Making DPA Happen:

Educators’ Experiences and Contributing Factors

By

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ABSTRACT

This Masters of Teaching research project is a response to the concerning state of the Daily Physical Activity (DPA) policy in Ontario elementary schools. This qualitative study is guided by the following question: what are the personal, professional, and educational factors and experiences that contribute to elementary teachers’ commitment and competence in meeting the DPA policy requirements in their classrooms? A review of the literature explains why the DPA initiative was developed, raises questions about the current success of DPA implementation in the classroom and points to the need for further research that explores the factors that facilitate policy delivery. Semi-structured interviews were conducted with two Ontario educators and analyzed. Overarching themes that emerged included participants’ reliance on segregated DPA time, and their use of online and personal resources to plan their DPA activities. Findings also revealed that participants emphasized the positive psycho-emotional benefits of DPA over its physical benefits for both themselves and their students. Further, personal factors, such as commitment to a fitness lifestyle, were more significant to their competence in meeting the DPA requirement than professional or educational factors. The results of this study suggest that although educational and professional development in the area of Health and Physical Education is an asset, it is not imperative to successful DPA implementation, and that although the Ministry’s implementation suggestions are well grounded in educational research, they may not be as practical or applicable in practice. Furthermore, this study informed my own personal practice as a beginning teacher by inspiring me to continue my fitness journey and allowing it to be reflected in my teaching.

Key Words: DPA, physical activity, DPA policy, health & physical education
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CHAPTER 1: INTRODUCTION

1.0 Research Context and Problem

In October 2005 Policy/Memorandum No.138 took effect, requiring that all Ontario school boards must deliver a minimum of twenty minutes of sustained moderate-vigorous physical activity (MVPA) to every elementary student each school day during instructional time (Ontario Ministry of Education, 2015). This initiative was developed to assist school-aged children in reaching the recommended 60 minutes of MVPA each day as recommended in Canada’s Physical Activity Guidelines for Youth (Canadian Society for Exercise Physiology, 2011). The new guidelines serve to bring greater awareness to Canadians with regards to both the benefits of being physically active everyday and the consequences of regular sedentary behaviour.

Greater research has focused on youth health behaviours and have identified that today’s Canadian youth are significantly less active than past generations (Garriguet, Janssen, Craig, Clarke & Tremblay, 2011; Tremblay, Warburton, Janssen, Paterson, Latimer, Rhodes & Murumets, 2011). ParticipACTION (2013) reported that less than 25% of Canadian youth achieve the recommended daily physical activity (DPA) levels and this alarming statistic is heavily contributed to by the fact that school-aged children are spending over 60% of their day being sedentary.

As a result, collective health research has announced that childhood obesity rates in Canada have reached an epidemic stage, warning the nation that because of poor health behaviours, this generation is likely to be the first to be outlived by the generation before them (Daniels, Arnett, Eckel, Gidding, Hayman, Kumanyika & Williams, 2005; Ebbeling, Pawlak &
Ludwig, 2002). With childhood obesity rates tripling over the past two decades Canada needs to elicit a dramatic change (Statistics Canada, 2015; CDC, 2013; Lau, Douketis, Morrison, Hramiak, Sharm & Ur, 2007). Further research in this area has inspired this necessary change. Childhood physical activity practices are said to shape active adult lifestyles (Trudeau, Laurencelle, Tremblay, Rajic & Shephard, 1999; Sallis & McKenzie, 1991). This research, along with the more recent work of Dishman and colleagues (2005) suggest that the earlier and more frequently a child is exposed to regular physical activity behaviours, the more likely they are to develop a mindset that fosters greater enjoyment and value of physical activity that is maintained throughout their youth, adolescent and adult life.

In addition to the benefits of DPA on a child’s physical development, there are also notable benefits for healthy psychological and cognitive development (Trudeau & Shephard, 2009; Kantomaa, Tammelin, Ebeling & Taanila, 2008; Ploughman, 2008; Sibley & Etnier, 2003). With this being said, it is crucial to create healthy habits early; hence the DPA action plan in Ontario elementary schools (Active Healthy Kids Canada, 2010). From as early as age three children are spending the majority of their weekday hours in the school environment. Although a school climate that is committed to giving children the opportunity for sustained MVPA for 20 or more continuous minutes does not reflect children’s typical physical activity patterns; the goal of this DPA school initiative is to foster early positive physical activity experiences (Ontario, 2015; Stone, 2012; Chorney, 2009). In order to make regular physical activity a habit, children must be presented with guided opportunities on a regular basis. Unfortunately, the Ontario education system is not consistently providing it’s students with this opportunity, as less than half of Ontario teachers are meeting the DPA requirements (Brown & Elliot, 2015; Stone, 2012; Chorney, 2009; Robertson-Wilson & Lévesque, 2009).
Of the analyses conducted on the implementation of this policy in Ontario elementary schools, the results are not promising. Much of the research in this area is dependent on the perceptions of educational stakeholders. Few studies have been conducted to gain a quantitative illustration of DPA in Ontario classrooms due to ethical limitations and accurate data collection methods (Stone, 2012). Several teacher perspectives paint the idea that the new DPA initiative is nothing short of just “more work” (Brown & Elliot, 2015; Patton, 2012; Robinson & Melnychuk, 2008).

Principals, teachers, parents and students are rather enthusiastic about the idea of DPA, however the enthusiasm by teachers quickly dissipates when they are responsible for turning this idea into action (Brown & Elliot, 2015; Patton, 2012). Several teachers have voiced their concerns about the many barriers that it difficult to incorporate physical activity into instructional time (Brown & Elliot, 2015). Often mentioned is the lack of knowledge, resources, time and space as contributors to poor implementation strategies (Brown & Elliot, 2015; Patton, 2012; Chorney, 2009; Robertson-Wilson & Lévesque, 2009; Robinson & Melnychuk, 2008; Dwyer, Allison, Barrera, Hansen, Goldenberg & Boutilier, 2003). As a result, of the little implementation of this policy in the classroom, the requirements of time and intensity are rarely being met. It is believed that the majority of teachers are not comfortable with effectively inserting bouts of physical activity across their daily curriculum teachings but instead attempting (with little success) to allocate segregated time for DPA (Brown & Elliot, 2015). What is less obvious in the literature are the success stories of implementing adequate classroom DPA by eager, motivated teachers; yet it is through these success stories that the greater educational community can learn and be inspired by.
1.2 Research Purpose

In view of this problem, the purpose of my research is to learn how a sample of teachers are committed to meeting the DPA requirement in elementary schools; specifically through their accounts of what inspired the commitment, what is currently being done in their classrooms and what outcomes are observed by their students. I aim to share these findings with the educational research community in order to increase the fulfillment rate of this requirement by providing educators with instructional support.

1.3 Research Questions

The central question guiding this study is: what personal, professional, and educational factors and experiences contribute to developing elementary teachers’ commitment and competence for implementing daily physical activity in their classrooms? Supplementary questions to further guide this study include:

- How do these teachers integrate MVPA across subject areas and what outcomes do they observe from students?
- What factors/resources facilitate fulfillment of the DPA requirements? How does this sample of teachers choose, access and utilize these resources and why?
- What challenges do these teachers face with implementing DPA in their classroom and how do they overcome these challenges?

1.4 Background of the Researcher

I laced up my first pair of figure skates at the age of four and that marked the beginning of my career in competitive figure skating. Throughout my childhood I not only had the
opportunity to be extensively involved in the sport I loved, but I also had plenty of opportunities to be physically active through organized sports such as dance, gymnastics, soccer, baseball and volleyball. My involvement in organized physical activity fostered my confidence, my interpersonal relationships and my time management skills.

If you were to ask a younger, elementary me, I would have expressed that gym was my favourite subject in school. As I moved into my secondary school years I maintained my interest in physical activity, so much so that I elected to take physical education courses each year, even if that meant increasing my course load. In Grade 12 my passion for physical activity was further inspired by an Exercise Science course I took, which opened up incredible windows of opportunity for my future endeavors.

I continued to follow my passion and completed my undergraduate studies in Kinesiology at McMaster University. During my four years at the undergraduate level I developed a solid understanding of the theories behind my passion. My extensive studies focused on human movement among special populations, including youth and from there I decided to take action. In order to advocate for the importance of physical activity for all children, I teamed up with an undergraduate colleague of mine to participate as a volunteer and later first aid responder in the Ontario Youth Special Olympic events organized throughout the Greater Toronto Area. Too often children do not have the opportunities I did to develop physically, psychologically and cognitively through organized sport; and even less opportunities are given to children with special needs. The Ontario Youth Special Olympic events held during instructional school days and funded by the government lessened the barriers for these children to engage in safe and inclusive physical activity and allowed them to develop life skills such as teamwork, social development and self-awareness of their own skills.
I was further inclined to continue my studies in this field and as a result achieved my registered massage therapy (RMT) certification. My RMT education focused heavily on the treatment of outcomes caused by inactivity. As I entered my practice within a gym setting I quickly developed an understanding of the many barriers that limit the amount of physical activity one receives and how beneficial regular physical activity is for my client’s health and rehabilitation. Observing and treating these outcomes first hand has fueled my motivation to remain active throughout my adulthood thus far.

Together with my lived experiences, my education and my practical work I have been able to consistently achieve a healthy lifestyle as outlined by Canada’s Physical Activity Guide. I have successfully upheld this standard of living under many conditions at various points in my life: on a tight budget during my study periods, despite a lack of time during busy work weeks, regardless of inadequate space when a gym membership was unaffordable and through prioritizing against a busy social life. Each day I continue to pass along my knowledge of health and the importance of daily physical activity to the communities in which I now work, teach and practice.

1.5 Overview

To respond to the research questions I will be conducting a qualitative research study using purposeful sampling to interview three teachers about their instructional strategies for meaningfully integrating DPA in classroom learning. In Chapter 2 I review the literature in the areas of physical activity guidelines; the benefits, barriers and implications of dismissing these guidelines. Next, in Chapter 3 I elaborate on the research design. In Chapter 4 I report my research findings and discuss their significance in light of the existing research literature, and in
Chapter 5 I identify the implications of the research findings for my own teacher identity and practice, and for the educational research community more broadly. I also articulate a series of questions raised by the research findings, and point to areas for future research.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction to the Chapter

In this chapter, a review of the literature will explore the areas of global health issues related to school-aged children, outcomes of physical activity and inactivity on youth development and scientifically calculated physical activity recommendations that support optimal growth for this population. More specifically I review themes related to Policy/Memorandum No.138: Daily Physical Activity Requirement in Ontario elementary schools. I begin by reviewing the literature in the area of youth sedentary practices and I consider its relevance to childhood obesity concerns. Next, I review research on the benefits of physical activity and the consequences of inactivity among youth in order to understand the need, purpose and goals of the 2005 Ontario elementary DPA initiative. From there, I explore the available resources and the perceived barriers that give an illustration of the DPA requirement in action. Finally, I present the various teacher perspectives surrounding the DPA, drawing specific attention to the perceived barriers of successfully incorporating DPA into each elementary school day.

2.1 Global Health Issues: Sedentary Practices and Childhood Obesity

The World Health Organization (2015) raises a global concern that an increased intake of calorie dense foods coupled with the increase in physical inactivity and sedentary lifestyles are contributing to rising obesity levels worldwide. To date, WHO’s (2015) global estimate of
childhood obesity stands at 42 million and predicts that by 2025, 70 million children worldwide will be affected by overweight and obesity. This organization supports the idea that the educational system is one of the many sectors that lack supportive policies that promote positive changes in dietary and physical activity patterns.

2.1.1 Sedentary Practices

According to the Canadian Society for Exercise Physiology (CSEP) (2011), sedentary behaviour in children is defined by periods of time where children are engaging in little to no physical movement. Common sedentary practices among school-aged children include watching television, playing video games, using the computer and sitting for long periods of time (CSEP, 2011; Tremblay, LeBlanc, Kho, Saunders, Larouche, Colley & Gorber, 2011). With a cautious eye on the global trends of inactivity and obesity, CSEP has recently teamed up with Healthy Active Living and Obesity Research Group (HALO) to bring a focused attention to these trends that are mimicked nationally across Canada and more locally across Ontario (Tremblay et al., 2011). Together these institutes have more clearly defined sedentary behaviour and set forth age specific guidelines with the aim of correcting these trends (CSEP, 2011; HALO, 2011). As outlined in the Canadian Sedentary Behaviour Guidelines for Children (aged 5-11 years), recreational screen time should be limited to no more than two hours per day and children should limit motorized transport, prolonged periods of sitting and time spent indoors each day (CSEP, 2011, p. 8). Based on the parameters of sedentary behaviour outlined by CSEP, many Canadian studies have determined that school-aged children spend over 60% of their day being sedentary (ParticipACTION, 2013; Active Healthy Kids Canada, 2010). Further studies reaffirm this alarming statistic stating that 90% of Canadian youth are not meeting Canada’s Physical Activity Guidelines. This astonishing statistic may be a high calculation in comparison to the results of
the 2006 Health Behaviour in School-aged Children Survey (HBSC) which reported that only slightly more than half (55%) of the very large sample size were considered inactive. Although these numbers are much higher than the ideal, Canadian youth ranked third highest in physical activity levels amongst 34 countries that participated in the HBSC study (Janssen, Katzmarzyk, Boyce, Vereecken, Mulvihill, Roberts & Pickett, 2005). The differing in these results may be explained by the unavailability of standardized and consistent physical activity collection methods for this population (Katzmarzyk & Tremblay, 2007).

Numerous studies attribute high inactivity figures to the recent skyrocket in screen time numbers over the last decade (He, Piché, Beynon, Kurtz & Harris, 2011; Active Healthy Kids Canada, 2010; Salo, 2009). In great contrast to the sedentary guidelines outlined by CSEP, screen times are as high as five to six hours a day during the weekdays and upwards of seven and a half hours a day over the weekends (He et al., 2011; Salo, 2009). A comprehensive study analyzed screen times among Canadian youth and found that ~16% of youth met the screen time guidelines (<2hrs/day) however this may be considered a generous reporting since only television watching and leisure computer use was accounted for, leaving out the contribution of other popular screen-related activities such as videogames, mobile phone use and iPad interactions towards total screen time (Mark, Boyce & Janssen, 2006). The extent of sedentary behaviour among school-aged Canadians, as demonstrated in the literature, brings forth the associated health risks, namely childhood obesity.

2.1.2 Childhood Obesity

Due to the exponential rise in childhood obesity rates across the globe, this phenomenon has been identified as a world health epidemic that warrants intervention (WHO, 2015; Lau et
al., 2007; Veugelers & Fitzgerald, 2005; Ebbeling, Pawlak & Ludwig, 2002). Health researchers have determined that overweight and obesity rates among school-aged Canadian children has skyrocked over the last three decades scoring in at a national average of 23% to date (Statistics Canada, 2015; Lau et al., 2007; Haque, De La Rocha, Horbul, Desroches & Orrell, 2006; Shields, 2005; Willms, Tremblay & Katzmarzyk, 2003). Alarmingly, childhood obesity rates have tripled, jumping from 2% to 10% over a thirty-year period and still on the rise (Lau et al., 2007; Shields, 2005; Willms et al., 2003). In this context it is important to convey the statistics around the incidence of overweight Canadian youth because it is widely understood that being overweight is a significant precursor for obesity (Lua et al., 2007; He & Beynon, 2006; Ebbeling et al., 2002). In Canada, the incidence of overweight youth has imitated a similar temporal trend, at least doubling over the past two decades and by 2004, 1 in 4 (26%) of Canadian school-aged children were considered overweight (Lau et al., 2007; He & Beynon, 2006; Shields, 2005).

Although many factors contribute to these statistics, such as socioeconomic status, ethnicity, physical activity levels and dietary habits, little research demonstrates a significant difference of childhood overweight and obesity rates between males and females or geographical location, specifically in Ontario (Lau et al., 2007; Galloway, 2006; Haque et al., 2006; Shields, 2005, Willms et al., 2003).

On a larger scale, provincial variations of childhood overweight and obesity rates have been found with an observable trend that rates increased from west to east (Willms et al., 2003). It is widely understood that across Canada, all provincial rates of overweight and obesity are on an incline, but it is interesting to note that the longitudinal study conducted by the Federal, Provincial and Territorial Advisory Committee on Population Health (1999) reported that Ontario has experienced the smallest exponential rise in youth overweight and obesity rates
compared to the other provinces. Geographically speaking on a smaller scale, within Ontario, the majority of childhood obesity research has been conducted in urban areas and the statistical provincial average of childhood obesity is weighing in at around 11% (He & Beynon, 2006; Haque et al., 2003). Galloway (2006) specifically looked at rates of childhood obesity in rural areas, but found no significant difference than that of urban focused studies.

There is a visible commonalty among the studies dedicated to childhood obesity research; that being the underlining purpose that drives these studies. Like many other research teams, Haque et al. (2006) described that the purpose of identifying student obesity rates in Timmins, Ontario was to gain insight of a current problem in order to combat it through improved program planning and resource allocation. This is where the education system—it’s programs and resources—takes a notable presence.

2.2 Outcomes of Physical Activity and Inactivity in Youth

Spending less time being sedentary can help children physically, psychologically and intellectually; thus alluding to the idea that engaging is regular physical activity serves many benefits in child development (Vazou, Gavrilou, Mamalaki, Papanastasiou & Siourmala, 2012; CSEP, 2011; Physical Activity Guidelines Advisory Committee, 2008; Weems, 2008; Manuel, Leung, Nguyen, Tanuseputro & Johansen, 2003). On the contrary, a lack of physical activity or inactivity has adverse affects on the physical, psychological and intellectual realms of child development (ParticipACTION, 2013; CSEP, 2011; HALO, 2011).

On all fronts, regular physical activity among school-aged children contributes to the maintenance of a healthy body weight, improvements in self-confidence and better performance in school (CSEP, 2011, p. 5).
2.2.1 Physical outcomes

*Physical benefits of activity*

With the vast amount of research done in this area of study, it is widely accepted that there are many physical benefits of being active during childhood. Physical activity builds strong, healthy bones and muscles while maintaining a healthy weight for a child’s growing stature (Physical Activity Guidelines Advisory Committee, 2008). Dated research claimed that regular exercise can lead to weight gain in the long run because exercise has the capacity to increase one’s appetite but Rippe & Hess (1998) clarify that regular exercise may lead to greater caloric intake, but it would not be significant enough to result in weight gain.

Physical activity also reduces the risk of developing chronic diseases such as type 2 diabetes and cardiovascular disease; both of which top the charts of leading causes of mortality in Canada (WHO, 2015; Vazou et al., 2012; PAGAC, 2008; Weems, 2008; Manuel et al., 2003). The relationship between physical activity and type 2 diabetes varies among researchers. Some research suggests that physical activity directly reduces the risk of type 2 diabetes by breaking down fats that interfere with glucose transport while other research suggests a more indirect relationship reporting that exercise decreases visceral body fat which is a major risk factor in the development of type 2 diabetes (Boulé, Haddad, Kenny, Wells & Sigal, 2001; Perseghin, Price, Petersen, Roden, Cline, Gerow & Shulman, 1996).

Broad studies evidently report strong correlation between physical activity and reduced cardiovascular disease, however it is interesting to take a closer look into cardiovascular research that focuses on HDL cholesterol (the good cholesterol) and its relation to exercise. A majority of the research claims that regular exercise can increase HDL levels by 5-25% depending on the
individual, however Leon (1997) reports that only about half of the population experience increases in HDL levels with exercise.

Physical benefits of childhood activity extend to include reduced risk for adult obesity, stroke, high blood pressure, arthritis and premature death (Juonala, Magnussen, Berenson, Venn, Burns, Sabin, 2011; PAGAC, 2008; Dietz, 2004).

Physical risks of inactivity

Chronic inactivity during child’s physical development has adverse effects on the body. Here it is critical to address that although the consequences and risk factors of sedentary and physical activity practices are often not observable during childhood, youth practices greatly impact the physical health and quality of life in adulthood (Disman, 2005; Trudeau, 1999; Sallis & McKenzie, 1991). Juonala et al. (2011) found that if excessive weight caused by inactivity is not normalized by adulthood, there is a significant increased risk of later cardiovascular disease. This same premise holds true to many health-related problems including type 2 diabetes, high blood pressure and cholesterol, arthritic, asthma and cancers (Raj & Kumar, 2010; PAGAC, 2008; Daniels et al., 2005; Dietz, 2004).

2.2.2 Psychological outcomes

Psychological benefits of activity

The child psyche has ample to gain from regular physical activity. Now more than ever, special attention is given to the psychological development in youth and much research has been dedicated to identifying how we can best foster healthy psychological development for children. Youth mental health awareness has been brought to the forefront as year after year more children
are being identified as having mental health problems, namely feelings of depression and anxiety (PAGAC, 2008; Weems, 2008). Regular physical activity has been labeled as a great technique in not only avoiding mental health-related disturbances but a technique to reduce and overcome feelings of depression and anxieties in children (PAGAC, 2008, Daniels et al., 2005). A rather controversial study surfaced in 2012 from Chandler and colleagues suggesting that exercise had no effect on depression in a large sample, randomized control study. Upon a fine tooth combing of this study there is evidence that the exercise group did not necessarily engage in a significantly greater amount of physical activity than the control group and the results pertain more to the idea that depression is unaffected by having a professional encourage subjects to exercise regularly.

Kantomaa et al. (2008) specifically studied elementary students and found that those who participated in regular physical activity had better emotional control than those who were regarded as inactive. Claims that suggest otherwise (exercise negatively impacts the emotional control of children) comes from studies that observe naturally occurring free play physical activity that is often disorganized and not closely monitored for safety, fairness and friendly competition, resulting in more emotional outbursts of anger, frustration and violence (Conger, Neppl, Kim & Scaramella, 2003; Shields, Cicchetti & Ryan, 1994).

There is much more harmonizing research that physically active children are generally happier, less stressed, are better able to cope with stress, and have higher self-esteem (Vazou et al., 2012; Kantomaa et al., 2008; Raustorp, Ståhle, Gudasic, Kinnunen & Mattsson, 2005). In relation to the school day, children who engage in regular physical activity have more energy throughout the day, take greater pride in their academic accomplishments and have higher

*Psychological risks of inactivity*

On the other hand, it goes without saying that physical inactivity can have adverse affects on the psychological wellbeing of a child. In both children and adults, studies have shown higher levels of depression, anxiety and stress in subjects that did not engage in regular physical activity (Active Healthy Kids Canada, 2010; PAGAC, 2008; Weems, 2008; Daniels et al., 2005). Inactivity further contributes to lower levels of positive self-perception of esteem, confidence and motivation (Vazou et al., 2012; Ploughman, 2008; Raustor et al., 2005; Schwimmer, Burwinkle & Varni, 2003). Schwimmer et al. (2003) was able to elaborate through their findings that the educational community should pay particular attention to psychological outcomes of physical activity and inactivity as it serves as the foundation of a child’s intellectual growth and capacity.

**2.2.3 Intellectual outcomes**

*Intellectual benefits of activity*

Physical activity does not only feed the body but also the brain. It has been noted throughout cognitive research that there are several positive benefits of physical activity on brain function (Ploughman, 2008; Sibley & Etnier, 2003). This field of research is particularly relevant to the purpose of this paper as it more directly grooms the topic at hand. Much educational research has been conducted exploring the relationship between physical activity and intellect. Specifically among school-age children, physical activity is positively related to academic

Until recently this physical activity brain claim has no hard scientific evidence but instead multiples theories. Weingarten (1973) was supportive of this general claim but theorized that physical activity positively impacts performance on complex cognitive tasks, but has no effect on simple cognitive tasks. This theory is of relevance to the early primary levels where students are more often engaging in simple cognition. To help support this claim brain imaging studies have found that the prefrontal cortex; the part of the brain that is associated with human intelligence and ability to respond to complex problem solving tasks, is more developed in physically active children in comparison with the brains of children who were inactive (Singh et al., 2012; Trudeau & Shephard, 2009; Sibley & Etnier, 2003). To deepen these findings, brain activity research has determined that regular physical activity increases the secretion of neurotrophins, proteins responsible for neural growth and survival (Chaddock, Pontifex, Hillman & Kramer, 2011; Trudeau & Shephard, 2009; Lykissas, Batistatou, Charalabopoulos & Beris, 2007).

A varying but noteworthy perspective comes from Gruber (1978) who theorized that exercise is only beneficial to cognitive performance if the exercise involves coordinated movements that require thought and concentration to execute which may speak to the importance of careful selection of physical activities by teachers when instructing DPA in their classrooms.

Exercise has shown to facilitate executive functions in children (i.e. processes required to select, organize, and properly initiate goal-directed actions, working memory and processing speed), therefore studies demonstrate that the overall academic performance of active children is
significantly higher than their inactive counterparts (Singh et al., 2012; Chaddock et al., 2011; Tomporowski, Davis, Miller & Naglieri, 2008; Sibley & Etnier, 2003). More specifically, Rasberry et al. (2011) detailed that school-aged children who engaged in regular physical activity scored higher grades through improved concentration and attentiveness in the classroom.

*Intellectual risks of inactivity*

In the many two-group experimental and control study design, the opposite relationship can be observed between physical inactivity and cognitive development. Inactive school-aged children tend to show poorer overall academic performance with its contributing factors being poorer concentration and attention span (Singh et al., 2012; Rasberry et al., 2011; Sibley & Etnier, 2003). When comparing students’ performance on standardized testing between active and inactive groups of students, results suggest that inactivity hinders performance on standardized testing (Roberts, Freed & McCarthy, 2010; Trudeau & Shephard, 2009).

### 2.3 Physical Activity Recommendations for Youth

By the mid nineties expansive advances in scientific measurements of physical activity prompted for a revision of the first Canadian Physical Activity Guidelines (CSEP, 2011). The Canadian Society of Exercise Prescription (CSEP) published the updated guidelines in 2011, with support from ParticipACTION and the Public Health Agency of Canada (PHAC). What is unique to these restructured guidelines is that they were developed using scientific protocol to ensure evidence-based information (CSEP, 2011). For the purpose of this paper, the Canadian physical activity guidelines specific to elementary school-aged children (ages 5-11) will be discussed.
2.3.1 Physical activity guidelines for children

The overarching theme of the Canadian Physical Activity Guidelines expresses that “more is better” however, the most current version of the Guidelines provide minimal targets that should be met by Canadians (CSEP, 2011). CSEP (2011) recommends that Canadian children aged 5-11 years engage in at least 60 minutes of moderate-vigorous physical activity (MVPA) each day. More specifically the guidelines recommend that children engage in vigorous intensity activities and strength activities at least three days per week (CSEP, 2011). The guidelines include pertinent information necessary to gauge the intensity of an activity using a 10-point scale and observable features of physical activity. Moderate intensity physical activity would be considered an exertion of a 5 or 6 out of 10 and be observed by some sweating and breathing somewhat laboured; where vigorous intensity exercise is considered an exertion level of a 7 or 8 out of 10 where children are visibly sweating and out of breath (CSEP, 2011). These guidelines illustrate that significant health benefits can be achieved when children meet the recommended exercise levels on a consistent basis.

2.3.2 Memorandum 138: daily physical activity requirement

In response to Ontario’s Chief Medical Officer, Dr. Sheela Basrur who instructed that all social and political sectors must unify their efforts to produce positive health changes in order to diminish factors contributing to youth overweight and obesity province-wide; the Ontario education system has stepped up to their responsibility (Ministry of Health and Long-Term Care, 2004). In October 2005 the Ontario Ministry of Education (MOE) developed a new policy titled Policy/Memorandum No.138 subjected around Daily Physical Activity (DPA) in elementary schools, Grades 1-8 (Ontario, 2015). This policy requires that all Ontario “school boards must
ensure that all elementary students...have a minimum of twenty minutes of sustained moderate to vigorous physical activity (MVPA) each day during instructional time;” which means time allotted to physical movement that is in addition to the movement accumulated during the physical education curriculum (gym class) and/or outdoor recesses (Ontario, 2015). The DPA requirement is an initiative encouraging healthier school environments throughout the province, all while positively influencing students’ readiness to learn and overall academic achievement (Ontario Physical and Health Education Association, 2006). The Ontario Ministry of Education (2007) suggests that DPA in the classroom can include but is not limited to walking, dancing and active games; but much like the Ontario education curriculum, has left it in the hands of classroom teachers to use creative and innovative ways to meet this requirement.

2.3.3 Memorandum 138 in action

ParticipACTION (2015), a national non-profit Canadian organization that is dedicated to helping Canadians sit less and move more, has revealed their annual report card that details how well Canadian children as a whole are meeting the recommended physical activity. For 2015, Canada’s youth was given a ‘D-‘ in overall physical activity, which reflects that only about 25% of this population is meeting the recommended levels of physical activity. The success level of the DPA requirement by Ontario elementary educators mimics a similar, if not more adverse trend. With the recent research that has been conducted on the implementation of this policy in Ontario elementary schools, educational researchers have discovered that less than half of Ontario teachers are meeting the DPA requirement (Brown & Elliot, 2015; Robertson-Wilson & Lévesque, 2009). Researchers in this field caution that accurate data collection methods used in their studies are lacking due to the constraints of ethics and intervention in childhood research (Stone, Faulkner, Zeglen-Hunt & Bonne, 2012). However, a fairly accurate picture of
Memorandum No.138 in action can be illustrated when it is contrasted against ParticipACTION’s annual grade allocation as previously mentioned. In the years since the DPA policy was developed, the overall physical activity levels among school-aged children has in fact fallen from a ‘D’ to an ‘F’, putting into perspective the idea that the DPA is not being successfully incorporated into instructional time, nor it’s goals being achieved with any great success (ParticipACTION, 2015).

Of the few Ontario educators that are attempting to incorporate the DPA policy into their classroom, DPA activities often struggle to meet the specified requirements of duration and intensity outlined in the policy (Stone, Faulkner, Zeglen-Hunt & Bonne, 2012).

### 2.4 Supportive Resources Available for the Daily Physical Activity Requirement

On the surface, the teacher-focused research illustrates the idea that upon the development of the DPA policy, the quality and quantity of supportive resources is regarded as insufficient (Brown & Elliot, 2015; Roberston-Wilson & Lévesque, 2009). The studies that represent this idea include a brief overview of the resources available for teachers but these studies predominately focused on the teachers’ perspectives of resource availability. This section will identify the resources I have found through my research; all of which are accessible to educators using the same methods of access as I have done.

Along with the development of DPA policy, the Ontario Ministry of Education (2005) partnered with the Ontario Physical and Health Education Association (OPHEA) to develop a variety resources for teachers that are available for download on the MOE website. Here, an e-learning module, grade specific guides for teachers, a guide for principals and a guide for the school board can be accessed (Ontario, 2005a; Ontario, 2005b; Ontario, 2005c; Ontario, 2006a;
Ontario, 2006b). First to note is that on the MOE website where the DPA policy is permanently posted, there are no external links to these resources. Furthermore, this resource list can only be accessed in the “PARENT” section of the MOE website.

Major institutions including the Ontario College of Teachers (OCT) and the Ontario Physical and Health Education Association (OPHEA) and the Toronto Catholic District School Board (TCDSB) have made professional learning workshops and courses available for teachers that provide explicit instruction for implementing DPA in the classroom. The OCT offers Health & Physical Education AQ courses (part 1 and part 2) that specifically study the current board policies and guidelines as well as strategies for implementation (OCT, 2016). OPHEA workshops including “Getting Active in any Space” and “Dance your way to DPA” are available by request as well as a “DPA Kit” available for purchase. The ‘On Your Way With DPA’ is an online resource developed by the TCDSB and is designed to help teachers provide quality DPA by suggesting twenty physical activities that can be done in twenty minutes. It is organized by grade levels and suggests implementation tips appropriate for that age group (TCDSB, 2005).

Funding for policy implementation is another important resource that contributes to the success of this policy in action. Deputy Minister Ben Levin, reported that the Ontario Ministry of Education invested $10.7 million towards supporting this initiative and included in this is a one time funding opportunity of $384,000 that can be used for professional development, school equipment and human resources in order to get this policy off the ground (Ontario, 2005). Ongoing funding for the DPA initiative can be obtained through various grants dedicated to daily physical activity within the school such as the Goodlife Kids Foundation Grant ($10,000 annually) and the Healthy Active Kids Grant ($15,000 annually) (OPHEA, 2015).
It is important to note that Brown and Elliot (2015) touched on the idea that although training sessions for DPA were available through school boards, they were not optional and offered infrequently. Further research to include a deeper understanding of the tactical use of DPA resources by elementary school teachers should be conducted. Specifically, teachers’ knowledge of the resources available, the barriers to using these resources and the perceived effectiveness of the resources should be further explored.

2.5 Barriers of DPA Implementation in the Classroom (Teachers’ Perspectives)

The research has collected several perspectives of Ontario elementary teachers with regards to the perceived barriers of incorporating DPA in their classrooms. From this focus, six themes appeared: barriers include issues of resources, knowledge, priority, time, space and classroom management (Brown & Elliot, 2015; Patton, 2012; Chorney, 2009; Robertson-Wilson & Lévesque, 2009; Robinson & Melnychuk, 2008; Dwyer et al., 2003).

2.5.1 Inadequate resources

As mentioned above, it is fact that Ontario has administered resources to help support teachers in the implementation of DPA in their classrooms; however the question is: how do teachers perceive the effectiveness of these resources in their own practice? The research targeted at exposing teacher perceived barriers to DPA implementation reveals that most teachers felt that resources were insufficient (Brown & Elliot, 2015; Chorney, 2009; Dwyer et al, 2003). Among this research topic, very few teachers voiced that resources were unavailable or inaccessible (85% reported they were available and accessible), but rather impractical or ineffective (Robertson-Wilson & Lévesque, 2009; Dywer, 2003). Many teachers agree that in order for this initiative to be properly implemented into schools, a physical education specialist
was necessary but unavailable in the majority of schools (Brown & Elliot, 2015; Patton, 2012, Robertson-Wilson & Lévesque, 2009). Furthermore, some teachers explained that perceived insufficient teacher resources is attributed by additional barriers such as inadequate time to fully explore and understand the resources provided (Brown & Elliot, 2015; Patton, 2012; Robertson-Wilson & Lévesque, 2009).

Chorney (2009) expressed that the quality of DPA instruction given by teachers is likely to be subpar if teachers do not have effective resources to reach the level of knowledge required to effectively implement the DPA initiative.

2.5.2 Inadequate knowledge

The many discourses that have been discussed in this literature review are all very important for teachers to understand. The research has noted that not enough teachers have adequate knowledge of physical education: benefits of physical activity, consequences of inactivity and how these relate to their classroom (Patton, 2012; Morgan & Hansen, 2008; Dwyer et al., 2003 Curtner-Smith, 1999). Furthermore, teachers’ idea of what moderate-vigorous activity looks like in their classroom does not always coincide with the policy’s intention. This discrepancy stems from the lack of understanding the terminology used in the policy (Patton, 2012; Morgan & Hansen, 2008).

In Patton’s (2012) qualitative research, 45% of teachers reported being “somewhat” knowledgeable of Ontario’s DPA requirement in elementary schools. At first glance this statistic is alarming on the premise that if teachers are not fully aware of the policy details, it is near impossible that they are successful in satisfying these requirements on a daily basis (Patton, 2012; Curtner-Smith, 1999). However in this same teacher focused study, almost 90% of
Subjects reported that they had adequate general knowledge of physical activity to conduct DPA despite their claims of lacking formal health and physical education training. From this alternative perspective, Patton (2012) suggests that health knowledge and competency in leading physical activity are not seen as barriers to DPA delivery.

Patton (2012) also noticed that teacher’s intention does matter. Physical activity in the classroom yields greater benefits when the teacher is knowledgeable about why DPA is being implemented in their classroom (Patton, 2012; Robinson & Melnychuk, 2008; Curtner-Smith, 1999).

2.5.3 Low priority

This section, DPA placed as a low priority by the majority of classroom teachers, shed light on contradicting ideas. When asked, every teacher studied expressed that DPA should be a priority at the elementary level; however these teachers admitted that DPA is not a high priority for them in their classroom action (Brown & Elliot, 2015; Patton, 2012; Dwyer, 2003). For many teachers, implementing the DPA policy takes a back seat when teachers compare it against other curriculum subjects for two distinct reasons; one, DPA is not allotted any space on report cards and two, teachers perceive there to be no consequences if they do not meet the requirements of this policy (Brown & Elliot, 2015). After coming across this collective response, I returned to my own research, searching for specified consequences of failure to meet this requirement. Needless to say, I found no specific penalty, but found that the Ministry of Education, school boards and principals were very lenient in the gradual implementation of this policy; expressing that they would like to see this policy be observable in classrooms by the end of the 2005 school year (Ontario, 2005).
Teachers feel they have no choice but to give low priority to DPA because of the greater societal pressure on academics. For decades, North American society has perceived curriculum subjects such as science, mathematics and literacy to be of higher priority than subjects such as visual arts, music and physical education (Dywer, 2003; Abu-Hilal, 2000; Andre, Whigham, Hendrickson & Chambers, 1999). To a certain degree is it possible that classroom teachers internalize this societal idea and therefore it is what is observable in their classroom. Teachers described this idea of societal pressure further by expressing that they feel personally accountable, in their role as a teacher, to dedicate their time to helping students achieve high performance levels on standardized testing above all other roles (Dwyer, 2003).

2.5.4 Inadequate time

The most common response expressed by teachers regarding perceived barriers to DPA delivery in the classroom was insufficient time (Brown & Elliot, 2015; Patton, 2012; Chorney, 2009). Among a group of Toronto teachers studied, they agreed that time was the single most important barrier to meeting the DPA requirement (Brown & Elliot, 2015). Many teachers admit that they do not deliver sufficient DPA on all days of the school week simply because there is no time (Brown & Elliot, 2015). Often the teachers studied held the belief that when sufficient instructional time is allotted to physical activity it is being taken away from time that would be otherwise spent on core curriculum subjects (Brown & Elliot, 2015; Patton, 2012). This perceived concept sheds light on the idea that it is likely that teachers are not incorporating DPA across the curriculum but instead segregating it as an additional subject demanding it’s own attention.
Teachers perceive that the new changes in the Ontario elementary curriculum has increased the demand on teachers leaving even less time for them to plan DPA activities on a regular basis (Brown & Elliot, 2015; Patton, 2012). When asked, teachers often suggested that in order to overcome time as a barrier they would need to force DPA into their timetable and that this would be made easier if there was greater advocacy from higher up (i.e. principals, school board) (Brown & Elliot, 2015).

2.5.5 Inadequate space

DPA implementation in the classroom is often identified as problematic due to space constraints (Brown & Elliot, 2015; Patton, 2012; Chorney, 2009; Dywer et al., 2003). In Brown and Elliot’s (2015) study, all teacher participants described features of the school physical environment as barriers. Portable classrooms were identified as having the greatest space constraint for DPA and often the school gymnasium was in use by other classrooms or events.

There is a greater concern with this perceived barrier. Space constraints lead to safety concerns; therefore key policy factors such as intensity are often modified in order to maintain a safe environment (Brown & Elliot, 2015; Patton, 2012). In turn, these limitations make it even more difficult to achieve MVPA in Ontario elementary classrooms (Brown & Elliot, 2015).

2.5.6 Classroom management

Classroom management concerns is a highly agreed upon barrier to implementing the DPA policy, teachers avoiding DPA practices altogether because it creates too much excitement and chaos in their classrooms (Brown & Elliot, 2015). Of the participants studied by Brown and Elliot (2015) many voiced the struggle of getting their students to settle down after a bout of DPA. Teachers also indicate that there is a fine balance between control and fun when it comes
to DPA activities, when activities are too controlled for the purpose of maintaining order in the classroom, it limits the students’ enjoyment of the activity (Marzano, Marzano & Pickering, 2003). Although it appears to be easier said than done, Marzano et al. (2003) mentions that having a managed classroom during DPA activities does not equate to taking the “fun” out of the activity, but suggests that DPA routines, habits and expectations must be established to allow controlled and effective fun to happen.

2.6 Effective Practices For Integrating DPA

Along with the introduction of the DPA policy by the Ministry of Education, suggestions were given to educators with regards to effective practices for integrating DPA into their classrooms. Since, further research in the area has allowed multiple strategies to surface including the concept of communities of practice (COP), specialist support and cross-curricular learning.

2.6.1 Communities of practice (COP)

Proposed by Etienne Wegner (2006), the concept of communities of practice (COP) involves “a group of people who share a common passion and learn ways to improve their practice through regular interaction” (p.1). A similar concept, peer coaching, is used among educators to teach and reinforce evidence-based skill development, while being able to cater their skills to fit their personal styles and situations (Lee, Gibson & Naylor, 2013). In practice, this may look like regular staff meetings, which focus on sharing ideas and learnings related to integrating DPA, or frequent social co-participation, or ‘teacher talk’ (Kerno, 2008). A COP provides the opportunity to problem solve, request information, seek experiences, reusing assets, coordinating, discussing developments, mapping knowledge and identifying gaps about a
focused, relevant topic in a group collaborative setting (Wegner, 2006; Wegner, McDermott & Snyder, 2002). Typically a leader or leaders with previous knowledge, commitment or dedication to a particular practice, in this case DPA, will assume the role of the ‘peer coach’ and will initiate the formation of a COP and be a lead source in providing teaching colleagues with knowledge, advice and teaching strategies for improved integration of DPA into the classroom (Lee et al., 2013). The ultimate aim of a COP in the educational setting, specifically as it relates to DPA implementation, is to provide open communication, knowledge exchange, quick access to resources and collegial support and is said to hold COP members accountable to their actions, goals and practices (Kerno, 2008; Maeda & Murata, 2004).

Lee et al. (2013) tested the COP approach with a group of educators who shared interest in improving the DPA practices within the classroom, and although existing literature named this approach to be effective for improving the implementation of DPA into the classroom, they found that the COP approach was not feasible, highlighting that members of the COP reported having insufficient time to attend and contribute to COP activities and were skeptic that they were able to improve the DPA problem they were currently facing.

### 2.6.2 Specialist support

In terms integrating DPA into the classroom, specialist support in the form of specialized physical education teachers is believed to be an effective practice (Whipp, Hutton, Grove & Jackson, 2011; Faucette, Nugent, Sallis & McKenzie, 2002). Specialized Phys. Ed teachers have more experience, knowledge and resources relating to DPA than that of a generalist teacher, thus making them more competent in providing physical activity instruction to students (Faucette et al., 2002). In research conducted on outsourcing the DPA program to specialized Phys. Ed
teachers, scheduling conflicts were too great for this degree of specialized supports (Whipp et al., 2011). However, generalist teachers found it extremely helpful when frequent support from a physical education specialist was provided (Faucette et al., 2002). Faucette et al. (2002) reports that generalist teachers found noticeable improvements in their skills, knowledge, and confidence in DPA integration as a result of observing and working alongside the specialized Phys. Ed teacher at their school.

2.6.3 Cross-curricular learning

Since the introduction of the DPA policy, the health and physical education curriculum document has been revised to specifically include DPA as a specific expectation (A.2.1) throughout grades one to eight (Ontario, 2005, p. 26). In the curriculum document the ministry suggests that DPA can be incorporated into the instructional day simply by providing its requirements during a scheduled health and physical education class. However, the ministry refers back to the DPA policy document for further information on how to effectively integrate DPA outside of Phys. Ed class, where it suggests that best practice includes integrating physical activity into other curriculum areas (Ontario, 2005).

Cross-curricular learning “provides students with the opportunity to learn and use related content in two or more subjects” (Ontario, 2015, p. 57). The Ministry believes that leaving DPA into the curriculum promotes meaningful learning and ‘provides students with multiple opportunities to reinforce and demonstrate their knowledge and skills in a range of settings’ and can be used as a differentiated instruction strategy (Ontario, 2015, p. 57). Cross-curricular integration of DPA is also a potential solution to teacher perceived time constraints, where the twenty minutes of physical activity is accounted for within a forty-five minute core subject
lesson (Burton & VanHeest, 2007). Although cross-curricular DPA integration may mediate some barriers, teachers report that preparation time for lessons increases when attempting to include DPA into a lesson plan in a meaningful and appropriate way (Brown & Elliot, 2015).

2.7 Motivating Factors for Teachers

Teacher motivation is frequently discussed in the literature as a key facilitator to DPA implementation, as is the case for the implementation of any teaching strategy (Brown & Elliot 2013; Patton, 2012). Ontario teachers are motivated to achieve the DPA policy requirements when there is a high degree of accountability, a high personal value placed on DPA and when positive outcomes by their students are visible.

2.7.1 Motivated by accountability

Teachers report that the more accountability there is to implement the DPA policy, the more motivated they are to meet the requirements (Brown & Elliot, 2015). Varying degrees of accountability have been suggested, from casual check-ins from administration to including DPA on report cards (Brown & Elliot, 2015). In Brown and Elliot’s (2015) study, numerous teachers discussed that accountability could be exponentially increased through monitoring of DPA by administration or by including it in student report cards, one participant stating that “once there is that accountability piece, then oh, you better believe you will have teachers doing twenty minutes of [DPA]” (Brown & Elliot, 2015, p. 9). However there is debate around the formal assessment of DPA as it is holds the potential to invalidate the intent of the policy, which is to help students develop a positive relationship with physical activity in hopes of making it a life-long habit (OPHEA, 2006). Patton (2012) understands that when school administration teams hold their teachers accountable for proper delivery of DPA through consistent check ins and
follow-ups, teachers themselves begin to see the importance of DPA and this value is then passed along to the students, ultimately accomplishing the initial intent of the policy.

2.7.2 Motivated by personal value for DPA

In all existing literature around the topic, every single teacher studied expressed that DPA should be a priority, giving the sense that teachers do place a high value on health and physical activity (Brown & Elliot, 2015; Patton, 2012; Dwyer, 2003). There has been a recent trend in philosophies of education that place great emphasis on educating the whole student, which holds the idea that good teaching includes placing high value on each student’s mental, emotional and physical wellbeing (Yoder, 2014; Estes, 2004; Sandeen, 2004). The DPA policy stands firm behind this philosophy as it provides elementary students with opportunity to make a positive impact on students’ physical, mental and social wellbeing through engagement in regular physical activity (Ontario, 2005).

Specific survey questions elicited by Patton (2012) further demonstrate that Ontario teachers place high value on physical activity for both themselves and their students, with over 94% of respondents placing an above average value on physical activity and more than 60% agreeing that the DPA program should be a permanent component of the curriculum. However, it is important to note that although in theory having high personal value for DPA motivates implementation it is not always translated into practice. The same groups of teachers who are in favour of DPA also admitted that DPA is not a high priority for them in their classroom (Brown & Elliot, 2015; Patton, 2012; Dwyer, 2003) and that often teachers who decide to participate in DPA related research studies are likely to have a more positive outlook of the DPA policy than those who did not participate (Patton, 2012).
2.7.3 Motivated by positive outcomes in students

Teachers appear to be aware of the positive outcomes DPA can have on students, but it is when these outcomes are observable in their own classroom that they are motivated to continue to implement the policy (Brown & Elliot, 2015). A principal in Brown and Elliot’s (2015) study states that teachers need to “see the benefits that [DPA] has for the students and their abilities” (p. 5) and when this is achieved it serves as an implementation facilitator. The reverse is also true; teachers are de-motivated to include DPA into their school day when they observe negative outcomes by their students (Brown & Elliot, 2015).

Fortunately, the majority of teachers previously studied observe many positive outcomes from DPA including improved attention, concentration, emotional behaviour and overall academic performance (Singh et al., 2012; Rasberry et al., 2011; Kantomaa et al., 2008). Furthermore, the majority of the respondents in Brown and Elliot’s (2015) study report that DPA helps create a better overall learning environment in the classroom, one that is mutually beneficial for both teachers and students, thus a great motivating factor.

2.8 Conclusion

In this literature review I looked at research on global health issues of sedentary behaviour and childhood obesity, the benefits of physical activity and the consequences of inactivity. This review explains why the DPA initiative was developed for elementary grade students. It also raises questions about the current success of DPA implementation in the classroom and points to the need for further research that explores the factors that facilitates policy delivery. In light of this, the purpose of my research is to learn what factors, professional, educational and personal, contribute to teachers’ ability to meet the DPA requirement and for
their success stories illustrated during qualitative interviews will serve to improve the fulfillment rate of Policy/Memorandum No.138’s requirements by the Ontario elementary schoolteachers community.

CHAPTER 3: METHODOLOGIES

3.0 Introduction to the Chapter

In this chapter, I outline the research methodology decisions made for this study and propose a rationale for these decisions. I begin by discussing the research design followed by the instruments used for data collection. Then I identify the sampling criteria and recruitment strategy I used to find my participants and provide a brief biography of each. Next, I describe how the data was analyzed. I provide details with regards to ethical considerations. Finally, I reflect on both the strengths and limitations of this study.

3.1 Research Procedures

Social constructivism pertains to the idea that meaning and understanding are socially constructed by individuals through their interactions with the world; developing a reality that is not fixed, singular or measurable but instead open to interpretation and constantly changing over time (Merriam, 2002; Kim, 2001). Qualitative research supports social constructivist theories as its purpose is to understand the multiple interpretations of individuals in a particular point of time and in a particular context (Merriam, 2002). Within qualitative research there are three overarching theoretical perspectives: interpretive which seeks to understand, critical which involves emancipation and postmodern which strives to deconstruct (Merriam, 2002; Lather, 1992). I am interested in understanding what factors and experiences inform Ontario elementary
teachers’ commitment to implementing daily physical activity into their classroom; therefore an interpretive, qualitative research approach is most relevant.

Merriam (2002) has proposed eight approaches of qualitative research: basic interpretive, phenomenology, grounded theory, case study, ethnography, narrative analysis, critical and postmodern, all in which have commonalities but take different focuses in the way the research problem is asked and then explored. Grounded theory, the approach chosen for this research study, emphasizes on deriving a theory that is ‘grounded’ in the data through inductive reasoning and constant comparative analysis; two techniques that will be described later in this chapter and used in this research study (Glaser & Strauss, 2009; Merriam, 2002; Duffy, 1985). Grounded theory is an appropriate qualitative research approach for this study, as I have devised a theory of how and why teachers’ experiences contribute to satisfying the DPA requirement through identifying themes that are grounded within the interview data.

Qualitative research studies are typically chosen when there is a lack of theory or inadequate existing theories to explain a phenomenon (Merriam, 2002). The current literature regarding the Ontario DPA requirement focuses on theories of why educators are not meeting the requirement, where my qualitative research is one of the first to theorize why educators are meeting the requirement.

3.2 Instruments of Data Collection

In a qualitative research study, the researcher is the primary instrument of data collection (Merriam, 2002). Interviews are a common method of collecting data in qualitative research because the researcher is able to immediately respond, adapt, clarify and summarize the material (Jackson, Drummond & Camara, 2007; Merriam, 2002). For these reasons, conducting
interviews will allow me to gain the richest understanding of my research problem. Among the
various interview formats including structured, semi-structured and unstructured, the semi-
structured protocol is the most common interview format for qualitative research and can be
conducted in both individual and group settings (DiCicco-Bloom & Crabtree, 2006). Individual
interviews allow the research to plunge deeply into the personal accounts of the participants,
where group interviews gives the researcher a broader, more superficial insight (DiCicco-Bloom
& Crabtree, 2006). Since my study aims to deeply understand the factors and experiences that
inform teachers’ commitment to implementing daily physical activity into their classroom,
individual interviews are most appropriate for this study.

Where structured interviews typically yield quantitative data and unstructured interviews
are usually coupled with observations, a semi-structured interview includes a set of
predetermined, open-ended questions and allow for further questions to emerge as the dialogue
between the researcher and the participant unfolds (DiCicco-Bloom & Crabtree, 2006). Interview
questions that are open-ended allow participants to offer in-depth responses that detail their
personal experiences, where close-ended questions generate forced choice responses and leave
little room for explanation (Jackson et al., 2007). Furthermore, according to Jackson et al. (2007)
semi-structured, open-ended, informal interviewing is preferred as it allows ‘greater flexibility
and responsiveness to emerging themes for both the researcher and the participant’ (p. 5). Since
the purpose of this study is not to produce quantitative data and no observations were made, the
open-ended, semi-structured interview format was selected for this research study, as my purpose
is to decipher themes related to the contributing factors and experiences of the participants
through dialogue.
My interview protocol (see Appendix B) was organized into four sections. First, I asked questions relating to the participant’s teaching background, followed by questions about their perspectives and beliefs about the DPA requirement, then their current practices of DPA in the classroom and concluded with questions regarding supports, challenges and an opportunity to give DPA advice for future educators.

3.3 Participants

Selecting a study sample that is relevant, practical and within the approval standards is the next step in this research project. Here, I outline and explain the criteria upon which the participants have been chosen and the method that was used to recruit these participants.

3.3.1 Sampling criteria

Based on the methodological parameters of this qualitative research design, two non-probability sampling strategies have be applied: convenience and purposive sampling. Convenience sampling involves selecting participants that are readily accessible (Marshall, 1996). Given its name, convenience sample is the most convenient and least costly of the researcher’s time, money and effort (Marshall, 1996). In return for convenience, this method of sampling may produce a sample that is not representative of the larger population under study and therefore may yield poor results (Marshall, 1996). To improve the quality of my sampling procedure, purposive sampling has been dually applied. Purposive sampling involves selecting participants that will be the most productive in answering the research question (Marshall, 1996). Purposive sampling requires a judgment by the researcher on whether a participant is likely able to provide “rich” insight on the subject at hand (Merriam, 2002; Marshall, 1996). Successful
purposive sampling requires a degree of background knowledge of the participants, which can be obtained through the development of sampling criteria (Marshall, 1996).

Over the course of this research investigation I was a pre-service teacher growing my professional connections within the Greater Toronto Area (GTA) and therefore I relied on these professional connections in terms of convenience sampling to recruit participants. The participants have been more explicitly selected through purposive sampling where I made an educated judgment by means of the following sampling criteria:

1. Participant is a practicing Ontario elementary teacher.

2. Participant is teaching in the grade level 1 – 8.

3. Participant is a full-time, generalist teacher.

4. Participant is successfully implementing DPA in their classroom.

5. Participant demonstrates leadership and commitment to DPA and/or physical education.

The sampling criteria I developed for the purposes of this research is highly relevant to the topic of study in order to gain the richest possible data. First, it is important that the participants are practicing Ontario elementary teachers because Policy No. 138 (the DPA requirement) calls on the duty of Ontario elementary teachers to fulfill this requirement. Secondly, this policy specifically applies to all Ontario students in Grades 1 through 8. The kindergarten level is not explicitly named in this memorandum, therefore it is expected that my sample of teachers are teaching the Ontario students that this policy directly applies to. In order to get a fuller picture of how teachers are implementing DPA in their classroom each day, the
teachers chosen for this study needed to be full-time teachers that are present in the classroom for the majority of the day. I did not choose to accept specialized teachers (i.e. gym prep teachers) because I wanted to better understand how teachers who were responsible for multiple curriculums were implementing DPA. Based on the ample research that pertains to Ontario teachers who are not successfully meeting this requirement I wanted to hear from the voices who are less often heard; the teachers who are successfully implementing DPA in their classroom, which is why they were chosen for this sample. Lastly, because this study is investigating the identities of teachers, it is imperative that the participants demonstrated leadership and commitment to DPA and physical education as at least a small part of their identity.

3.3.2 Recruitment

To recruit participants for this research study I engaged in conversations about my research with my associate teachers during my practicums and drew upon their references of other staff members or external teachers they thought may be interested in participating in my study. I also engaged in conversations with other pre-service teachers about their practicum experiences and drew on the connections they made with their associate teachers and their respective schools, having them identify any of these connections as being suitable for my study. Lastly, I created a short description of my research topic along with the sampling criteria and distribute it to family members, friends and colleagues that know practicing teachers in Ontario.

3.3.3 Participants biographies

Participant 1 – Ted

Ted has been a primary/junior educator since 2010. Ted has had experience teaching Grades 2 to 4 thus far in his career and currently teaches in a Grade 3/4 split classroom. Ted
began his full-time teaching career and has remained with Thames Valley District School Board, being a member of his current school for the past three years. In addition to his role as a teacher, Ted runs various intramural sports, coaches the junior and senior basketball teams as well as the cross-country club and assists with the school’s dance team. As an avid and dedicated runner, physical activity has always been a personal interest and passion for Ted.

Ted proclaims that physically active learning is a strong component of his teaching philosophy and expressed his firm, supportive stance behind the Ministry mandated DPA policy as we move into a technological age with increasing sedentary practices.

Participant 2 – Kim

Kim has been a primary/junior educator since 2012. Kim has had experience teaching Grades 2 to 4 as well as the Autism program and currently teaches a Grade 3/4 split. Always a member of the Toronto District School Board, this is Kim’s fourth year at her current school. In addition to her role as a teacher, Kim runs the track and field club, organizes the school’s annual free throw competition and has initiated a Best Buddies program that focuses on social skill development. As both a Pilates student and instructor, physical activity has always and continues to be a personal interest and passion for Kim.

Kim declares that she consciously encompasses the DPA policy into her teaching philosophy, saying it is her way of placing emphasis on educating the whole student, mentally, physically and emotionally; understanding that daily physical activity helps combat the rising stress levels and screen time of today’s youth.
3.4 Data Analysis

In qualitative research studies it is best practice to be constantly engaged in an analytical process throughout all phases of the research (Merriam, 2002; Thorne, 2000). It is through rigorous data analysis that the database of information generated is processed into findings (Thorne, 2000). As previously mentioned, the raw data for this study was gathered using semi-structured interviews, which were transcribed to generate a database of information.

To make meaning of the database of information I have used the constant comparison analysis technique. This technique involves taking each piece of data and comparing it to the others (Glaser & Strauss, 2009; DiCicco-Bloom & Crabtree, 2006; Merriam, 2002; Thorne, 2000). Here, I have compared each of the interviews against one another, which has allowed me to identify similarities and differences among the experiences of the participants. This constant comparison has allowed me to recognize frequent themes that emerge from the data, the ultimate purpose of my data analysis.

I have developed predetermined coding categories with operational definitions of each category as suggested by Potter and Levine-Donnerstein (1999). Using the predetermined codes I highlighted passages in the transcripts that pertain to each category. Any information that was not coded using the initial coding categories was analyzed to determine if it represents a new code or considered null data.

Like many qualitative studies, the data analysis process of this study required inductive reasoning to interpret and organize the meaning of the data. Inductive reasoning is a strategy used in qualitative research that uses data to generate ideas in the direction from particulars to
generalizations (Ketokivi & Mantere, 2010; Merriam 2002; Thorne, 2000). My data analysis makes broader generalizations based on the particular accounts of the study sample.

3.5 Ethical Review Procedures

The three core values; beneficence, autonomy and justice as outlined in the Belmont Report, summarizes the basic ethical principles which must guide all research involving human participants (Department of Health, 2014; DiCicco-Bloom & Crabtree, 2006). The ethics board of research has approved the overall research design of this Master’s of Teaching Research Paper (MTRP) research project. DiCicco-Bloom and Crabtree (2006) explain that it is imperative for ethical qualitative research to use a “do good and avoid harm” approach and elaborate on this approach by identifying four ethical issues specific to the interview process: decreasing the risk of unforeseen harm, safeguarding participant’s information, appropriately informing participants about the study and decreasing the risk of exploitation.

The first ethical issue described by DiCicco-Bloom and Crabtree (2006) is decreasing the risk of unforeseen harm. There is an unpredictable nature to semi-structured interviews allowing the interviewer to add or change the interview questions on the spot. This allowance can potentially redirect the interview in unforeseen ways (DiCicco-Bloom and Crabtree, 2006). Also, due to the conversational tone of semi-structured interviews, when interviewers engage in active listening while simultaneously reflecting on the responses given, they may respond back to the interviewee with their own personal information, opinion or experiences, which may result in unintended harm to the respondent (DiCicco-Bloom and Crabtree, 2006). There are no known risks to participation in this research study. In order to decrease the risk of unforeseen harm I have remained as neutral as possible in my responses, being careful not to add my own personal
anecdotes to the interview. Furthermore, I have as closely as possible followed my predetermined research questions while staying open to the possibility of new directions raised by participants.

Safeguarding participant’s information is DiCicco-Bloom and Crabtree’s (2006) second ethical issue that must be upheld. It is imperative that above all, the interviewee and their information remain anonymous (Department of Health, 2014; DiCicco-Bloom & Crabtree, 2006). In order to maintain anonymity in my study, all participants have been provided with pseudonyms and any identifying indicators have not been disclosed. To ensure that the participant’s information is protected the data has been stored on a password-protected computer where only the course instructor and myself have access to this data. Participants have been reassured that the data will be stored for up to five years before it is permanently destroyed.

The third ethical issue demands that participants are appropriately informed about the study (DiCicco-Bloom & Crabtree, 2006). It is the responsibility of the researcher to ensure that the participants have enough information to provide informed consent (Department of Health, 2014). To fulfill this responsibility I have included the purpose of the study, the potential ethical implications involved, the research protocol and the rights of the participant in a detailed written consent form (see Appendix A). Participants have been informed both verbally and in writing of their rights as a participant, which includes the right to withdrawal from the study at any point without penalty and the right to withdrawal from answering any question(s) that exceeds their comfort level (Department of Health, 2014; DiCicco-Bloom & Crabtree, 2006). Once properly informed it is mandated that each participant signs and dates the consent form.
Finally, DiCicco-Bloom & Crabtree (2006) explain that it is necessary to decrease the risk of exploitation, meaning that “the outcome of interview research should enhance the freedom of the participants more than it enhances the author’s career” (p. 6). Furthermore, it is essential to acknowledge the contributions the participants made to the research and compensate them for their time and effort in some way (DiCicco-Bloom & Crabtree, 2006). I have used the highest degree of transparency by providing participants with a copy of their own transcript to reflect upon as well as encouraged participants to read and reflect on the final publication of this study to further inform their teaching. I have shared my sincere appreciations for their contributions at the end of the interview and in follow-up communications.

### 3.6 Methodological Limitations and Strengths

Throughout this chapter many of the strengths and limitations of the individual methodological decisions have been explained, however the limitations and strengths of this research study as a whole need be mentioned.

Due to the design’s in-depth nature and the amount of data analysis it requires, qualitative research of this sort often uses a small, selective sample therefore the researcher is unable to generalize the findings to a greater population (Carr, 1994; Duffy, 1985). A significant limitation to my research study is the very small sample size of only three teachers and in turn, I am unable to generalize my findings to the entire teaching population. However, with this small sample of three teachers I am able to gain a rich, in-depth understanding of their real lived experiences.

There is an inverse relationship between reliability and validity within research, where reliability increases and validity decreases as more controls are placed on variables through a process of standardization (Carr, 1994; Potter & Levine-Donnerstein, 1999). My qualitative
research design has limited reliability due to the un-standardized process of semi-structured interviewing and the reliance on my interpretation of the data. This qualitative study design finds greater strength in its validity as the research takes place in a more natural setting (Carr, 1994; Potter & Levine-Donnerstein, 1999). In particular, my research is dependent on what teachers say they do as no observations were made in the natural setting of a classroom, and therefore weakening this studies validity.

Carr (1994) also explains the strength in the relational nature of qualitative research that uses face-to-face interviews as this level of interaction allows the researcher to “obtain first-hand experiences that provide valuable and meaningful data” (p. 3). Bryman (1988) acknowledges that the more time the researcher spends with the participants the data is likely to be more honest and valid due to the established trust between the researcher and the participant. However, Bryman (1988) also acknowledges that a close researcher – subject relationship could potentially distort the findings of the study in the form of researcher interpretations and biases. By collecting my data through a single occasion, sixty-minute interview with each participant I was able to develop a good rapport and a level of trust without infringing on a bond that is likely to amplify my assumptions and biases. In the natural circumstance that subjectivities will, in fact, be present, I have continually acted reflexively throughout this process to identify and monitor the ways in which I may have influenced the collection and interpretation of the data, a highly valuable technique suggested in Merriam’s (2002) work.

Finally, it is imperative to note that this study hears only the voice of one stakeholder position (teachers), where the voices of other stakeholders (i.e. parents, students) are silenced. The board of ethics was unable to approve the inclusion of parents and students for reasons such as conflicts of interest and parental approval needed for studying vulnerable populations (i.e.
children). It would have been ideal to interview other stakeholders to gain a more holistic idea of topic of study. Although I received ethical approval to include principals in my protocol, I chose to only include teachers, another potential limitation in this study. It would be beneficial to interview principals as it may be at this level that school-wide DPA is mandated, and therefore I would have been more interested in the experiences of the principal than the teacher, who successfully implements DPA only because their superior enforces it. If the voice of students’ parents could have been heard they may bring insight on what contributions they make to help their child meet the daily physical activity guidelines that promote optimal health and growth. Lastly, student interviews on the topic of the DPA requirement would have painted a more detailed picture of how students are receiving DPA by their teacher and provide direct outcomes of DPA for themselves, oppose to observed student outcomes by their teacher; thus bringing forth any discrepancies in the these narratives.

3.7 Conclusion

In this chapter I have outlined the research methodology I have used to conduct my research. In summary, this qualitative research study used convenient and purposive sampling against an established sampling criterion mentioned earlier in this chapter, to recruit a sample of Ontario educators. Semi-structured interviews were conducted and analyzed using the constant comparison, coding and inductive reasoning in order for themes to emerge. Lastly, ethical considerations, limitations and strengths have been reported. In the next chapter I will report my findings.
CHAPTER 4: RESEARCH FINDINGS

4.0 Introduction to the Chapter

In this chapter I present and discuss the findings that surfaced through research interviews from two educators who are committed to integrating daily physical activity in their classrooms. These findings assist to better understand what personal, professional, and educational factors and experiences contribute to elementary teachers’ competence to implement the Ministry mandated DPA policy.

Through discussion I will identify any convergences and divergences between the participants’ responses and relevant literature. The findings are organized into four main themes:

1. Participants reserve segregated DPA time and plan their activities using online and personal resources.
2. Participants emphasize the positive psycho-emotional benefits of DPA over the physical benefits for both themselves and their students.
3. Participants infer that personal factors are most significant to their competence in meeting the DPA requirement over professional and educational factors.
4. Participants indicate that accountability can be a challenge in incorporating DPA, whether to the habit itself, to their students, or to themselves.

Each theme will be described and supplemented by subthemes, which will include specific evidence from the data and its significance within the context of the literature reviewed. Lastly, I will highlight my key findings and make recommendations for future research.

4.1 Participants Reserved Segregated DPA Time and Planned Their Activities Using Online and Personal Resources.
This section reviews the strategies participants use to implement the DPA policy in their classroom. This section provides insight into how the DPA requirements are successfully being met in hopes to help educators build their confidence and competence in implementing this policy in their own classrooms. Specifically, participants describe their reliance on segregated DPA integration, providing specific examples of what DPA looks like in their classrooms. Also, the participants detail their use of an effective online resource as well as their own specific knowledge of health and physical activity to support their DPA practices.

4.1.1 Participants relied on segregated DPA integration and only mentioned cross-curricular DPA integration when pressed.

Participants were eager and confident when painting an image of what DPA looks like in their own classrooms, being able to draw on specific examples of isolated DPA activities. Ted reserves a twenty-minute block in his daily timetable just for DPA, which include tag games, group jungle, free movement, dancing and strength and endurance exercises. Although Kim does not reserve a specific space in her timetable, she integrates DPA into her classroom in a similar segregated way (including dancing, aerobic exercises, active stretching and Pilates workouts) and uses these activities as a transition between subject areas. The tendency towards segregated practices of DPA, as reported by these teachers is found to be a common practice amongst many Ontario educators who are attempting to implement this policy (ParticipACTION, 2015; Stone et al., 2012). However, segregated DPA integration is contrary to best practices suggested by the Ministry of Education, which instead recommends a cross-curricular integrative approach. These teachers did mention that they attempt cross-curricular DPA, a gold standard practice (Ontario, 2015), but spoke with less detail and confidence about their cross-curricular integration of DPA and found it more difficult to provide specific examples of these in their practice.
For example, Ted mentioned that he attempted to include DPA into his social studies and literacy lessons, and was able to provide some detail on how he incorporated running into his unit on provinces and geographical regions in Canada by connecting it to learning about Terry Fox and his run across the country. Ted prefaced that this cross-curricular attempt likely met the time requirement (twenty minutes) but did not quite meet the intensity requirement (moderate to vigorous physical activity) of the DPA policy. Kim mentioned that some of the DPA activities she selects for her classroom could fall into other curriculum subjects such as literacy, where she explains that she instructs students to do jumping jacks while she calls out a letter, which is their cue to complete their last jumping jack by landing in the shape of that letter using their bodies. Here Kim adds that although there are literacy connections, activities like the one she described were not incorporated into her literacy lessons nor reflect the specific language arts curriculum expectations the students were currently learning about.

Although participants relied on segregated DPA practices, they recognize the benefits of cross-curricular integration, but imply that it is increasingly more difficult to incorporate DPA into a lesson in an appropriate and meaningful way without sacrificing the mandated requirement of twenty minutes of heart pumping physical activity each day. This demonstrates possible tension between the Ministry’s expectations for DPA and teachers’ practical possibilities in implementing it.

4.1.2 Participants commonly pointed to online resources as effective for implementing DPA.

Although participants attempted to provide a range of DPA activities that meet the policy’s requirements, they identified that online interactive resources, such as follow-along
physical activity videos have been most useful to their successful integration. Interestingly, both participants mentioned one specific online resource, GoNoodle, a website that they routinely use in their classrooms. GoNoodle offers a variety of desk-side physical activities geared to elementary-aged students that are designed to get kids moving. Kim indicated that by using GoNoodle and its features, teachers can be assured the policy requirements are being met because they “can sort the videos based on intensity, and choose one that is the appropriate length” which helps them align with the time and intensity parameters outlined in the Ontario Ministry of Education DPA policy.

From the participants’ use of this online resource as well as their personal recall of the DPA policy, they demonstrate a thorough understanding of what the policy entails, including the terminology used and what activities serve to meet the requirement. Ted spoke to the need for DPA to be of “more intense, heart pumping activity” referencing the term “MVPA” which the Ministry defines as “moderate-vigorous physical activity” (Ontario, 2015). Kim deciphered a potential difference between physically active learning and DPA, understanding that the policy expects a level of physical activity that impacts one’s health and not just differentiated learning instruction to meet the needs of kinesthetic learners. Patton (2012) reminds us of this correlation between knowing and doing; many teachers previously studied have inadequate knowledge of the specific policy details and therefore what DPA looks like in their classroom does not coincide with the policy standards. The responses of the participants of this study demonstrate the other side of the correlation found by Patton (2012), suggesting that having in-depth policy knowledge teachers can target the policy requirements with greater success.

4.1.3 Participants identified ways in which they draw on their prior knowledge outside the curriculum to implement DPA.
Along with adequate policy knowledge, participants draw on their own prior knowledge of health and physical activity to supplement their DPA successes. Ted’s lifelong interest in running and Kim’s interest in Pilates has given them entrance to the world of health and physical activity and, as a member of the fitness community, access to its knowledge. Although the participants’ prior knowledge of health and physical activity is unique to their interests, they have used it to their advantage. Ted draws on his running routine, specifically his stretching, warm up and cool down, using a variation of this pre and post exercise routine when leading DPA for his students, a practice that is highly encouraged by the Ministry. Kim draws on her knowledge of Pilates exercises she gained from the hundreds of classes she has led, using ‘snippets’ of her well-rehearsed Pilates routine as her DPA for that day.

Ted and Kim are not unlike the vast majority of Patton’s (2012) research participants that claimed to have adequate general knowledge of physical activity, such as knowing that physical activity is healthy and includes activities such as running, cycling and swimming. However, previous research does not explicitly suggest that these teachers use their general health knowledge as a tool for DPA integration. The responses of these participants brings forth an interesting idea, suggesting that having more than just general knowledge, but specific knowledge of physical activity is a factor that can contribute to successful policy implementation.

4.2 Participants Emphasized the Positive Psycho-emotional Benefits of DPA Over the Physical Benefits for both Themselves and Their Students.

This section reviews the observed benefits participants identified from their students as a result of DPA. This section indicated the benefits of daily physical activity on youth and sheds
light on the idea that the DPA policy accomplishes more than just the physical changes that it was intended for, but includes positive psycho-emotional growth as well. In this section participants discuss the positive impacts of DPA on students’ motivation, focus, attention, confidence, happiness and sense of self. Also, the lack of mention of observed physical benefits of DPA is discussed.

4.2.1 Participants recognized that participation in DPA has a positive impact on motivation, focus and attention.

Both participants utilized the phrase “brain break” to illustrate how DPA positively affects students’ psychological capacity to learn. It can be understood that in the context of the classroom, a brain break is a teaching strategy used when students appear to lose focus, lack motivation or become restless during lessons or work periods. Students are encouraged to take a step away from their learning and come back to it, refreshed. For these educators, DPA is used to achieve this refreshment. Kim observed that after her students participate in a bout of DPA they regain their motivation, focus and attention, which she describes as “getting back on track.” To further this point Ted mentioned more specifically that DPA helps with attentiveness during instructional time, re-motivates students to learn and increases concentration during independent work time.

The outcomes observed by these teachers reflect common findings in the literature, supporting the idea that regularly active students score higher grades through improved concentration and attentiveness in the classroom (Rasberry et al., 2011). Participants did not go as far as explicitly mentioning better academic performance by their students as a result of DPA,
but it may be expected that with the outcomes they do observe, their students, too, parallel previous research findings, experiencing greater academic success (Raspberry et al., 2011).

4.2.2 Participants recognized that participation in DPA has a positive impact on confidence, happiness and sense of self while combating stress and anxiety.

Participants observed a positive correlation between DPA and emotional success in their students. As well, both participants mentioned that their personal DPA routines help relieve and combat stress in their own lives and believe that DPA has the same effect on their students’ mental well being. Although hard to quantify, both Kim and Ted take pride in their classroom dynamic, as one that feels safe and inclusive, allowing the students to be confident and have a strong sense of self. During DPA sessions this dynamic remains and Kim explained that she can “really feel the happiness” in her students during DPA activities.

Tim disclosed, “going for a run helps to clear my mind and generally makes me happier” and believes that by conducting DPA in his classroom he can provide his students with strategies to help combat stress and anxiety.

Both participants acknowledged the presence of various stressors during a school day, a big one being the assessment and evaluation of students’ skills. This understanding has lead to participants having strong beliefs that DPA should not be assessed; their reason being, it is likely to reverse all positive emotional outcomes. Kim mentioned that because DPA is included in the health and physical education curriculum she feels there may be some expectation from the Ministry to assess and evaluate this curriculum strand. Ted added that by assessing DPA the “fun goes out the window” and believes that for many students it would amplify stress and anxieties around physical activity. But rather than challenge its place in Ontario expectations, these firm
opinions can be used to reiterate the intent of the DPA policy, which is to help students develop a positive relationship with physical activity in hopes of making it a life-long habit (OPHEA, 2006).

Furthermore, this finding brings necessary focus to youth mental health, a topic that has been given increasing attention. PAGAC (2008) would agree with the importance of successful implementation of the DPA policy as they advise that regular physical activity is a great technique to reduce and overcome feelings of depression and anxieties in school-aged children.

4.2.3 There was an absence of observable physical benefits mentioned by participants.

As much as themes develop through the thoughts, ideas and words of the study’s participants, themes may also emerge from what is not said. Both participants provided many observable psycho-emotional benefits of DPA, but did not make specific mention of observable physical benefits related to daily integration of physical activity in both their own lives, or their students’. Ted revealed, “I have observed similar benefits from DPA in my own life and for my students, more in the less physical ways.”

Literature has emphasized that there are numerous physical benefits of regular exercise, including healthy bones, weight management and lower risk of chronic disease (Juonala et al., 2011; PAGAC, 2008). It is possible that these benefits were not explicitly observed by teachers because they are longer term benefits that can be difficult to measure over the course of a school year. It is ever more interesting that participants did not mention any observable physical benefits given that the Ministry imposed this mandate as a response to the concerning physical health reality of Ontario students, namely childhood obesity (Ministry of Health and Long-Term Care, 2004).
4.3 Participants Indicated That Personal Motivation is the Single Most Significant Factor Contributing to Their Competence in Meeting the DPA Requirement Over Professional and Educational Factors.

This section reviews the participants’ reliance on personal motivating factors in order to meet the DPA policy requirements. This section brings forth insight into how teachers can use their own health and fitness experiences to provide successful DPA experiences for their students. Participants explained that their competency with this policy has evolved from their perceived high personal value of health and active living and their personal commitment to doing it. They also highlighted that they do not hold any specific professional or educational qualification related to health and physical activity that support them with DPA policy integration.

4.3.1 Participants identified that having high personal value of health and active living contributes to their competence of DPA implementation.

Both participants demonstrated a high personal value of health and active living in terms of passion and believe it helps them implement DPA in their classrooms. Ted believed that his “own passion for fitness” is what motivates him to incorporate DPA. Kim’s suggestion to teachers who struggle to successfully bring the DPA policy into their classrooms is to “get passionate about it.” Her advice suggests that if a teacher value health and physical activity, it is much more likely that they will include it in their classroom. When comparing these responses to the literature it is interesting that a similar trend exists. In the studies of Brown and Elliot (2015), Patton (2012) and Dwyer et al. (2003), every teacher studied expressed that DPA should be a priority, giving the sense that teachers do place a high value on health and physical activity.
However, and importantly, this same group of teachers also admitted that DPA is not a high priority for them in their classroom (Brown & Elliot, 2015; Patton, 2012; Dwyer, 2003). A potential disconnect is present, where believing in the importance of physical activity may not necessarily be enough to ensure its implementation, yet the participants of this study felt that passion, over perceived importance is key to bridging this gap.

The findings from this research project present a possible solution to this tension. Ted’s high personal value for health and physical activity extends into his classroom, which could be seen through his suggestion of putting a core curriculum subject on the “back burner” and placing more value on DPA since it is “something that could shape [students’] future.” For many other teachers, implementing the DPA policy takes a back seat when teachers compare it against other curriculum subjects (Brown & Elliot, 2015). Here it may be surmised that belief and passion have different effects. It may not be enough to simply believe exercise to be important. Ted’s experience suggests it is through passion for exercise that this perceived importance turns into consistent, successful action both inside and outside the classroom.

4.3.2 Participants identified that their personal commitment to health and active living contributes to their consistency of DPA implementation.

From passion to action, both participants illustrated a clear parallel between their ability to implement DPA and their personal commitment to it. Both participants shared their long history of being physically active, dating back to a young age. As teachers, they both uphold their commitment to DPA in their personal lives and understand how it impacts their classroom DPA practices.
Kim joked, “you don’t have to be an athlete to do DPA in your classroom, but it probably helps.” She attends Pilates classes numerous times per week and commits to instructing Pilates on her weekends. This has made her realize that this personal commitment allows her to adapt her Pilates routines to make it effective DPA for her students. Ted, who is committed to running four days a week and supplements with group fitness classes, mentioned on multiple occasions that this commitment is reflective in his DPA practices. He also encouraged teachers to “find something fitness related that [they] like to do” sharing that this will help bring DPA into their classroom.

Existing literature relies heavily on teachers’ perceived attitudes towards DPA for both them and their students, and typically concludes that all teachers have positive perceptions around DPA (Brown & Elliot, 2015; Patton, 2012; Dwyer et al., 2003). However, research thus far has not made a connection between personal perceptions to actual personal DPA practices and how teachers’ attitudes reflect on their classroom DPA practices. With these participants shedding light on the idea that personal fitness attributes as a possible contributing factor, more explicit research in this area would be beneficial.

4.3.3 Participants used their combined value and commitment to choose their own resources personally, rather than those given to them through educational or professional development.

Neither participant relied on formal educational training or resources to successfully implement the DPA policy, but rather retrieved and selected resources from personal sources, including their own health experiences and informal resource sharing with colleagues. Participants had extensive educational backgrounds and additional professional qualifications
through the Ontario Ministry of Education, but none of these were specific to the health and physical activity sector.

Ted graduated with a Bachelor of Arts in Sociology and Psychology, noting that there was very minimal attention given to physical activity. Ted’s AQ courses include Special Education and Reading Recovery, which he did not believe provided him with any resources to guide his classroom DPA practices. Likewise, Kim received her Autism Behavioural Science certificate along with AQ courses in Religion, Autism and Special Education; although she remembered her instruction mentioned the importance of physical activity, she gained no specific knowledge or resources to help her properly implement DPA in the classroom context.

Although both participants did not rely on educational and professional resources, it is important to note that they do exist. Educational programs such as Kinesiology, Human Kinetics and Exercise Science provides a solid foundation of knowledge that would directly apply to the DPA policy as it includes in-depth learning of exercise instruction and prescription for children and youth (McMaster, 2015). On a professional level, the OCT offers Health and Physical Education AQ courses that specifically study the current board policies and guidelines (OCT, 2016). However, Brown and Elliot (2015) remind us that many of the teachers previously studied were not aware of these professional resources, and they are offered optionally and infrequently.

This finding came as a pleasant surprise and brings some optimism to the DPA policy. I expected teachers who were successfully implementing the policy to have previous educational and professional qualifications related to the field. As it appears, it is not imperative that teachers have such formal knowledge of DPA in order to successfully incorporate it in their classroom.

This section reviews participants' perceived challenges when it comes to integrating the DPA policy. This section does not only explore participant-specified barriers, including classroom management concerns, absence of policy monitoring by administration and lack of intrinsic motivation, but seeks to identify possible solutions, outlined by participants, in order to overcome these barriers. Through this, participants provide insight for other teachers who experience these same challenges. These solutions all point to the idea of accountability; participants explained that they overcome challenges by being accountable to the DPA habit itself, being accountable to their students’ needs and finally being accountable to their own fitness practices.

4.4.1 Participants indicated that classroom management can be a challenge to implementing DPA, and that commitment to a daily habit is the only way to overcome classroom chaos.

Participants indicated that, overall, elementary students love DPA, and with that can come excitement and chaos. Teaching Grade 2, Kim noticed that classroom management is consistently a challenge. She reasoned that coming from a play-based learning environment, Grade 2 students are not used to so much structured seatwork. Kim recognized that her students are the most in need of DPA but admitted it “really gets them going.” To this, Kim has realized that by implementing DPA consistently enough the students quickly get over the initial hectic excitement that can cause classroom chaos. Ted too understood the importance of consistency to
control chaos, adding that when DPA practices become sparse it is very difficult to get the students “back on board”.

As previously mentioned, classroom management concerns is a highly agreed-upon barrier to implementing the DPA policy, where teachers avoid DPA practices altogether because it creates too much excitement and chaos in their classrooms (Brown & Elliot, 2015). As it applies to general teacher best practices, these participants understand that establishing classroom routines and consistent expectations are important classroom management techniques that should extend into DPA practices. Having a managed classroom does not equate to taking the “fun” out of the classroom, but to establish routines, habits and expectations that allow for controlled and effective fun (Marzano, Marzano & Pickering, 2003). Committing to a daily habit, as these teachers have, illustrates what controlled and effective fun can looks like, and demonstrates to the educational community that well managed DPA is possible.

4.4.2 Participants indicated that the absence of policy support and monitoring by administration can be a challenge to implementing DPA, and that commitment to students’ needs increases accountability.

Although both participants are successfully implementing the DPA policy in their own classrooms, they were aware that this is not a common practice by other teachers in their schools and believe that the lack of support and monitoring by administration plays a hand in this matter. To overcome this challenge both participants allow their students to ultimately hold them accountable. Ted suggested there is some support from administration at his school, explaining that for teachers like him who are already integrating DPA on their own, the administration acknowledges and praises their efforts, but for teachers who are not, administration does not
push or hold them responsible to increase their efforts. Ted added, in the end “the students want it” and with it being a consistent routine in his classroom, his students know to ask for it, holding him accountable.

Similarly, Kim understood that there used to be a push for DPA by her school’s administration, but since being there she has not experienced any policy monitoring. As a solution, Kim brought forth an insightful point. As good teacher practice, she “picks up on the body language of her students” and has found that through this, students “share, either explicitly or implicitly that they are in need of a DPA break”, thus holding her accountable.

Although Ted and Kim have found accountability through other means, Brown and Elliot (2015) suggest that all teachers can benefit from tighter policy monitoring by administration, including goal-setting and check-ins between the administration and their staff. Brown and Elliot (2015) go on to describe an interesting trend; teachers report that the greater the accountability they have in implementing the DPA policy, the more motivated they are to meet the requirements. Policy monitoring by administration appears to be only one way of increasing accountability, with these teachers demonstrating that commitment to students’ needs is yet another way to become more accountable.

4.4.3 Participants acknowledged that intrinsic motivation can be a challenge to implementing DPA for educators who are not already committed to physical activity, and suggest personal exploration of their own fitness as a means to overcoming that challenge.

The participants of this study acknowledged that not all educators are committed to living physically active lives and strongly believe this lack of intrinsic motivation can impede their ability to implement the DPA policy. By exploring and harnessing fitness in their own lives, both
participants have found the intrinsic motivation, which helps them fulfill the requirements of the DPA policy. Ted spoke explicitly to his personal, intrinsic motivation to support his practice, which comes from his dedication to living a physically active lifestyle. He strongly believes that “if you are a teacher who hates working out or going to the gym, it is so unlikely that DPA will be a part of your classroom” and emphasizes the importance of establishing a personal connection to health and fitness. To this Ted suggested that all teachers should search for something fitness-related they enjoy doing. To help with this personal exploration he believes it would be beneficial for school boards to offer professional development courses that focus on teacher lifestyle balance as opposed to teaching practices.

To this topic, Kim suggested the importance of having an “open mind” to what DPA can be in order to foster intrinsic motivation. Her response echoed Ted’s suggestion to “find something you like to do that is active” and adds that if time impedes on your motivation to go to the gym or get out for a run, to “not abandon those practices, but instead bring them into the classroom to motivate both yourself and your students.”

These insightful ideas and suggestions parallel Robinson and Melnychuk’s (2008) suggestion that there is an opportunity for identity formation in education every time teachers experience new curriculum, initiatives or programming. From here it can be noted that with the introduction of the DPA policy in 2005, it did not have to be solely a call for teachers to change their teaching practices, but could also be an opportunity for teachers to make changes to their teaching identity. Both participants have used their health and fitness identity to intrinsically motivate them to preserve through the barriers of motivation, a task from which all teachers could benefit.
4.5 Conclusion

In conclusion, this study found that these participants relied on segregated DPA practices to successfully implement the policy. Participants made DPA happen by primarily drawing from online resources and their own prior knowledge. Also, these participants were aware of the positive impact consistent DPA had for their students. Despite the absence of physical benefits observed, these participants noticed that DPA had psycho-emotional benefits including motivation, focus, attention, confidence, happiness and reduced anxieties. This study further uncovered that personal motivation was a key contributor in these teachers’ competence in meeting the DPA policy requirements. These participants did not have any substantial professional or educational training in DPA practices, but instead used their high personal value for physical activity and their own personal commitment to living physically active lives to motivate them to incorporate DPA into their classrooms everyday. Lastly, this study found that classroom management concerns, lack of administration support and absence of intrinsic motivation were barriers to implementing the DPA policy. To overcome these challenges, these participants made themselves accountable to their students’ needs, to establishing a daily habit, and to the exploration of their own personal fitness.

These findings make a significant contribution to existing literature in two distinct ways. First, it illuminates the reliance on personal factors to meet the DPA policy requirements. It was initially hypothesized was that Ontario teachers who are successfully implementing the DPA policy held significant education and professional development in the field of physical activity. Literature suggested that the more institutionalized knowledge teachers attain relating to DPA, the more competent they would be in integrating this DPA specific policy into their classrooms. However, this study adds that personal factors, specifically the personal DPA practices of
teachers, may serve as a greater contribution to teachers’ competence in classroom DPA over educational and professional factors. Secondly, this study draws explicit attention towards the lack of physical outcomes observed by these teachers through policy implementation. With the primary intent of the DPA policy being to improve physical health of students with the underlining goal of reducing childhood obesity rates, teachers may not have the tools to comment on the physical outcomes DPA has on their students. Instead, the responses from this study sheds greater light on the secondary intent of this Ministry mandated policy, which aims to improve the psychological and emotional wellbeing of students through DPA.

Previous literature focuses on the concerning state of the DPA policy, why this is so and what professional and educational resources are available to support educators in implementing this policy. Going forward, more specific quantitative research on the personal health practices of educators would be valuable. Data of this nature could be used to make correlations between how teachers’ health and DPA practices outside the classroom contribute to their DPA practices inside the classroom. Also, further quantitative research related to the outcomes of the DPA policy would bridge the gap between teachers’ perceived versus actual outcomes. Future research dedicated to measuring the physical benefits of DPA would provide insight on the effectiveness of the policy’s primary intent.

The next chapter, Chapter 5, will discuss implications of the research findings for my own teacher identity and practice, and for the educational research community more broadly. I also articulate a series of questions raised by the research findings, and point to areas for future research.
CHAPTER 5: CONCLUSION

5.0 Introduction to the Chapter

In this chapter, I discuss the significance of this research study and its implications. First I provide an overview of the key findings on the factors and experiences that contribute to elementary teachers’ commitment and competence for implementing the DPA policy in their classrooms. Then I address the broad and narrow implications of the findings in relation to the educational research community and my own professional identity and future practices as an educator. Next, I make recommendations relevant to faculties of education, schools and fellow teachers. Finally I suggest areas for future research that would further this research discussion.

5.1 Overview of Key Findings and their Significance

As mentioned in the previous chapter, although attempted, teachers do not feel their integrated DPA practices regularly meet the requirements outlined in the Ministry’s policy, so instead they rely on segregated DPA practices to successfully implement the policy in their classrooms. For teachers, DPA is consistently conducted by either reserving DPA periods in their weekly timetable or by planning their day to include DPA sessions as a transition from one subject to another. This demonstrates that although cross-curricular DPA is considered best practice by the Ministry, successful policy integration is still possible through segregated DPA practices. The DPA implemented by teachers is made possible by drawing on a combination of an online resource and their own prior knowledge related to physical activity. Teachers rely on and recommend using GoNoodle, an interactive web-based application designed to get students physically active as they can be assured that with this resource, their students can receive the level of activity they need (twenty minutes of moderate-vigorous physical activity) as outlined
by the Ministry, a challenge many other teachers face. When GoNoodle is not being used for DPA, teachers use the knowledge gained from their personal participation in health and physically active behaviours to carry out DPA in their classrooms. Although teachers’ prior knowledge about exercise is specific to their unique interests, such as running or Pilates, they are able to use it to their advantage, adapting their personal exercise routines to fit the needs of their students, emphasizing that obtaining sufficient knowledge to execute successful DPA does not necessarily require formal teacher education.

Secondly, this study revealed that teachers are aware of students’ need for daily physical activity and witness the positive impact consistent DPA has for their students. Teachers observe that the DPA policy accomplishes more than its original intent of improving the physical wellbeing of students, noticing their significant psycho-emotional growth. When motivation, focus and attention wane, teachers use DPA as a “brain break” allowing students to take a step away from brain activities and come back refreshed and ready to learn. Teachers emphasize the pure enjoyment students’ exhibit when participating in DPA, inadvertently improving their overall confidence and sense of self. In acknowledging the various stressors present in teachers’ own lives and how useful daily physical activity is to combating their stress, they recognize the potential stresses and anxieties their students face and believe that integrating DPA in the classroom can provide students with lifelong strategies to help reduce stress and anxieties. This understanding further caused teachers to believe that DPA should not be assessed formally as it is likely to reverse all positive emotional outcomes, instead heightening stress and anxiety. This finding links the importance of DPA in youth mental health, a topic of increasing relevance in today’s society. Yet, despite teachers’ observation of the psycho-emotional benefits of the DPA policy, teachers lack mention of any observable physical outcomes produced through
implementing DPA in their classrooms. Interestingly, teachers also place little emphasis on the physical benefits they receive from their own personal DPA routines. With the Ministry imposing this mandate as a response to the concerning physical health reality of Ontario students, these findings bring into question the effectiveness of the policy’s objective.

This study further uncovered that personal motivation is a key contributor in teachers’ competence in meeting the DPA policy requirements. Teachers describe the high value they place on DPA in terms of passion and take their own advice about getting passionate about physical activity to personally motivate their DPA practices. Teachers demonstrate their passion for DPA by putting it at the forefront of their teaching, while others, despite believing DPA is important, give DPA a back seat to other curriculum subjects. This finding highlights that it may not be enough for educators to simply believe DPA is important, but through passion comes action. Teachers take action in their lives outside the classroom, making a personal commitment to health and active living as it contributes to their consistency of DPA implementation inside the classroom. The accounts of teachers’ personal exercise practices illustrates a parallel between their ability to implement DPA and their personal commitment to it, yet little research illuminates the actual physical activity practices of teachers. While personal factors appear to be key contributors to successful DPA integration, it is not imperative that teachers hold specific DPA education or professional training in order to be successful DPA policy implementers. Although available but often difficult to obtain, teachers do not rely on DPA resources provided through educational or professional development, a finding that brings optimism to the future of DPA policy implementation; where educators can instead find motivation from within, giving each classroom equal opportunity to include DPA.
Lastly, this study found that accountability helps teachers overcome challenges in classroom management and personal motivation. The excitement DPA elicits from students makes classroom management a struggle for teachers, but they hold themselves accountable to implementing DPA consistently in order to control the excited chaos. Commitment to making DPA a true daily habit and establishing DPA routines and expectations gives hope to hesitant teachers that well-managed DPA is possible despite the classroom management concerns. Teachers also contend with a lack of administration support and monitoring of the DPA policy so instead of relying on administration to hold them accountable, teachers find accountability through students’ needs. Teachers understand the need for physical movement at the elementary level and when students are not explicitly asking for it, teachers sense their need for it. This finding implies that being attuned to students’ needs serves as a great alternative for increasing accountability in circumstances where policy monitoring by administration is underprovided. Finally, teachers use their health and fitness identity to intrinsically motivate them to preserve through the barriers of motivation commonly faced. Based on their own experiences, teachers highly encourage others to reengage with their personal fitness journey and use this Ministry mandate as an opportunity to not only change their teaching practices, but also their personal and teaching identity.

5.2 Implications

In this section, I outline both the broad and narrow implications of my research, first for the educational research community, including the Ontario Ministry of Education, teacher education programs, school administrators and classroom teachers, then for my professional identity and practice as a new teacher.
5.2.1 The educational research community

Since 2005 the Ontario Ministry of Education has been actively responding to the concerning physical health status of today’s youth. Specifically, the DPA policy is part of a comprehensive province-wide effort to change all the factors that contribute to unhealthy weight (Ministry of Health and Long-Term Care, 2004). Now that this policy has been in effect for over a decade, its outcomes have been made evident. Aligned with previous literature, both participants in this study readily acknowledged a plethora of intellectual and emotional outcomes observed through successful implementation of the DPA policy in their classrooms. Based on the results of this study, the observable outcomes of the policy were limited to non-physical elements, despite the policy’s focus on the physical well being of Ontario’s youth, implying that this mandate, although yielding pertinent benefits for Ontario students, may not be as effective in fulfilling its primary objective.

Literature highlights the positive relationship between policy knowledge and policy implementation, a correlation that can be applied here, to the DPA policy. Previous literature suggests that the more institutionalized knowledge teachers attain relating to DPA, in the form of undergraduate studies in the field of health and physical activity, HPE courses offered in teacher education programs and additional qualification courses, the more competent they would be in integrating this DPA specific policy into their classrooms (Patton, 2012). However, neither participants of this study have acquired any significant institutionalized knowledge relating to DPA during their undergraduate studies, their time in a pre-service teacher education program, or in their continuing education efforts as practicing teachers, despite being highly successful in implementing the DPA policy in their classrooms. Instead, both participants draw on their personally gained knowledge of health and physical activity to successfully implement the DPA
policy. This significant discovery implies that although educational and professional
development in the area of HPE is likely an asset, it is not imperative to be successful DPA
policy implementers.

Another trend has surfaced in the literature, teachers voicing that the more accountable
they are made to implementing the DPA policy, the more motivated they are to do so (Brown &
Elliot, 2015). Together with the literature and participants’ responses it appears that policy
monitoring by administration teams is a well-needed method of increasing teacher
accountability; however, both participants share their alternative ways of remaining accountable
to integrate DPA into their classroom everyday in lieu of the lack of administration support in
their schools. Although participants raise their concerns regarding the level of administration
involvement in the DPA policy, including mandates for teachers to assess DPA or include it on
report cards, they believe more can be done to improve accountability.

Contrary to effective DPA practices outlined in the literature, including community of
practice frameworks, specialized Phys. Ed supports and cross-curricular DPA integration, both
participants demonstrate several ways of successfully integrating the DPA policy into the school
day that lie outside the suggested strategies (Whipp et al., 2011; Ontario, 2007; Wegner, 2006).
This implies that although the effective strategies are well grounded in educational research, they
may not be as practical or applicable in practice. Furthermore, it is important to note that the
resources used by the participants of this study to successfully implement the DPA policy come
from within, or by the hands of teachers themselves. More than focusing on the resources
provided by the Ministry, both participants make use of resources they have selected from
personal sources, including their own health experiences and informal resource sharing with
colleagues.
5.2.2 Professional identity and practice

Prior to conducting this research study I made the assumption that I, as an educator, hold the knowledge necessary to successfully implement the DPA policy in my own classroom, an assumption derived from my Bachelor of Science in Kinesiology studies at McMaster University. After conducting research on the factors contributing to teachers’ success with the DPA policy, I have come to understand that my formal education in the area of health and physical activity may only serve as a small contribution to my ease of policy implementation. Instead, my attention has been shifted towards my current daily physical activity practices, reflecting on how I can bring those into my classroom DPA practices. Furthermore, the findings of my research have reminded me of the importance of continuing on my own fitness journey, and have inspired me to encourage my students to do the same, in hopes of fostering a positive, life-long relationship with physical activity.

From this study I have found reassurance in my own experiences with integrative DPA into the classroom as a student teacher. In comparison with the literature regarding best practices for DPA integration, I understand my classroom DPA practices fall somewhat short in terms of duration and lack of cross-curricular integration. I have found it very difficult to reach the required twenty minutes each day using increments of at least ten minutes per DPA session and I have only attempted DPA as an segregated practice, oppose to integrating it into lessons. However, the successful DPA practices of both participants have proved that effective DPA policy integration is still possible in other ways. Although I will strive to expand and evolve my classroom DPA practices, I am relieved to know that there is flexibility in the execution of the mandated policy. Given the various challenges of integrating DPA into the classroom as reported by participants, I am committed to using the same strategies they outlined in order to overcome
these challenges. The extensive background research done to inform this study heightened my awareness of the barriers teachers face, but the participants added practical insight into how I can hold myself accountable to the DPA policy.

After hearing the DPA successes of a selection of Ontario teachers I was able to find uplifting parallels between my fitness story and theirs, implying that I am more than capable of making DPA a success in my own classroom as well. The words “passion to action” stand out to me as an underlining theme presented in this research, and I believe that I myself, like Ted and Kim, have the passion for health and physical activity required to bring the DPA policy into action.

5.3 Recommendations

Based on the findings of my research study, specific recommendations to various stakeholders, including faculties of education, school boards, schools and their administration teams as well as teachers, can be made to help negate the concerning state of the DPA policy in Ontario schools.

5.3.1 Faculties of education

Faculties of education, whether providing pre-service teacher training or professional development courses, do in fact include content specific to the DPA, as it is a component of the Ontario elementary curriculum. Based on research findings, I recommend that the approach used in these programs be re-evaluated to better equip pre-service or in-service teachers in implementing the DPA policy. From my experience as a pre-service teacher at OISE, the health and physical education course did attempt to change any negative attitudes towards physical
activity that pre-service teachers may have, however the course heavily focused disseminating teaching strategies for teachers to use in the classroom.

Given what is known about the many barriers to implementing the DPA policy as well as the reliance on personal factors to overcome these barriers, I recommend that HPE courses shift their focus to one that challenges pre- and in-service teachers to be reflective in their own current health and physical activity practices, one that helps teachers achieve a balanced lifestyle that includes time for personal fitness and one that supports teachers in getting physically active themselves, as these seem to be the factors contributing to proper policy implementation.

5.3.2 Schools

Following up on Brown and Elliot’s (2015) correlation regarding the importance of accountability in making DPA happen, Ontario school boards should take initiative to re-establish accountability at each level of the educational system, first by asking all schools to re-evaluate the status of the DPA policy in their schools, address its position of priority and reintroduce it if necessary. On at least a monthly basis, school boards (and indirectly the Ministry of Education) are recommending that school administration teams administer new initiatives and push pedagogies that have come out of recent educational research.

I recommend that the education system use my research to implement another push for DPA in Ontario schools. Research led discoveries on effective DPA practices should be implemented in the schools, including building communities of practice and investing in specialized Phys. Ed supports. I suggest school-wide DPA initiatives that are effectively and consistently monitored by school administration teams in order to improve accountability to all.
5.3.3 Teachers

The greatest, most practical recommendation to be made here stems from the very powerful teaching philosophy of Parker Palmer (1983), which emphasizes that as educators, we teach who we are. As current and future teachers encounter the DPA policy in practice they should be constantly reflexive in their own personal DPA practices and reflective in how these personal and professional practices interconnect. I suggest that all teachers continue to explore their personal fitness as a means of motivation, inspiration and practical knowledge development in the area of DPA.

With the intent of the DPA policy being to help students develop a strong value for physical activity, I recommend that teachers teach with a high degree of transparency, allowing their perceived value for DPA to be made both visible and palpable to students, in hopes they too will embody this important value.

5.4 Areas for Future Research

Thus far the majority of research specific to Ontario’s DPA policy has focused on the ways in which Ontario educators are not effectively integrating the policy into their practice, but this research study begins to shed light on the ways in which some Ontario educators, in fact, are. Future research in this area with a greater sample size would be beneficial. Specifically, having a larger sample of teachers would provide a more diverse range of teacher experiences, including those who have strong intuitionally gained knowledge in the field of health and physical activity, and would bring forth a clearer understanding of the true or other contributing factors that make DPA happen.
Two quantitative elements would further complement this study. This field of educational research lacks documentation of teachers’ personal health practices. Quantitative research on the personal health practices of educators would be valuable as data of this nature could be used to make stronger correlations between how teachers’ health and DPA practices outside the classroom contribute to their ability to incorporate DPA inside the classroom. The second quantitative element that should be explored in future research is the measuring of outcomes of the DPA policy, specifically the physical outcomes DPA provides to students. Receiving ethical approval to quantify the physical outcomes of DPA, either through heart rate monitor studies, longitudinal BMI studies or fitness testing would provide insight on the actual effectiveness of the policy’s primary intent.

Finally, this study reveals only a single perspective of the implementation of the DPA policy, that being the voice of the educators. Future research that includes and combines multiple perspectives, especially those of the students and administration teams would paint a more accurate picture of the policy in action.

5.5 Concluding Comments

In this final chapter I provided a brief overview of the key findings from this research study, addressing the importance of each. This study found that these participants relied on segregated DPA practices to successfully implement the policy and made DPA happen by primarily drawing from online resources and their own prior knowledge; demonstrating that successful policy integration is possible without complying with Ministry-outlined best practices or using formally received resources. Findings also show that teachers observe many positive psycho-emotional outcomes of DPA, despite not observing physical outcomes, which on one
hand links the importance of DPA in youth mental health but brings question to the policy’s primary intent. This study further uncovered that teachers’ high personal value for physical activity and their own personal commitment to living physically active lives is what motivates them to incorporate DPA into their classroom everyday, a finding that places a higher value on personal factors as key contributors to implementation over educational or professional factors. Lastly, this study found that there are alternate sources of improving accountability to the DPA policy and that these are used to overcome challenges of classroom management, lack of administration support and absence of intrinsic motivation that stand in the way of DPA integration.

Next, I used the significance of my findings to discuss the implications of my research in relation to the broader educational community. To the Ontario Ministry of Education, teacher education programs, school administrators and classroom teachers my research implies that although educational and professional development in the area of HPE is likely an asset, it is not imperative to be successful DPA policy implementers. Also, although teachers are capable of drawing on alternative sources for maintain their accountability to the policy, my research implies that greater efforts can be made at the school board and administration level to support teachers with this policy. Lastly, the successful DPA practices of teachers contradict Ministry outlined best practices, implying that, although the Ministry’s suggestions are well grounded in educational research, they may not be as practical or applicable in practice. I then highlighted the significance of my study on my own personal practice as a beginning teacher, which includes continuing my fitness journey and allowing it to be reflected in my teaching.

I then outlined various recommendations in light of research to faculties of education, schools and teachers, recommending another push for DPA in Ontario elementary schools,
ultimately allowing Ontario elementary teachers another opportunity to reflect both inwardly and outwardly on the DPA practices both inside and outside the classroom. Finally, I suggested areas of future research, which included bringing quantitative elements regarding teachers’ personal health practices and physical outcomes of the policy on Ontario’s youth. Overall, I feel this study brings positive light to the future of Ontario’s mandated DPA policy and has the ability to provide practical resources to make DPA happen, in each and every classroom.
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Date:

Dear _______________________________,

My Name is Sierra Dziadura and I am a student in the Master of Teaching program at the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT). A component of this degree program involves conducting a small-scale qualitative research study. My research will focus on learning what factors and experiences contribute to developing elementary teachers’ commitment to enacting daily physical activity in their teaching practice. I am interested in interviewing teachers who are committed to meeting the policy’s requirements and have demonstrated leadership in the physical literacy. I think that your knowledge and experience will provide insights into this topic.

Your participation in this research will involve one 45-60 minute interview, which will be transcribed and audio-recorded. I would be grateful if you would allow me to interview you at a place and time convenient for 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. I may also present my research findings via conference presentations and/or through publication. You will be assigned a pseudonym to maintain your anonymity and I will not use your name or any other content that might identify you in my written work, oral presentations, or publications. This information will remain confidential. Any information that identifies your school or students will also be excluded. The interview data will be stored on my password-protected computer and the only person who will have access to the research data will be my course instructor Dr. Angela MacDonald. You are free to change your mind about your participation at any time, and to withdraw even after you have consented to participate. You may also choose to decline to answer any specific question during the interview. I will destroy the audio recording after the paper has been presented and/or published, which may take up to a maximum of five years after the data has been collected. There are no known risks to participation, and I will share a copy of the transcript with you shortly after the interview to ensure accuracy.

Please sign this consent form, if you agree to be interviewed. The second copy is for your records. I am very grateful for your participation.

Sincerely,

Name Sierra Dziadura

Phone Number (416) 894-9232
Email sierra.dziadura@utoronto.ca

Course Instructor’s Name: Angela MacDonald
Contact Info: angela.macdonald@utoronto.ca

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 from this research study at any time without penalty.

I have read the letter provided to me by Sierra Dziadura and agree to participate in an interview for the purposes described. I agree to have the interview audio-recorded.

Signature: ________________________________________

Name: (printed) ______________________________________________

Date: ______________________________________
Thank you for agreeing to participate in this research study, and for making time to be interviewed today. This research study aims to learn what personal, professional, and educational factors and experiences contribute to developing elementary teachers’ commitment and competence for implementing daily physical activity in their classrooms. This interview will last approximately 45-60 minutes, and I will ask you a series of questions focused on your previous experiences, passions, interests and education relating to DPA, how DPA is implemented in your classroom, the challenges you face with implementing the DPA requirement and what outcomes you observe from your students who are receiving DPA. I want to remind you that you may refrain from answering any question, and you have the right to withdraw your participation from the study at any time. As I explained in the consent letter, this interview will be audio-recorded. Do you have any questions before we begin?

Section A - Background Information

1. How long have you been a teacher?

2. What is your educational background (i.e. undergraduate studies)?

3. What grade do you currently teach? What grades have you taught previously?

4. How long have you been teaching at your current school?

5. Can you describe the demographics of your classroom? Your school? (i.e. diversity, socio-economic status, size etc.)

6. Does your school have any particular programming priorities relevant to DPA that you are aware of? (i.e. is there a whole school commitment?)

7. What seems to be the general attitude toward DPA in your school?

8. Does your administrator hold teachers accountable to DPA? If so, how? If not, how do you hold yourself accountable to DPA?

9. In addition to your role as a teacher, do you fulfill any other roles in the school (i.e. coach, advisor, resource teacher etc.)?

10. Can you share when and how your interest in physical activity/education began?
11. What personal, professional, and educational experiences have contributed to you developing an interest in DPA?

12. Which have contributed to preparing you to enact DPA in your everyday teaching practice?

13. What, if anything, about your identity do you believe gives you the ability to successfully meet the DPA requirement?

Section B - Teacher Perspectives/Beliefs

1. In your view, what is DPA? What kinds of activities can be considered DPA?

2. Why do you believe that DPA is important in schools? What is the role of DPA in education?

3. Can you share your personal thoughts on the DPA requirement mandated by the Ministry of Education?

4. What are some of the benefits that you have observed from DPA in your own life? And for your students?

5. In your view, why is DPA not being implemented to the extent that it is intended to be in Ontario schools? What do you believe are the barriers getting in the way of implementation?

6. In your view, how might these barriers be addressed?

7. What kinds of experiences do you believe are important for teacher education and professional development to include in order to increase teacher commitment to DPA?

Section C - Teacher Practices

1. How do you model your own personal values related to physical activity and health in the classroom?

2. How comfortable do you feel with implementing the DPA requirement in your classroom? Why do you think that is?

3. Approximately how often do you implement DPA in your teaching practice?

4. Is there a particular time of day when you implement DPA? If yes, when? If no, why not?

5. How, if at all, do you connect DPA to the formal curriculum? If applicable, which subject areas do you integrate it into and why?
Can you give me an example of how you have integrated DPA into one (or more) of these subjects?
   i. What were your learning goals?
   ii. What opportunities for learning did you create through DPA integration?
   iii. How did your students respond? What outcomes did you observe? (i.e. engagement, behaviours, academics)

6. How, if at all, do you assess DPA?

7. How else do you integrate DPA into your everyday classroom teaching? Can you give me some specific examples that don’t necessarily align with the formal curriculum?

8. Are there any particular resources that you use when implementing DPA? (i.e. school yard, equipment, websites, music, etc.)

Section D - Supports and Challenges

1. What factors support you in your capacity to implement DPA in your everyday teaching practice? (i.e. supportive colleagues/administrators, access to infrastructure/space)

2. What are some challenges you experience integrating DPA into your teaching?
   - How do you respond to these challenges?
   - How do you think these challenges might be overcome?

Section E - Next Steps

1. What, if any, are your goals for future implementation of DPA in your teaching practice?

2. What advice can you give to future educators to help them successfully integrate DPA into their classrooms?

Thank you for your participation in this research study.