the policy, it would take away the planning burden (Patton, 2012). Administration needs to be on board for these changes to occur, and all of the stakeholders involved need to hold each other accountable, as the teachers play a key role in the success or failure of a new initiative (Robinson, & Melnychuk, 2008; Patton, 2012). Every subject in the curriculum has a minimum amount of time that needs to be addressed during the school week during instructional time. Physical education is set at 150 minutes per week and this includes DPA, therefore it is important to incorporate physical activity every day in order to reach the allocated time because the majority of schools are not meeting the required frequency or intensity of the policy (Patton, 2012; Stone, et al., 2012). Despite the difficulties in administering DPA, there have been various strategies that schools have used to integrate DPA into the school day; the next section will address samples of how DPA has been implemented.

**How physical activity is currently being implemented**

Physical activity can be integrated into the school day in numerous ways, and Ontario’s DPA policy is one that strives to create an opportunity. Moreover, it is important to allow students to have an opportunity to reset their brains after sixty minutes, in bouts of 5-10 minutes, however this fluctuates by age and teachers also need to gauge their students as to when they might be losing focus (Castelli, & Ward, 2012). An example of this would be the “Take 10” program which is based on ten minute physical activity breaks in the class (Vazou, et al., 2012). Another program is “Physical Activity Across the Curriculum” in which the goals are to change physical activity levels and increase children’s academic achievement (Vazou, et al., 2012). These programs, when appropriately implemented, can possibly create energizers in the classroom, and allow students to refocus. When integrated with the curriculum physical activity
has a small but significant effect on cognitive function and academic achievement. (Vazou, et al., 2012). Notably, a high school in Naperville provide a strong case study to demonstrate the powerful affects that physical activity has on learning. In this case study students were engaged in physical activity before class known as “zero hour” to increase their ability to focus and perform in school. What was very impressive was that these students were one of the fittest in the nation, but equally as important their student’s academic achievement significantly increased. Naperville’s eight’s graders took the TIMSS test (Trends in International Mathematics and Science Study) and finished first in science, and sixth in math, when prior results indicated they were outpaced by other countries (Ratey, 2012, 4:00).

Additionally, programs such as “Physical Activity Across the Curriculum” support research which states that most children would benefit from accumulating their physical activity in small bouts of various types of activities that range from organized sport, active play, and active transportation (Active Healthy Kids, 2014). Next, some schools have informal systems that take place outside of the classroom to help students increase their activity level.

Alternative approaches outside of the classroom have also been integrated into the school day to get students more active. As was previously stated, these approaches fall outside the DPA guidelines but still provide students the opportunity to engage in a healthy school.. Castelli & Ward (2012) examine the ways that physical activity has been incorporated outside of instruction time. One strategy is that there is an opportunity for physical activity upon arrival to school. These include breakfast programs with physical activity, broadcasting physical activity over the announcements to homerooms, having morning physical activity assemblies, or even providing children with the opportunity to do silent reading on a stationary bike or Swiss ball (Castelli & Ward, 2012). To facilitate more PA in the school day, recess and drop in times can be utilized.
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This would be informal physical activity in which the school can supply students with equipment, create activity zones, have playground markings, and teach students games that they can play at recess (Castelli & Ward, 2012). Although this research focuses on elementary students, some approaches at the secondary level include: fitness classes, and the ability to use a supervised weight room (Castelli & Ward, 2012). Teachers who value physical activity on a personal level can also take the initiative to set up formal programs for students such as intramural sports, or school tournaments that occur during recess. This involves students or teachers creating teams to play against each other and other schools. This will not only increase activity rates but also provide students the opportunity to create more peer relationships outside of the academic setting and build stronger relationships and rapport among teachers and students (Patton, 2012).

One strategy in the classroom during instruction time that Gaus & Simpson (2009) explore is using physical activity through kinaesthetic learning, where students can accumulate small bouts of physical activity and still reap health benefits if they reach up to sixty minutes a day (Blair, & Connelly, 1996 as cited by Gaus & Simpson, 2009). Some sample activities include: Geo-robes which “is an activity designed to help children recall the various vocabulary words” (Gaus, & Simpson, 2009, p. 90). In this activity students move their arms and bodies to shape the geographic terms. To be brief an example would involve students placing both hands on their head for the North Pole, and touching their feet for the South Pole (Gaus, & Simpson, 2009).

For math, students can participate in multiplication squares, a game designed as a way to review basic multiplication facts (Gaus & Simpson 2009). In this game students form four equal groups and arrange seats in a square with chairs on each side to equal the number of students in
that group. Each student is then assigned a number 0-9, and the teacher will then call out a
multiplication fact; if that student’s number is the correct answer the student must stand and
perform a loco motor skill (Gaus & Simpson 2009). For literacy, children can connect
movements and actions to literature by retelling stories using key words that focus on motor
skills and movement (Gaus & Simpson, 2009). Activities like this do not take away instructional
time and reinforce material through a different learning strategy; it negates the notion that
teachers lack the time to implement DPA outside of instruction time.

Overall, physical activity opportunities can be offered in and out of the classroom for
students. Inside the classroom it allows students an opportunity to reset their minds; it can also
serve as an incentive, to motivate students to be more academically engaged, as well as
differentiated instruction for targeting kinaesthetic learners. Outside of the classroom it provides
a great opportunity to reap further health and social benefits, as well as provides one component
of a healthy school.

**Known Benefits of physical activity among children**

The literature cites a range of benefits that accompany implementing physical activity
into everyday school life and classroom practice. Physical benefits include an increase in fitness
levels, reduced fat levels, lower BMI scores, and an increase in healthy behaviours (Patton, 2012;
Stone, et al., 2012; Vazou, S. et al., 2012). In addition, the students who experienced DPA
regularly were more likely to exhibit more minutes of moderate to vigourous physical activity
(MVPA) across the week inside and outside of school (Stone, et al., 2012). This literature
demonstrates the extent that DPA can indeed serve as a tool to foster healthy active living into
children lifestyles both in and outside of the school context. However, Stone et al. (2012) argue
that similar to academics, these behaviours need to be reinforced at home because in their
research, they found that children who engage in DPA every day of the school week had higher levels of physical activity levels than their peers who were not engaged. This statistic supports the notion that children can carry these behaviours outside of school contexts. DPA could possibly foster an avenue to extra-curricular involvement and participation on sport teams, since students are exposed to new and exciting activities they may not have been otherwise exposed to (Stone, et al., 2012).

The Physical Activity across the Curriculum program also found that students who participate in at least ninety minutes of MVPA per week outperformed students who performed traditional lessons. The brain structuring for these students has been found to be different compared to inactive children (Vazou, et al., 2012). This demonstrates the effectiveness of kinaesthetic learning. Specifically, in reference to John Ratey’s work (2012) he specifies that when we move “the CEO” the prefrontal cortex is turned on because more neurotransmitters are created and our brain’s readiness to log in information and grow increases. Furthermore, exercise helps executive function of the brain which includes skills such as: planning, organization, maintaining focus, learning from mistakes, initiating or delaying responses, evaluating consequences, and increasing working memory (Ratey, 2012, 7:50).

Further academic benefits have also been cited, including the findings that physical activity can have a small but significant positive effect on cognitive function and academic achievement (Sibley, & Etnier, (2003) as cited by Vazou et al., 2012). The students involved in this study experience what Lepper (2005) describes as a positive relationship between intrinsic motivation and academic achievement (as cited by Vazou et al., 2012). This motivation also stretches to include an increase in behaviours such as persistence, high effort, concentration, and a preference for more challenging tasks (Boiche, J.C., et al., 2008 as cited by Vazou et al. 2012).
Additionally, research by Vazou et al., (2012) found significant positive correlations between enjoyment, perceived competence, effort, and value demonstrating the positive psychological benefits of physical activity integration in the classroom.

In conclusion, there are several benefits of physical activity for children, since school is where students spend most of their time and have the most learning experiences; the environment is optimal for shaping students into healthy citizens, while reaping academic benefits.
Chapter 3 – Methodology

Nature of the Research

I conducted a qualitative research study that investigated how a sample of elementary teachers used formal and informal instruction to implement physical activity through an integrated curricular approach. The characteristics of this research shared both features of phenomenological and narrative approaches that Creswell (2013) describes in *Qualitative Inquiry and Research Design*. This study was considered narrative because it privileged the lived experiences of each participant involved in the study. Furthermore, the study investigated the phenomenon of teacher’s experiences implementing the daily physical activity requirement into their classroom teaching.

Semi-structured interviews were conducted in natural settings and information was gathered by talking directly to participants through face-to-face interaction (Creswell, 2013). In addition the researcher was the key instrument of data collection through open-ended questions that were self-designed (Creswell, 2013). After collecting this data, inductive and deductive reasoning were used, which included transcribing and analyzing each interview for common themes. Throughout this research study, the researcher focused the learning on the views of the participants. This required maintaining focus on participant’s views of DPA implementation methods. Finally, this research study used an emergent design throughout the course of study in order to account for flexibility and the dynamic changes that occur in the field of education.

Procedure

The procedure for this research was first approached by compiling and analyzing existing research and literature in the areas of physical education, and daily physical activity in school and learning environments. The literature review consists of sub-topics which include: the
introduction of Daily Physical Activity, the current state of physical activity programs in schools, teacher’s opinions of physical activity in the classroom, implementation strategies, and the known benefits associated with DPA. Next, the qualitative data was collected through face to face semi-structured interviews which reflect the current practices of three elementary school teachers. Notably, these participants were recommended from an administrator and school personnel for their strong commitment to physical education, and healthy living. These educators have a reputation for applying these behaviours in the school environment through formal and informal daily physical activity sessions, extra-curricular activities, and/or field trips, or have demonstrated leadership in this area in their schools or boards. After interviewing the participants, specific aspects of data were coded for themes that align with the research question until specific themes were identified. Finally, the findings were connected to the literature and implications of the study were identified.

**Participants**

The participants involved in this research study included three elementary school teachers. The interviews were conducted using a qualitative method to obtain an in-depth focus on how these three teachers implement Daily Physical Activity through an integrated curricular approach that includes both formal and informal instructional time and spaces.

In order to explore the research topic and collect data, purposeful sampling was used so that all participants share similar characteristics. This means that the participants selected for interviews were chosen based on the following criteria: The teachers must be from an elementary, have experience implementing Daily Physical Activity into their classroom or school, and are willing to share their experiences. Also it is imperative that the participants selected demonstrate leadership and commitment to the inclusion of DPA in the classroom by
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personal values consistent with healthy active living, or by consistently scheduling DPA appropriately in the classroom. Appropriate is being defined as twenty minutes of moderate to vigorous physical activity on days in which the students do not have physical education class. Other examples that demonstrate leadership in this area include facilitating professional development for colleagues in their school or the school board, running extra-curricular clubs, and starting initiatives in the school or partnering with community organizations.

In order to maintain anonymity of participant’s pseudonyms will be used. One participant who will be identified as Jenn is a teacher of physical education, art, French, and covers DPA planning time. She teaches at a Kindergarten to grade 8 school that has a set DPA period for the entire school. Growing up Jenn and her family has always been involved with sports from a young age, therefore physical activity has always been a part of her life. Next, Erica is a grade six homeroom teacher who also teaches physical education to her class and two other classes at a middle school for grades six, seven, and eight. Growing up she danced competitively and holds strong values towards health and fitness. The final participant was Nicole who currently teaches grade seven, and has experience teaching Kindergarten to grade seven, she is also situated at a middle school for grades six, seven, and eight. Her experiences with physical activity are also sports related as she grew up playing sports, especially fast pitch softball where she received a scholarship to play at the university level.

**Instruments of Data Collection**

The instruments used for data collection in this research included semi-structured interviews with three consenting participants. The interview questions were targeted towards each participant’s encounters with implementing physical activity at both the primary and junior
levels in the school environment, as well as personal values consistent with healthy active living.

The interview questions are listed in Appendix B.

These open-ended questions allowed for discussion between the researcher and participants (Creswell, 2013) to reflect on how physical activity has been implemented in their school as well as its effect on students learning, motivation, and engagement. Furthermore opinions relevant to the Daily Physical Activity policy were discussed. The reason for using this type of questioning is so that each participant’s opinions, strategies, and personal values are considered and to allow additional questions and discussions to emerge with new ideas and themes.

**Data Collection and Analysis**

In order to collect data from the semi-structured interviews I used a voice recording App called “Voice Recorder Pro” This App enabled me to slow down and pause while I transcribed. Upon having collected the data through semi-structured interviews, I transcribed each interview’s questions and responses. The set of data was read several times over. I looked for themes, patterns, and interesting statements that were in line with my research question. Then I proceeded to plot my codes into chart format with supporting quotes that the interviewee stated. After identifying several codes I focused on three over-arching themes which included barriers, benefits, and implementation strategies. These themes will be further discussed in chapter 4, as either direct quotes or paraphrased.

The aspects investigated throughout the duration of the interview and transcribing process focus on those methods of practice and implementation of physical activity throughout a school day, specifically investigating the perceived barriers and benefits associated with the DPA policy. Furthermore the use and effectiveness of physical activity on student’s living skills
specified in the Ontario Health and Physical Education curriculum are examined, as well as the motivations, and engagement within the school environment. Each of these aspects are directly linked to the research question “How does personal identity influence a sample of elementary teachers daily physical activity practices through an integrated curricular approach that includes both formal and informal instructional time and spaces?”

**Ethical Review Procedures**

In order to ensure that ethical review practices were evident throughout the duration of this research, and interview process, the ethical review procedures that align with the Master of Teaching program at the University of Toronto was utilized. This was to build trust between the researcher and participant so that their needs and concerns were considered and addressed. To begin, written ethical consent was first obtained and both the participant and the researcher obtained a copy (See Appendix A for Consent Letter). Subsequently, the participant received a full explanation of the study, and was informed of the interview procedures which consisted of a 30-60 minute duration that was audio recorded, at a place of the participant’s convenience. The participant was also made aware that their identity will remain confidential, and their name will not be used at any point in the research, presentations, or publications. They were also made aware that they may choose to withdraw at any time even after consenting, and were entitled to decline answering any questions. Additionally each participant was also informed that there are no known risks or benefits for their involvement in the study, their participation will be acknowledged, and they are entitled to a copy of the researcher’s notes to ensure accuracy.

**Limitations**

This Master of Teaching Research Project is conducted for the purpose of gaining insight on strategies and practices that teachers and administrators are currently using to implement
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DPA into the school day, both in and outside of the classroom. The study itself had some limitations, one being that it focused on gathering insight from participants in one school board, the Peel District School Board. The reason participants were selected from one school board was due to time constraints, and for the convenience of the researcher. This puts into question the variability of the data across Ontario. Nevertheless the insights of these educators are relevant and valuable sources for the purpose of this research study.

Another limitation is that there were a limited number of participants, and they each have respective bias in favour of physical activity, and healthy living. The literature review reveals that teachers have different opinions and attitudes towards the DPA policy. However, when selecting interview participants, those that were chosen reflect the population committed to DPA. The reason these participants were selected was because they are committed to implementing Daily Physical Activity into their everyday practices, and thus provide the most opportunity to learn how to appropriately and efficiently implement the Daily Physical Activity policy.

Due to the scope of the research, other limitations include the fact that students were not interviewed or spoken to, and there were no classroom observations. Hearing student’s firsthand experience and witnessing physical activity in the school would be beneficial in order to gain insight with respect to how it effects their motivation, engagement, as well as the student’s view of teacher’s DPA delivery in the classroom. Furthermore, as discussed in the literature review children are more active when involved in active play opposed to structured programs (Active Healthy Kids, 2014). Keeping this in mind, it would be beneficial to gather the insight of children to see if they are active at times of the day without their teacher to see how living skills transfer is different environments.
Strengths

Although this research did not allow for student opinions and observations, the educators conveyed their passion for DPA through their interview. Thus, it was rich in narration and description. This study provided the selected participants the opportunity to share their DPA strategies so that teachers can reflect on their practices and spread insight of the benefits regarding DPA in the school environment. With this intention, this research study described the process of DPA implementation through detailed explanations versus simply the outcomes of statistics as quantitative research would unfold. In addition, the voice of the participants provides strategies and ideas to other educators for integrating physical activity into the school day in both informal and formal time and spaces. This is valuable as past research studies have reported that teachers consistently view time as a barrier to delivering appropriate DPA lessons (Cothran et al., 2010; Patton, 2012).
Chapter 4 – Findings

Introduction

In this chapter I present findings based on the interpretation of qualitative data from three face to face interviews with elementary school teachers within the Peel Region. All participants have had at least two full years of teaching experience and at the time of the interviews all participants worked in various grade levels to contribute data across the primary and junior years. Currently, all three participants are physical education teachers as well as classroom subject teachers.

The purpose of this research was to gather information on DPA programs using a sample of elementary school teachers who carry strong personal values towards health and physical education. Moreover, as well as how do these teachers implement physical activity across subject areas, and what impact is physical activity perceived to have on students learning, motivation, and engagement.

The findings resulting from the interviews provide insight to elementary school teacher’s views, practices, beliefs, and understandings of DPA in their current school.

Key Themes and Findings

The analysis of the interview data presented three key themes shared between the research participants as a result of their experiences, and beliefs specifically relating to the Daily Physical Activity policy. The key findings of this research are the following:

- Teachers perceive systemic and professional practice barriers that impede their implementation of the DPA policy as per the recommended guidelines.
- School staff recognize there are many perceived benefits when physical activity is used in their classroom.
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- Through formal and informal opportunities teachers can implement meaningful DPA time for the duration a child is at school.

Finding 1: Teachers perceive systemic and professional practice barriers that impede their implementation of the DPA policy as per the recommended guidelines.

**Systemic Barriers**

Systemic barriers are areas external to the teacher and in the school environment that affect their ability to facilitate daily physical activity. The areas that were identified include time, space, equipment, and resources.

First of all, time was reported as a significant barrier among all three teachers. Jenn’s school has DPA scheduled in it, and every day at the same time the bell rings to indicate that the next twenty minutes are allocated specifically for DPA. Part of Jenn’s job is to go around to different classes at this time and relieve teachers for their planning time and facilitate physical activity with their classes. Although this period is specifically for activity some classes will opt out of DPA participation at this time specifically if the class has or will have physical education in the same day. Although that is one exception, Jenn has run into circumstances when other teachers have said they need that extra period as work time. She explains that “You get a handful of people who just need that extra period for the day or week.” She describes the DPA period as temptation time:

“When it’s made available to you…that DPA time…and you’re teaching throughout the block, and before and after it, then you might not use DPA time for DPA. It’s tricky, it’s like a temptation time, like you know you shouldn’t use DPA for anything else but when it’s there and you need it, you do.”
Sometimes despite Jenn’s best intentions to implement a full DPA program in the school day with a class, the time constraints that affect homeroom teachers also affect her delivery of DPA with that class. For example she describes that when she goes in to deliver DPA she is faced with the fact that the homeroom teacher will be wrapping up a previous lesson by using the last or first 10 minutes of DPA to clean up because the lesson didn’t finish. Very often academic material takes precedence over DPA and she is faced with this contention when she goes in for planning time. She describes facing situations such as:

“Another struggle is that …if something is a higher priority they will have the kids work on something even when I go in to teach them, and they’ll say “do you mind if they just finish this,” and of course I’m not going to say no, but sometimes I do say. “You know okay I’ll give them five more minutes and then we’re going to pack up because we need to be active for 15-20 minutes.”

She tries her best to deliver the best program outlined by the policy requirements while realizing and respecting homeroom teacher’s wishes and values for what is described as competing academic curricular demands. Jenn’s experience is unique compared to the other two participants in this study because she has DPA time allocated at her school.

Erica and Nicole are homeroom teachers while also teaching physical education to other classes in their school; they share time constraints in their homeroom classes that emulate Jenn’s responses. For instance, Erica states that “Timelines happen I have gazillion math concepts to teach, sometimes we are not going to get out…You have EQAO scores that need to be up, we’re sending kids to grade 8 that can’t read, where is your time better spent?” The curriculum has many strands to cover in an already dense year; she specifies that sometimes she finds the struggle deciding whether to use that twenty minutes of time for activity or reading because the
student is not where they need to be. Yet, there is much research based evidence that states that increased physical activity, or short bursts of physical activity such as DPA contribute to increased attentiveness, student achievement, and positive mood behaviour (Sibley, & Etnier, (2003) as cited by Vazou et al., 2012).

Nicole also echoes the importance that standardized tests invoke a high dependency of class preparation. She explains that “if you have EQAO you have that entire math curriculum to get through by the end of May so that 20 minutes a day adds up.” These comments demonstrate that the most importance is placed on literacy and numeracy and this is reflected not only in the school environment but also in parental views as well. The participants announce that parents place more importance on their child’s math, literacy, and science scores and would prefer their child to be sitting and learning rather than engaged in an active learning experience outside of the classroom.

Furthermore time constraints and DPA implementation are reflected in reporting student achievement. While Nicole is a physical education she still has insight to other teacher’s views on facilitating the policy, she states:

“We often get so built up with the amount of curriculum we have to cover, and then for there to be curriculum expectations that are not part of the subject areas we need to report on. It ends up being one of those; bit of those extras, that you do see the benefits of it but there not the explicit checks off the curriculum we have to cover”

Furthermore this finding articulates that classroom and specialty subject teachers find it difficult to teach specific subjects and incorporate DPA because it’s not something they are going to be able to reflect in their report cards. However this is an incorrect assumption because
as stated in the policy “School boards and principals should also take appropriate action to ensure that parents are kept informed of their children’s participation in these activities” (Ontario Ministry of Education, 2005). Thus, if a student has physical education scheduled twice a week, the student’s active participation in the three days of DPA should contribute to the overall grading.

This piece of data was particularly interesting because it indicates an alternative view to time constraints apart from the academic precedence, it highlights that some schools do not adhere to this policy. It is of utmost importance that student’s achievement is documented and reported for continued learning.

Next, space was another systemic barrier which impacted DPA. Factors that contribute to space included accessible spaces in and around the school, on the playground, and also when the weather is a factor for effective use of outdoor spaces at certain times in the school year. Jenn explained she is in a unique situation at her school since it was just built and the students moved in this year. There are many factors around and within the school that affect her DPA practices. First of all she identifies there is no playground built yet, as well as no markings or paintings on the pavement for students to play games. She finds the lack of playing space an interruption for safe and meaningful daily physical activity.

Furthermore, access to the gym is something she wishes to have more of; she explains that “not having the gym is probably my biggest barrier...and that space is probably a huge barrier for everyone” Although classroom teachers can book out the gym for activities there is not enough gym space accessible for all classroom teachers. As a result she specifies that if teachers can’t book out the gym or go outside because of the weather their class doesn’t participate in DPA, but Jenn has a background in HPE education and can usually be creative
when space is limited. These views are shared with Erica who states that as long as you know enough about physical activity you can develop strategies to get your kids moving. Erica has a strong background, and personal values ties to health and fitness which gives her the confidence to implement physical activity with her class. Thus, Erica and Nicole did not describe physical space as a huge barrier. This is also because their school is privileged with two gyms, and a lot of field space. However environmental factors such as the weather impede their ability to go outside but the largest physical space barrier for them would be trying to facilitate activity inside of a portable. As a school that goes up to grade eight the students are more mature and this causes some problems but Nicole states it’s not a large issue because you can move desks around with them to create the space. There are some spatial barriers for the participants in this study however they are able to diffuse these barriers, because they have professional development and background knowledge of how to effectively implement physical activity for their student’s appropriate level of development.

The next systemic barrier that emerged was equipment. Jenn mentions that she is in a new school that still has work to be done on the playground but they also do not have equipment such as basketball nets outside for students to play with yet. Her situation is unique compared to Erica, and Nicole, however all three participants share the same concerns about lacking equipment specifically to engage their class in DPA activities. All three participants share similar concerns of equipment issues that hinder an ideal DPA program. For example Jenn expresses: “The Phys. Ed equipment is not made available to homeroom teachers because there have been so many issues with equipment going missing, equipment being kept in classrooms and then not being available for lessons in the gym.” Erica expresses similar concerns regarding equipment “Another reason why DPA doesn’t run as well as it could is because equipment…it’s not that we
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don’t have equipment it’s that equipment always goes missing, so I literally don’t have any equipment.” Finally Nicole mirrored Erica and stated her concerns that what equipment is readily available affects her implementation of DPA. She also states that she needs more resources and equipment. This is interesting to me as a researcher because previous comments reflect that teacher’s knowledge affects their activity choices more than equipment. This idea will be further articulated in the discussion.

Furthermore, as physical education teachers they make it very explicit that the physical education equipment should not be taken out for DPA. The equipment for Phys. Ed is specifically for those classes because the teacher has planned their activities for the class. An interesting finding includes the fact that DPA and physical education are mandated together, however it was found that the budget for physical education resources are sometimes not allocated towards DPA. Erica notes that: “So that is there from the Phys. Ed budget usually (referring to PE equipment), and that does not go out for DPA” This is found to be concerning because it shows that schools may require more budget directed towards physical education in order to provide teachers the appropriate resources to deliver a DPA program that meets the Ontario Ministry of Education’s requirements. They all voice that schools needs to allocate some budget amount towards more equipment that can be used for Daily Physical Activity. All three participants explain that they make use of what they do have available but other teachers lack the PE knowledge required for some specific Phys. Ed equipment to deliver games, and activities.

Additionally, other barriers were brought up that reflected the students. Generally the student’s love DPA however there are times when it’s difficult to run with students. Particularly, when the games can’t run themselves, Jenn’s first experiences teaching DPA were difficult and she quotes “I can see it being hard like I struggled a little more with DPA because I taught DPA
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last year as well, and it was hard to get them engaged if there were games that essentially
couldn’t run themselves or the kids didn’t feel responsible for them” and that sometimes

“There is also the odd time when a kid doesn’t want to participate, maybe they just had
Phys Ed, it’s hard to get them to …like sometimes they want to play the game they were
just playing in the gym so that’s hard...and sometimes it’s always a little harder to get the
females involved.”

Student engagement is a topic that will further be discussed in this chapter, as well as in the
discussion.

**Professional Practices related to self-identity**

Professional practices related to teacher’s self-identity were also identified as a barrier for
facilitating daily physical activity into their student’s lives. The practices are reflected by
teacher’s personal values, and their knowledge related to personal health and knowledge of
physical education.

First of all personal values and self-identity are presented as how an individual perceives
physical activity to be meaningful in their lives, how it influences their facilitation and
involvement in daily physical activity within the school environment. All three participants
value healthy active lifestyles from their childhood to their current state as a teacher. Two of the
three participants participated in sports as a child and are comfortable with their own physical
literacy skills to participate and involve their students. Nicole approached her passion for
physical activity through a different vehicle and that was dance. Her involvement in dance
supports her development as a physically literate individual that is comfortable implementing
DPA with her students. Since all three participants value physical activity in their own lives they
strive to make it regularly a part of their students’ lives. Although the participants in this research
have a strong personal identity related to healthy active lives they empathize with other teachers who do not share the same vision. Erica voiced that “if you do not have an interest and passion in it, you’re not going to make the effort to do it.” Her comments are supported by Nicole who commented “I think that as much as we’d like to think that all teachers’ kind of live and model a healthy active lifestyle, they don’t and I think it makes it a little difficult for those teachers.”

Personal identity plays a large role in how teachers deliver their program and this can also be echoed at the administrative level. Jenn mentioned that her school has a twenty minute period allocated for DPA and because of that DPA gets pushed at her school since her Principal values it. Although personal values and identity are barriers, the teachers in this research provided strategies so that all students in the school get the same quality DPA program. Nicole mentions that for a quality DPA program a school requires that “all teachers need to come together and figure out how we are going to do this as a school so that all the kids are getting the same kind of quality DPA, and I think it takes a lot to teach those teachers the value of it.” This is a very powerful quote that supports the importance of people’s beliefs for systemic change. Every teacher has their own philosophy of education and it might be difficult to reconstruct some teachers’ teaching strategies, but there are ways to provide students the opportunity for the same quality physical activity programs. For instance, Jenn, Nicole, and Erica work in separate schools however the strategy Nicole and Erica suggests for their school reflects strategies used in Jenn’s school. The suggestion is that teachers who are exceptional in physical education or even whom have strong personal values tied to physical education would cover planning time for other teachers. They also suggest that the school could have a rotating schedule in which the school would participate in school wide DPA at different times of the day so that classes can combine and teachers who value DPA can facilitate activities with the classes while the other teacher is
supervising. For the participants in this research these strategies help to negate some of the barriers tied to personal values that impede the implementation of DPA.

**Professional Practices related to Knowledge**

Moreover, all three participants in this research have a keen interest in physical education and are very knowledgeable in the subject matter. However different values and philosophies of education carry different exceptionalities in other subjects but may lack competency and confidence in physical education. The barrier lack of knowledge emerged from this research’s data and it coincides with personal values. Each participant in this research voiced their concerns that not all their school staff is appropriately trained for running DPA with their students. Jenn covers some classes planning time to facilitate DPA however she identifies that one of “the biggest challenge for teachers in our school and most schools is probably the same. It’s that they don’t know what to do and how to do it” as well as “a lot of teachers struggle with finding games and activities”. These comments are shared within all three participants; Erica explains that there are teachers that are just not comfortable doing it, and that if they are uncomfortable that they shouldn’t be forced to do it”. Nicole echoes these responses but also adds that teachers need to be provided the resources and opportunities as supports for the DPA program and that it needs to constantly be evolving because if you play the same thing, the students are not going to be enthusiastic about it.

Despite lack of knowledge, and games hindering an effective DPA program, each participant listed many resources available for teachers. The problem is that they are not aware of it, or cannot access it. For example Jenn mentions that OPHEA (Ontario Physical and Healthy Education Association) offers a lot of resources but teachers don’t know about it. She states that “sometimes just seeking out those resources you need a push to do it, you need to know where to
get them and how. A lot of teachers don’t know about OPHEA, and if they did they probably would have a better DPA program.” This gap of knowledge speaks to the low amount of health and physical education (HPE) teacher training in faculties. Since HPE, and DPA are limited in pre-service teaching education, this area of academia is marginal from the beginning.

Each participant lists several resources that are available however much of the knowledge distribution is on the onus of the teacher to seek out these resources themselves. This is difficult because as mentioned in the previously personal values and identity form a teacher’s vision and philosophy of education. They are more likely to seek out resources and opportunities that fit their philosophy.

The participants in this study also identified various conferences, workshops, and resources that educators can attend or use such as: OPHEA’s conference, CIRA’s (Canadian Intramural Recreation Association) conference, Think Act Be Fit Conference, as well as regular board run workshops. The issue with the conferences that Erica identified is that they are usually outside of school hours and there aren’t many where you are released for professional development. Jenn also identified this barrier, and proposes that the school can appoint one teacher, or create a DPA Committee, to attend the workshops and/or conferences then come back to their school and provide other teachers the tools and strategies for facilitating an exceptional DPA program. This idea would be efficient to build capacity.

Overall external matters such as time, space, equipment, and resources as well as professional growth opportunities tied to personal values, and knowledge were identified as a significant theme in this research.
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Finding 2: School staff recognize there are many perceived benefits when physical activity is used in their classroom.

Although barriers were a very significant finding in this research, it does not devalue the DPA policy. Despite having a dense curriculum, many teachers see great benefits that associate with movement around and outside of their classroom. These include increasing concentration, developing living skills, increasing motivation and engagement in student participation, and health benefits.

**Increased Concentration**

To begin with, one of the most notable benefits that all three participants stated was the fact that physical activity serves as a break for students and provides an outlet. As a result the teachers in this study reported that students are better focused after a bout of physical activity. This includes various times and spaces throughout the school day. All three participants share similar views and have observed DPA helps increase concentration. Some of their views included comments such as:

“I find that the concentration is a lot higher, especially right after DPA or right after nutrition break.”

“They do it because they themselves see how much it can bring the attention back or give the kids an outlet.”

“Whether we had Phys. Ed or not we had DPA because they are better focused once they got their energy out.”

When students engage in a bout of physical activity it provides a break for them to re-focus and re-orient to focus on something task related. Not only have these teachers realized that students are better focused after a bout of DPA but also after any type of activity engagement
that may occur outside the classroom, but still impacts classroom behaviour. For instance Jenn has noticed students have more concentration in the morning, and owes it to the fact that they were just running around outside, or some of them walked to school.

Nicole explains her rationale that physical activity will affect each student differently. She says in general it helps re-orient their attention but most of the time it depends on the personal needs of each student, she has found that sometimes it doesn’t have an impact on some students, but this is not a concern, and that it has the most effect on higher energy kids. Overall, teachers in this study reported that most of the teachers in their school use physical activity because they themselves see how much it can bring the attention back, or provide a calming effect.

Living Skills

Living skills are another key benefit that participants in this research identified. All three participants stated that DPA promotes the development of living skills. In particular teamwork or interpersonal skills are a result of cooperative games, and sport participation. Furthermore since these teachers see their students in multiple environments they see how living skills transfer to different environments outside of the gymnasium. Jenn explains that through physical education is where students develop the main core learning skills and it is a goal for them to apply these skills to areas outside of the gymnasium and that DPA provides another great opportunity for transferability of those skills. These learning skills are specified as living skills in the Health and Physical Education (HPE). These skills include personal skills such as self-awareness, self-monitoring, adaptive, management, and coping skills. Interpersonal skills are also mentioned which include: communication skills, relationship and social skills. Finally
critical and creative thinking are addressed and include planning, processing, drawing conclusions/presenting results, and reflecting/evaluating (Ontario Ministry of Education, 2015).

An interesting finding reported was evidence of behaviour management in physical education specific to learning skills. One participant stated that students who may act out, or bully other students in the classroom display more positive behaviours when engaged in physical activity. For example Nicole states that physical education gives these students a sense of empowerment because they can utilize their strengths to visibly help other student’s. There is a sense of entitlement, and possibly confidence that they share when engaged in physical activity more so than in other subjects such as math, science, and language arts. She describes this as “it gives those students the ability to be on top, because academically usually those students are not my top players so now they can show what they know and be kind to others.”

In addition the Peel District School Board reinforces character traits every month such as responsibility, inclusion, respect, and etc. The participants in this research shared that physical education and DPA help their students develop these character traits, and build classroom climate, and community which leads to a more respectful and inclusive learning space. Erica describes this because it is evident that when “when you have kids together…and even adults, when their participating in physical activity you can see how they can find a way to include everybody it builds the climate of the class. So I’ve seen classes and this is from my whole range of years come together more as a group which then reduces bullying incidences.”

Each teacher explained that learning skills are very important in physical education since they transfer to different environments. They explained how they look for participation, effort, and consistency, and inclusion of others. Furthermore, they share that their “A” students are the students who participate in a way that encourages other students and help develop a
positive social climate for the class. These opinions support the Ontario Health and Physical Education’s curriculum that draws attention to living skills which also include personal, interpersonal, and critical and creative thinking.

Finding 3: Through formal and informal opportunities, teachers can implement meaningful DPA time for the duration a child is at school.

In this research “how teachers implement DPA” emerged as a significant theme. Formal opportunities were presented through delivery within classroom instruction time whereas informal opportunities are presented as opportunities to engage in physical activity outside classroom instruction time.

**Formal School Spaces**

The findings of this research display that formal physical activity in physical education is easily implemented because it’s all activity anyway. Other formal opportunities for including DPA throughout the academic day include using it as a break. Erica describes that she has her class sometimes for three periods in a row and sometimes it’s a lot for her, as well as her students so she uses various signs that says “Do you need a break? Walk?” If the class responds that they need a break they will take a break from the academic material and engage in some sort of physical activity. Jenn, and Nicole echo using DPA as a break and see fit to use it as a natural break for their students as well. Another formal DPA engagement strategy listed by these participants include what they observe other homeroom teachers doing to create breaks and these include going outside, using the hall space, playing games in the classroom, or booking out the gym if it’s available. One strategy that was found to be useful for these teachers included having the students run DPA games. They describe this puts onus on the students and it provides another
medium of instruction so that students are learning instructions from their peers. This helps combat the barrier previously mentioned which entails lack of knowledge.

An interesting finding of this research is that the teacher’s value curriculum integration and DPA as kinaesthetic learning however would appreciate using DPA as a break from academic material rather than integrating it with curriculum. They state they are aware of differentiated learning but DPA provides an encouraging gap to disengage from academic material that is beneficial. In spite of this, they have facilitated lessons that integrate DPA and curriculum. Strategies these teachers have used or witnessed in their school include: integrating language arts procedure writing by having the students write procedures for playing a game then actually going outside to play the game. Also, for justifying in the language arts curriculum students were asked to come up with plays for capture the flag, write them down and then go outside and use them in the game and then justify whether the plays were good or not. An example Nicole used for mathematics and physical education integration was that the students participated in a relay race with two types of cards – one with a face value (such as a number), the other with an exercise. The students were to run up take one of each type of card and do that exercise as a team, and after everyone has gone they would sort the numbers from least to greatest, or another mathematical function the teacher asked.

Another interesting finding is that the one participant Jenn whom represented a school that has a DPA period, found that this allowed for more school-wide DPA initiatives. For example, every Friday they have a dance groove party in which music is played over the announcements and all the students and teachers essentially dance around the hallways for twenty minutes.
Informal Opportunities

Informal opportunities are opportunities outside of the classroom scheduled time to engage in physical activity. However, it should be noted that the DPA policy is meant during instructional time so recess does not count as DPA time, yet it provides opportunities to get kids moving and reinforces associated benefits. The opportunities shared between all participants that take place outside of instruction time but within the school environment. These opportunities include intramurals for a vast amount of sports including volleyball, flag football, basketball, dodgeball, field and floor hockey, sport clubs, as well as drama and dance clubs. Furthermore participants listed that their students have the opportunity to represent their school and participate in extra-curricular tournaments outside of school hours.

In addition there are opportunities during recess or break to engage in structured games. PALS (Playground Activity Leaders) is a program that comes into the school to train students to facilitate games with their peers on the playground. There are also school-wide initiatives to promote active lifestyles such as the Terry Fox Run, and also bringing in outside resources to facilitate activity with the students such as Aussie X (A school and community sports program that engages their participants in physical activity) Furthermore it was found that some schools engage in DPA challenges between classes in which the school allocates time for the teachers to facilitate a specific exercise with their students.

There are also general informal opportunities that promote healthy active living; however they do not completely physically engage the students to the recommended DPA guidelines but they act as a medium. These opportunities present as bringing in outside athletes, and speakers to talk to the students, field trips to community sporting events, and having student led presentations on health. All of these strategies and ideas support the idea of a healthy school, and
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DPA is a vehicle to help create healthier students and school communities and promote well-being for Ontario students.
Chapter 5 – Discussion

Introduction

The information gathered throughout this qualitative study reinforces how teacher’s identity influences their teaching practices. The findings further emphasize that there are structural and personal barriers associated with professional practice that need to be addressed for successful policy implementation and desired benefits. The objective of this chapter is to share findings from the study, by both the literature review and the interviews, and articulate the implications they have on the researcher, and the educational community. Next, recommendations for implementation are listed, and I also briefly review this study’s limitations. I conclude by discussing new questions for future research that emerged, and some that were unanswered or vague.

Connections to Literature

There is a strong relationship between the themes discussed in the literature review and the data collected in the interviews. The following section specifically connects ideas and theories expressed in the literature and throughout my interview process.

First of all, findings from the data and the interview process establish there is evidence that physical activity within the school day provides benefits for students in multiple dimensions. Teachers recognize the importance of DPA from a physical standpoint because it reduces body fat, BMI, increases fitness levels, and serves as a platform for healthy behaviours (Patton, 2012; Stone, et al., 2012; Vazou, S. et al., 2012). Without a doubt there are physical benefits as students accumulate more fitness activities in their lives, but the most shared correlations are the academic benefits associated with learning, and concentration. The literature review sources research that demonstrates students who participate in more moderate to vigorous physical
activity per day have a different brain structuring and outperform students who engaged in fewer minutes (Sparking Life, 2015; Vazou, 2012). Most importantly, the stronger connection to literature and the findings are that physical activity serves as a platform for development of living skills. Vazou’s (2012) research concluded that physical activity benefits expanded to include an increase in behaviours such as persistence, high effort, concentration, and a preference in challenging tasks. Similarly the teachers involved in this research study reported that the core living skills outlined in the Ontario Health and Physical Education curriculum were promoted with DPA. These include teamwork, communication, responsibility, cooperation, and it should be noted that in health and physical education living skills are the one area of curriculum which is used to determine grades. Growing Success (2010) states that the Ontario Health and Physical Education curriculum

“includes living skills expectations which students are expected to achieve in the context of their learning in the Active Movement, Movement (competence, and Healthy living strands of the curriculum. The Living Skills expectations require students to demonstrate certain aspects of the learning skills and work habits…and a student’s demonstration of those skills and habits is to be evaluated as part of the evaluation of the overall expectations in the three strands of the curriculum (Page, 10).

The literature review and the findings support notions that learning skills labelled in Growing Success also mimic living skills in the HPE curriculum document which are transferable in different environments. Specifically in this study teachers report they can see how these skills transfer to different classrooms, subject areas, as well as from sport involvement outside of school to within school.

Moreover, the findings in this research support Vazou, and Castelli’s research which found that concentration increases after a bout of physical activity. This research in particular explores the times educators feel students are more concentrated and attribute that to times and spaces when students return to class after a bout of physical activity. These examples include
after nutrition break, after physical education, upon arrival to school in the morning, and after daily physical activity in the classroom.

Furthermore, connections between literature and research support teacher’s opinions, with the most prevalent opinion being barriers that impede successful policy implementation. Patton (2012) found that time is the biggest barrier for DPA delivery, and that was a consistent piece of data shared by all interviewees. Other barriers included an insufficient amount of resources such as equipment, and facilities (Robertson-Wilson & Levesque, 2009). Systemic barriers included time, equipment, facilities, and other available resources within the school; however it was also related to barriers associated with professional practice such as teacher identity, personal values, and lack knowledge. These barriers are also highlighted in the report titled “Ready, Set, Go! Building Healthy Schools in Ontario” (2013) which specifies principals report that DPA is viewed as a ““low priority” in an already packed school day. They say there is insufficient time, equipment, space, and teaching training to implement the program properly” (People for Education, 2013). Furthermore, research provided by Fletcher & Temertzoglou (2010) investigated the differences in elementary generalist teachers and secondary HPE specialist teachers and found that elementary generalist teachers have different experiences with HPE compared to secondary HPE specialists. Specifically that “some individuals feel disengaged from HPE because they struggle to make meaningful connections between their lives and the curriculum (Ennis, 2008 as cited by Fletcher, and Temertzoglou, 2010, pg. 21). Also since the introduction of the new Health and Physical Education curriculum in 2015 more topics are introduced such as sexual education; Temertzoglou states “the number of hours of teacher training for elementary health and physical education varies from 12 to 36 across the province” and that “clearly more time is needed to provide more comprehensive teacher training to prepare
beginning teachers” (CBC News, 2015). She is speaking specifically to the recent sexual education curriculum revision however there still needs to be more training for HPE in faculties of education to support beginning teachers.

Consistent with Patton’s (2012) findings, lack of knowledge serves as a key obstacle for teachers to effectively accomplish daily physical activity requirements throughout the school day. The lack of knowledge consists of what Robinson, & Melynchuck (2008) found to include insufficient knowledge of appropriate development activities for their students as a result of limited experience and background in delivering physical activity for children. This is largely due to the limited number of hours devoted for physical education, and DPA practices in pre-service teacher education, and unknowingness of teacher workshops to aid professional development expressed in this research. Alternatively, personal values were also identified as a barrier. The literature and research is consistent finding that those teachers who effectively integrate DPA value physical activity, and healthy living in their own lives also take initiative to deliver formal and informal programs for students to be active such as intramurals, tournaments, other recess activities, and sharing resources (Castelli, & Ward, 2012). More importantly, data collected from the literature review and interviews state that administration support needs to be in place in order for a successful policy implementation.

**Recommended Methods and Practices of Implementation**

A key finding that connects the literature and this qualitative study were effective practices for implementing DPA in the school. Elementary school teachers in this research study describe a number of practical ways to effectively integrate daily physical activity throughout the school day. Using data gathered from my literature review, and interviews I have compiled a list
of some key strategies that serve as effective practices for successful implementation of PPM 138: Daily Physical Activity in Elementary Schools.

- Schedule time within the school day specifically for Daily Physical Activity exercises.
- School Boards need to provide more workshops and professional development opportunities for teachers and teacher candidates to advance their knowledge in the topic of implementing Daily Physical Activity.
- Enlist a couple of teachers, and staff to attend professional development and share their learning’s with the rest of the school.
- Incorporate DPA as a natural break as short bursts of physical activity contribute to increased attentiveness, behaviours, and positive moods.
- Allot Physical Education budget for DPA equipment, and creating accessible spaces for active play.
- Teaching with physical activity is teaching students with kinesthetic learning as a primary source.
- Teaching about physical activity encourages embedded living skills consistent with the Ontario Health and Physical Education curriculum.
- Provide role-models who model healthy, active lifestyles to students.
- Encourage extra-curricular activity involvement for students, staff, parents, and the community – as these contribute to a healthy school.
- Allow students to create and instruct DPA activities
- Appoint a DPA committee at schools to provide and distribute resources, and provide professional development for other staff.
- Create Professional Learning Communities to enhance the learning of all professionals in the school, and enhance student’s learning experience and achievement.
- Seek resources with strategies for DPA activities such as:
  - Ontario Physical Health Education Association (www.ophea.net)
  - Physical and Health Education Canada (www.phecanada.ca)
  - Canadian Intramural Recreation Association (www.ciraontario.com)
  - Playsport (www.playsport.net)
  - Go Noodle (www.gonoodle.com)
Implications of the study

For the researcher

As previously described in “Background of the Researcher” one of the most pressing reasons to further study physical activity integration in the school environment began with my own personal identity as a former athlete with strong advocacy for healthy active living. One of the most concerning issues in North America is childhood obesity and schools are vital for teaching children physical literacy, and living skills to be healthy citizens. Throughout my research I have gathered valuable data that supports physical education, and DPA as a cornerstone for living skills and that has framed my philosophy of education which includes holistic teaching in physical, social, emotional, and spiritual domains.

As an educator with a strong personal identity related to physical education I am highly committed to providing accessible opportunities for students to engage in physical activity in both formal and informal spaces of the school environment. Professional practice and teacher identity were key barriers for successful policy implementation and it is important to note that many of the participants in this study stated that as teachers we are key role models whom students spend a vast majority of their time with. As such, we must provide opportunities for our students to engage in healthy active lifestyles. This research has provided me with insight to the many barriers teachers face when implementing the DPA policy and strategies to negate them.

For myself as an educator with a high degree of personal values I seek professional practice opportunities to facilitate opportunities for students to engage in DPA throughout the classroom; however structural barriers are still an issue. This raises the question to determine what barriers are easier to overcome - professional practice or structural, this implies that for myself and other educators with personal values tied to health and physical activity structural
barriers need to be overcome. This can be supported by administrators allocating time, equipment, and space for physical activity throughout the school day. Moreover, the participants in this study indicate that having DPA scheduled as a school-wide event would be beneficial for teachers to assist other classes with implementing DPA and this can serve as a planning time as well for homeroom teachers.

Also, in this research many participants noted informal opportunities for students to be active which occurs outside of classroom time. These opportunities do not align directly with the mandated DPA Policy as specified “all elementary students, including students with special needs, have a minimum of twenty minutes of moderate to vigorous physical activity each school day during instructional time” (Ontario Ministry of Education, 2005). However these do connect with the foundations for a healthy school as they create student engagement, facilitate supportive social, and physical environments, more teaching and learning related to healthy active living, and student leadership opportunities. This integrated approach provides a positive school climate, which would grow into a healthy school and engage more students and staff (Ontario Ministry of Education, 2014). Furthermore these values would transfer to multiple environments and positively affect student’s life outside of school.

For educators whose personal values are not tied to health and physical education, more of their input is required to specify strategies to overcome the barriers. Nevertheless, this research provides insight and strategies to overcome barriers associated with professional practice that has direct connections for me as a researcher and educator. In particular participants identified that working in professional learning communities (PLC’s) are key for supporting staff who don’t have personal values and knowledge tied to physical education. PLC’s are important to enhance the learning of all professionals in the school, enhance student learning, and improve
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student achievement, (Ontario Literacy and Numeracy Secretariat, 2007) thus creating PLC’s are effective for successful policy implementation. As a researcher and educator this implies that I need to support professional development of professionals in the school through being the advocate for health and physical education. Consistent with the findings in this research teachers state that more workshops and resources need to be present to support professional development. For me this implies being the individual that seeks resources, and opportunities to share and implement within the school, and pushing for leading a DPA committee to support the policy.

For the educational community

Implications for the educational community are that although barriers related to professional practice and systemic structures exist, the benefits of exercise and movement in the classroom cannot be undermined. There are consistent findings that students who engage in physical activity have better cognition and academic scores (Sparking Life, 2015), as well as have a prime opportunity to develop living skills as noted in the findings section. The purpose of DPA is to contribute to a healthy classroom and school environment so that students can acquire living skills transferable in different environments. It is important to address these barriers in the education community in order to contest barriers associated with professional practice and support professional development. Pre-service teaching programs could foster DPA in teacher candidates classes in which students learn strategies and practices for classroom teaching. This would provide the opportunity for student-teachers to learn, practice, and develop confidence in implementing DPA in their teaching practice. For example in the Master of Teaching program at OISE teacher candidates have three hours of class time which DPA instruction could be integrated. This speaks volumes for embedding professional practice opportunities for teacher
candidates, and creating awareness of the resources and formal classroom strategies that can be used for DPA in elementary schools.

In contrast, systemic barriers must also be addressed for a successful policy. As mentioned previously Hogwood and Gunn’s ten preconditions for perfect implementation include sufficient resources which include equipment, and facilities. (Hogwood and Gunn, 1984 as cited by Wilson, and Lévesque, 2009, pg. 126). Teacher’s opinions from the findings of this research specify that more equipment and resources need to be available for appropriate DPA delivery however with background knowledge and professional development minimal equipment is not deemed necessary, as articulated by participants in this study. However, it should be noted that teachers who lack the knowledge to integrate DPA would benefit from equipment available.

This is why opportunities in pre-service teacher education programs are crucial for individuals that lack knowledge, and have little personal values, and identity associated with health and physical education. In order to assist those educators there are increasingly amounts of resources available that include lesson plans, ideas, activities, as well as technology websites such as Go Noodle that need to be shared within all school personnel. To facilitate this distribution and development of resources a DPA committee can be appointed at each school.

As aforementioned physical education and DPA serve as a catalyst for development of living skills; findings in this research support this information, as the teachers involved in this study provide their students the opportunity to create and run DPA activities. Such opportunities further allow development of living skills as students feel empowered and develop confidence as they learn to understand themselves better. Allowing students to create and run DPA activities provides teacher’s a valuable opportunity to assess students living skills as well as attune their professional practice barriers.
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Limitations

This research provides insight of implementation strategies for the DPA policy however it carries some limitations. All of the participants were from the Peel District School Board, and this questions the variability of data across school boards, and regions. Also this research was limited to three participants who carry a positive personal identity towards physical activity and healthy living and thus are more committed to effective implementation of DPA. As a result of having biased participants they represent a population that provides effective and appropriate strategies for effective policy implementation.

Also, due to the scope of the research, students were not interviewed, observed, or spoken to. If students were directly involved in the data collection findings would report more concrete data that supports students attitudes, and learning skills by integrating physical activity in the classroom. It would also be beneficial to speak to students to identify whether their involvement in formal and informal physical activity opportunities within the school have fostered an interest in physical activity involvement outside of the school environment away from their teachers, as well as contributed to a healthy school climate.

Further Questions

Upon completion of my Master of Teaching Research Project, I feel that although there has been much research on the topic of Policy/Program Memoranda No. 138 – Daily Physical Activity in Elementary Schools there is still a lot of research to investigate the barriers for effective implementation. While this research looks at the barriers it further investigates the known benefits and strategies for administering the policy effectively.

Future research may strive to look more specifically at how DPA and integration of physical activity in the classroom benefit student’s learning with an in depth look at development
of living skills. This is unique because physical education along with DPA are the one area in the Ontario’s Growing Success document in which learning skills are assessed to help determine student grades. In physical education these are reflected as living skills. In addition, this research’s participants noted the female participants were more difficult to engage in physical activity opportunities, future research could examine the logic behind this phenomenon. Further research may also look at how teacher candidate’s attitudes and readiness influence their teaching practices related to Daily Physical Activity. Finally, as structural and personal barriers emerged from this study, future research may look at the built environment and how it is conducive to student’s physical activity patterns inside, and outside of school.

Conclusion

To me healthy, active lives are vital for successful educational outcomes. This is evident as the Ontario Health and Physical Education Curriculum has reformed to include living skills, and with that PPM 138 Daily Physical Activity in Elementary Schools focus is to support a healthy school environment by providing students with the opportunity to engage in activities that have a positive impact on their social, mental, physical, and social well-being. This research is not just about how DPA can be integrated into elementary school but it examines how barriers such as teacher’s personal beliefs associated with their personal identity, values, and professional practice influence their implementation of PPM 138. It is about opening up opportunities for the educational community to forego systemic barriers such as time, equipment, space, and facilities, and create health goals as valuable as numeracy and literacy goals. Teachers are an important link between the classroom, and home-life thus creating opportunities to teach living, and learning skills. Therefore it is important for the teacher to overcome his or her own barriers –
whether they may be systemic or related to professional practice in order to effectively implement PPM 138.
Appendix A – Consent Letter

Date:

Dear,

I am a graduate student at OISE, University of Toronto, and am currently enrolled as a Master of Teaching student. I am studying what teachers are doing to implement physical activity into their classroom routines for the purposes of a graduate research paper. I think that your knowledge and experience will provide insights into this topic.

The purpose of this requirement is to allow us to become familiar with a variety of ways to do research. My data collection consists of a 30 minute interview that will be audio-recorded. I would be grateful if you would allow me to interview you at a place and time convenient to you, outside of school time.

The contents of this interview will be used for my research project, which will include a final paper, as well as informal presentations to my classmates and/or potentially at a research conference or publication. I will not use your name or anything else that might identify you in my written work, oral presentations, or publications. This information remains confidential. The only people who will have access to my assignment work will be my research supervisor and my course instructor. You are free to change your mind at any time, and to withdraw even after you have consented to participate. You may decline to answer any specific question. I will destroy the audio recording after the paper has been presented and/or published which may take up to five years after the data has been collected. There are no known risks or benefits to you for assisting in the project, and I will share with you a copy of my notes to ensure accuracy.

Please sign the attached form, if you agree to be interviewed. The second copy is for your records. Thank you very much for your help.

Yours sincerely,

Kimberley Ann Ramcharan
416-735-9849, Kimberley.ramcharan@mail.utoronto.ca

Instructor’s Name:
Phone Number:
Consent Form

I acknowledge that the topic of this interview has been explained to me and that any questions that I have asked have been answered to my satisfaction. I understand that I can withdraw at any time without penalty.

I have read the letter provided to me by __________ and agree to participate in an interview for the purposes described.

Signature:

Name: (printed) _______________________________________________

Date: ______________________________
Appendix B: Interview Questions

1) What grade do you currently teach?

2) How many years have you been teaching this grade?

3) Can you share how and when your interest in physical education/activity began?

4) How do you demonstrate your own personal values and knowledge towards physical activity and health in the classroom?

5) How do you integrate DPA into your everyday classroom teaching? Can you give me some specific examples?

6) Do you tend to teach DPA on its own or do you integrate it with other curriculum subject areas? How do you this? Can you give me an example?

7) What are your learning goals when implementing DPA?

8) What range of impacts have you observed DPA having on students? (depending on response can probe specifically about student engagement and participation – What learning skills are directly affected by DPA?)

9) What seems to be the general attitude toward DPA in your school?

10) Does your administrator hold teachers accountable to DPA? How?

11) What are some challenges you experience integrating DPA into your everyday teaching?

12) How do you think those challenges might be overcome? What kinds of supports would help?

13) What strategies can school boards offer to ensure the appropriate delivery of the DPA policy by teachers?
### Figures

**Hogwood and Gunn’s 10 Preconditions for Implementation**

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<td>1. “The circumstances external to the implementing agency do not impose</td>
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<td>crippling constraints”</td>
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<td>2. “That adequate time and sufficient resources are made available to the</td>
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<td>programme”</td>
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<td>3. “That the required combination of resources is actually available”</td>
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<td>4. “That the policy to be implemented is based upon a valid theory of</td>
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<td>cause and effect”</td>
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<td>5. “That the relationship between cause and effect is direct and that there</td>
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<td>are few if any, intervening links”</td>
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<td>6. “That dependency relationships are minimal”</td>
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<td>7. “That there is understanding of, and agreement on, objectives”</td>
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<td>8. “That tasks are fully specified in correct sequence”</td>
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<td>9. “That there is perfect communication and co-ordination”</td>
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<td>10. “That those in authority can demand and obtain perfect compliance”</td>
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