Teachers’ Perceptions of the Relationship Between DPA and Student Success

By

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Abstract

Daily physical activity is an essential part of living a healthy life. Research has shown that physical activity not only prevents health risks, but also may increase academic success in children. A qualitative research study was conducted to determine what teachers’ perceptions are on the affects of physical activity in the classroom in relation to their students’ academic success. Data was gathered through the process of a semi-structured interview, from two teacher participants. The findings revealed that teachers do believe that there are benefits to implementing daily physical activity in the classroom, however, this is based on the teachers’ values and beliefs in regards to physical activity. Also, they perceive students to be more focused after being engaged in physical activity, which is a determinant to academic success. The research also showed that there are barriers to implementing daily physical activity into the class, however these barriers can be overcome with the right implementation strategies. This research is important for all members of the educational community in order for schools to actively implement daily physical activity opportunities to support their students overall well being and success.

Key Words: daily physical activity (DPA), physical activity (PA) physical education (PE), student success, teacher identity, teachers’ values/beliefs, health benefits
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Chapter 1: Introduction

1.0 Introduction to the Research Study

“Intelligence and skill can only function at the peak of their capacity when the body is healthy and strong.”

(Kennedy, 1960, pg. 16)

Physical activity is an integral part of our lives, because as humans our bodies are created to be active. As seen in the quote above, our minds are affected by the way our bodies function. Depriving our bodies from physical activity can lead to a wide variety of physical and mental health consequences, such as cardiovascular disease and depression (Warburton, Nicol & Bredin, 2006). Youth participation in physical activity is closely related to active adult participation, whereby the more physically active one is as a child, the more engaged one would be as an adult (Lee, Burgeson, Fulton, and Spain, 2007). The promotion of physical activity to children is crucial to children’s health and their overall well-being. An effective way to integrate physical activity in a positive and engaging way to children is through physical education (PE) classes in school (Coe, Pivarnik, Womack, Reeves, & Malina, 2006). This will allow children to engage in physical activity, which may contribute to the necessary amounts stated in the guidelines that would be beneficial for their health. As stated in the Canadian Physical Activity Guidelines, children between the ages of five to seventeen should be obtaining at least sixty minutes of moderate to vigorous physical activity daily to obtain health benefits (Canadian Society for Exercise Physiology, 2015). Active Healthy Kids Canada (2014) conducted an assessment and graded multiple countries in regards to their children’s physical activity habits. Canada was presented with a grade of a D- for overall physical activity. Therefore, there is a gap in providing children with enough opportunities to be physically active. Active Healthy Kids Canada (2014) also stated that children must be encouraged to engage in physical activity throughout their day
through a wide variety of activities. Children are at school for the majority of their day; therefore, teachers must create these physically active opportunities for students so they can obtain positive health benefits.

Mental and physical health are also related to the way we live our lives. If physical activity is known to reduce anxiety and depression and increase psychological health, then students would have a greater opportunity to concentrate and learn at school (Lee et al., 2007). Therefore, it can be inferred that there is a mind-body connection that must be focused on.

Not only is physical activity essential for our physical and mental health, but there have also been a number of studies that prove that it can increase student achievement in learning. Some aspects that have shown improvement through physical activity are increased attention span and concentration, as well as increased self-esteem (Coe et al., 2006). All of these features have the potential to increase student success and achievement in school. As previously stated, one major way of implementing physical activity to students is through PE class. Since all children must attend school, it is the one place where we can make sure that they are obtaining the daily exercise that they need. Physical education, however, is not the only way to provide students with the necessary physical activity guidelines; teachers can also learn how to integrate physical activity in the classroom, known as daily physical activity (DPA). By doing so, we are giving the children a mental break, and because physical activity increases concentration levels, when students are asked to get back on task, they may be more focused and better prepared to continue with the lesson at hand. DPA is not only a recommendation; it is in fact a requirement in the governments Healthy Schools Plan (OME, 2006). However, from what I have seen and heard from education professionals, these requirements are rarely met in schools, and many
teachers do not engage their students in DPA, even though the government of Canada mandates it.

There have been a variety of studies done in the area of student engagement in physical activity and achievement. Nevertheless, the only way for students to be exposed to these opportunities is through teacher initiation. Since students rely on teachers to create physical activity opportunities, in PE class and in regular classroom experiences such as DPA, then the teachers must truly believe in the benefits that physical activity provides for children.

1.1 Purpose of the Study

The purpose of this study was to look at teachers’ views on the mind-body connection, the importance of physical activity in regards to student success, and whether or not teachers’ views affect their students. This study is important to the education community because it allows educators to gain a sense of awareness on how their perceptions of physical education affect their students. By understanding teachers’ opinions on this issue, more research can be done to understand how teachers can affect their students, either positively or negatively, depending on their outlook on physical activity.

1.2 Research Questions

The importance of teachers’ perceptions on physical education and physical activity are integral to the students’ learning environment and learning opportunities, and I believe that without the right mindset, teachers may be holding back their students from achieving their maximum potential as learners. Therefore, the following question framed my research project:
What are Ontario teachers’ opinions on the affects of physical education and physical activity in the classroom in relation to how it affects students’ academic achievements and success?

In addition, throughout my research I tried to understand the teachers’ views on the importance of physical activity in the lives of students, as well as their teaching strategies that may or may not create optimal learning environments for their students. In the process of the study I also answered the question: how did these teachers perceive their students’ learning? This question specifically looks at the ability of the teacher to recognize whether or not their students are engaged in their learned, concentrated, or simply going through the motions. It also aided in recognizing whether the teacher is able to identify when their students’ interests in learning change, for example students may be more concentrated after snack or after DPA. These sub questions will allow for a greater understanding of how the teachers perceive physical activity.

1.3 Significance of the Study

The reason this area of study has become such an issue is because there are teachers who do not see the purpose of teaching physical education and have even gone to the extent of eliminating physical education all together- replacing it with other programs in which administration believes will improve student academics (Coe et al., 2006). If teachers are removing a strategy that is proven to increase student achievement, then it is an issue that must be addressed.

The reason why I believe that this is such an important issue is because teachers hold the power in our school classrooms. They also hold the key to their students’ learning and knowledge; how they frame their learning strategies directly impacts their students. If using
physical education and physical activity in schools really does affect students’ achievement, then
more teachers should make it a priority to implement these strategies into their classrooms. It is
important to observe teachers who use these techniques, and discover how they think their
students are benefiting from physical activity.

This study may benefit all teachers, in that if they are having problems with student
attentiveness or student achievement, it may be beneficial to try knew teaching strategies; using
physical activity and physical education allows students to express themselves, feel good, and
open their minds. “Movement can be an effective cognitive strategy to (1) strengthen learning,
(2) improve memory and retrieval, and (3) enhance learner motivation and morale” (Jensen,
2005). All of these aspects affect students’ learning in a positive way, and by simply moving,
students are not only allowing their bodies to be active but also activating their minds. This is
very beneficial for students and by promoting it in schools, hopefully students will continue to be
physically active, in hopes that it will affect their attempts for growing knowledge, even when
they have left the classroom.

1.4 Background of the Researcher

I have always known that I wanted to become a teacher and that I wanted to make a
difference in the lives of students. In my last year of high school, I was enrolled in an exercise
science course, which I had a true passion for. This led me to do my undergraduate degree in
Kinesiology and Health Sciences. Throughout my undergraduate degree I learned the benefits of
physical activity and the consequences our bodies can experience with a lack of physical activity.
While knowing that I was going to pursue my dream of teaching, I decided that promoting
physical activity to students is integral for their overall well-being. I learned the importance of physical activity, in allowing our brain to properly function.

As I began volunteering in classrooms, I tried to start implementing physical activity for students who were easily distracted. In one instance, the classroom teacher and I implemented walks, or quick energy blasts for a student who had a hard time focusing. We realized that once the student engaged in a short act of physical activity that he was more attentive afterwards, and was able to concentrate on the lesson being taught. Students need oxygen flow to their brains constantly if they are going to be learning. Oxygen is dispersed around the body through blood flow, which is increased by physical activity; therefore, there is a clear link between movement and learning (Jensen, 2005). Sitting down for six hours a day and listening to a teacher, does not allow them to access the oxygen that their brains need to acquire the knowledge that they are potentially receiving. The way the brain functions and its connection to movement allowed me to open my mind to the ways students act in school. Thus, I believe it is integral to focus our attention on the issue of the lack of physical activity in the classroom.

I remember when I was in elementary school teachers would discipline the class by taking away physical education class for the week. This deprived us from what we needed; exercise. While volunteering in schools more recently, I continued to see this happen, where teachers disciplined students for not listening by taking away physical education class. This is negatively affecting their students, and some teachers may not fully understand the benefits of integrating physical activity in schools. Physical education classes should be as important as any other subject that students are being taught because of the number of health benefits physical activity provides. Therefore, a teacher’s perception of physical activity directly impacts students’ learning environments. These experiences have guided me on this research path, and I find it
extremely important to make educators aware of the crucial part that physical activity plays in a child’s academic success and overall well-being.

1.5 Overview

Overall, this study focused on teachers’ views about physical activity and physical education, in regards to their students’ learning achievements. There are five chapters within this study. Chapter 1 includes an introduction to the study, as well as the purpose for conducting the study. In Chapter 2, literature pertaining to my research question is reviewed to provide knowledge of the findings that have already been collected, based on my conceptual framework. The literature review will also offer insight on the importance of why I conducted this study. Chapter 3 includes the methodology of this study, including the participant pool, where and how the data was collected, as well as the procedures that were taken throughout the data collection process. Chapter 4 provides readers with the findings that were found within this study, which pertain to the study’s research question and sub-questions. Finally, Chapter 5 includes a discussion on the findings and conclusions made based off the results of the study. At the end of the research paper, there is a list of references as well as appendixes, which were used within the study.
Chapter 2: Literature Review

2.0 Overview

This study focuses on the importance of teachers’ beliefs towards the concept of mind-body connection, and how, with implementation of daily physical activity, teachers can provide their students with the opportunity to achieve greater academically. In recent years there has been an abundant amount of research done in the area of physical education and physical activity in regards to its correlation with academic achievement (MacDonald, Abbott, Hunter, Hay, & McCuaig, 2014). In this study, teacher identity is a key factor that needs to be focused on, since it is up to the teacher to decide which learning strategies they choose to implement in their classrooms. Even if there is evidence to prove that physical activity is beneficial for academic success, it is still reliant on the individual teacher to implement daily physical activity in their classroom. This literature review will also look at the important differences between daily physical activity versus physical education.

One of the main concerns in today’s society is an increase in obesity, and specifically the rise in childhood obesity. Much of the literature that focuses on physical education and physical activity began with health being the main concern. Therefore, this literature review will also touch upon the health benefits that relate to physical activity and how this will affect students positively in many ways, including academic performance and focusing on the mind-body connection. Finally, in relation to this study, this literature review will touch upon brain development and learning, and how the effects of physical activity have a direct impact on increasing the rate of students’ school performance.

When discussing students and their academic success there are many aspects that can determine the direction that the student has been led. I have chosen to use a conceptual
framework to outline the overarching research questions; therefore, looking specifically at the concepts of teacher identity and beliefs, along with daily physical activity, and our mind-body connection, in relation to physical activity. These concepts are further investigated throughout this study. The concept behind teacher identity is that each teacher has their own view of what is important, which in turn affects their classroom teaching style. The concept behind DPA is mandated by the Ontario Ministry of Education (2006) to be included in the classroom everyday, and yet it is apparent that many teachers still do not implement it. One of the aspects of DPA is to create healthier places to learn and improve student achievement (OME, 2006). Finally, the concept of our “mind-body” connection is defined as “taking into account the physiological, psychic and spiritual connection between the state of the body and that of the mind” (Random House Dictionary, 2015). Together these concepts help this study look at teachers’ views on the mind-body connection, the importance of physical activity in regards to student achievement, and whether or not their views affect their students. These concepts are unpacked at a deeper level through this literature review.

2.1 Teacher Identity

A teacher’s identity is important because what they value in the classroom will have an effect on their students’ lives, even if it is done unconsciously. Teachers have their own belief system that guides their behaviours and decisions (Pajares, 1992). When looking at teachers who do not teach physical education, we must assess what their belief system is in regards to physical activity and health. If a teacher’s belief system guides their decisions, then that may or may not lead to the implementation of daily physical activity in the classroom, depending on the values the teacher holds for physical activity. In a study conducted by Kullina, Brusseau, Ferry and
Cothran (2010), four-hundred and eighty-six pre-service teachers shared their views about areas of curriculum. In this study, their results showed pre-service teachers enter teaching with pre-existing beliefs about all subjects, including physical education. In this study pre-service teachers did rank fitness and health as their top priority for reasons to teach physical education. It is very important to point out that these teachers view fitness and health as their top priority for teaching physical education, however, this is not the case for all teachers. O’Sullivan (2003), (as cited in Kullina et al., 2010), states that most pre-service teachers rank skill development as the most important goal of physical education. These studies prove teachers’ views on physical education are different. It is important to note that the teachers who view skill development as the most important aspect of physical education may not have the same belief about the benefits of physical activity as a teacher who believes that the number one priority of physical education is fitness and health.

On the opposite side of the spectrum, there are teachers who consciously reject the implementation of DPA based on their own identity, experiences and beliefs in regards to physical activity and their efforts of implementing it into their classrooms (Robinson & Melnychuk, 2008). Robinson and Melnychuk (2008) studied the Alberta Education Plan for DPA (2005) and reported that an author who attended a professional development session, which focused on DPA, stated that out of thirty junior high PE teachers, none of them reported that DPA was being implemented in their schools. This shows that there was a disconnect between the implementation and the policy that has been created. Teachers who are consciously avoiding DPA are hindering their students of a better school environment that may increase their academic achievement. This may lead to students not having access to the learning that they need.
A teacher may have other reasons as to why they would refrain from implementing DPA into their classroom, such as being preoccupied with reaching literacy and numeracy testing targets, lacking confidence and competence in leading physical activity, and not wanting to be burdened with another responsibility in school (Abbott, Macdonald, Hay, & McCuaig, 2011 in Macdonald, Abbott, Hunter, Hay, & McCuaig, 2014). The feeling of “being burdened” to conduct physical activity is quite disheartening due to the fact that physical activity is a great predictor of our health, and creating a healthier environment for students to excel in should not be a burden, it should be a necessity. Therefore, the importance of teachers’ identity and their values and beliefs in regards to physical education and physical activity is extremely important because it determines whether or not teachers implement DPA in their classrooms, and ultimately give their students an optimal learning environment.

2.2 Daily Physical Activity (DPA) vs. Physical Education

Physical education is the “development and care of the body ranging from simple calisthenic exercises to a course of study providing training in hygiene, gymnastics, and the performance and management of athletic games” (Merriam-Webster Dictionary, 2015). There has been such a large focus on increasing academic achievement, which has drastically reduced the amount of physical education time, being reduced to one to two periods per week and being replaced with other classes in which teachers believe increase academic achievement (Coe et al., 2006). Due to the decline in physical education classes, there is now even less time for students to engage in physical activity.

Daily physical activity is the implementation of twenty or more minutes of physical activity during the instructional day (OME, 2006). Teachers are now required to apply DPA in
the classroom, when the students’ days do not include PE class, or any other activity that allows them to obtain twenty minutes of sustained moderate to vigorous activity (OME, 2006). DPA became a requirement for all elementary students on October 2, 2005, as part of the government’s Healthy Schools Program (OME, 2006). Therefore, DPA has been a mandatory part of students’ lives for about ten years. Yet, it is unclear whether teachers and schools, engage in this initiative because there is no formal evaluation (Stone, Faulkner, Zeglen-Hunt, & Bonne, 2012).

DPA is a great health promotion initiative that can impact a large number of students; however, there are no policies or procedures to assess the effectiveness of the program (Stone et al., 2012). If there was an evaluation process and teachers were assessed on the quality and quantity of DPA in their classrooms, then it is likely that more teachers would be motivated to incorporate it into their instructional day. It would not be an option, rather a mandatory part of their routine that will be assessed, similar to teaching language everyday. Stone et al. (2012) conducted one of the only studies that provided objectively measured feedback to key stakeholders about DPA implementation. Within this study, Stone et al. (2012) assessed the amount of children who participated in DPA at school, and if they were obtaining quality moderate-vigorous DPA. They found their results by having each student who participated in this study wear an accelerometer that measured that time spent being active throughout their day. Their results focused on schools that did implement DPA in the classrooms and whether it was effective or not (Stone, et al., 2012). They found that less than half of the participants regularly engaged in DPA everyday. These students were significantly more active in and out of school and there were fewer overweight and obese individuals. However, when looking at these results, that is less than half of children in schools, meaning that more than half of the students
participating were not receiving adequate amounts of physical activity. Their results also show that majority of schools are not meeting the DPA requirements (Stone et al., 2012). Therefore, there is a clear gap between policy, and implementation in regards to DPA. Health is the most important factor in our lives, and studies show that increasing physical activity leads to a healthier lifestyle.

Due to the decline in physical education classes there is a need to implement DPA, even though it is a requirement, and teachers need to incorporate this into their everyday lessons. There has to be a strong support system from the school boards to ensure that teachers and principals are successfully implementing DPA (OME, 2006). There is a misconception that unqualified teachers in physical education should not be the ones to implement daily physical education, this should not be the case (Robinson & Melnychuk, 2008). It is not a substitute to teach skill development, it is there to increase our students’ engagement in physical activity, to allow them to become more active so that they can live healthier and more active lives (Robinson & Melnychuk, 2008). It is also a way for students to connect within class lessons in different ways, for example, kinesthetically (Vail, 2006). In a study done by Donnelly et al. (2013) using an “Academic Achievement and Physical Activity Across the Curriculum” (A+PAAC) approach, which was a training program for teachers, they found that teachers were better prepared to implement DPA, and through this program it allowed teachers to deliver academic lessons using physical activity, therefore there was no reduction in academic instruction time; an issue that many teachers are concerned with. Teachers should learn how to create a balanced classroom and incorporating DPA in academic lessons would cut down the elimination of both physical activity and academic subjects.

Therefore, the differences between DPA and physical education are very important to
note, as they are quite different, and each have their own benefits for students. Using DPA as a health promotion initiative will increase students’ overall health and well-being, which could potentially affect their academic achievement.

2.3 Mind-Body Connection

2.3.1 Health Benefits Related to Physical Activity

There have been many studies done to prove the effectiveness of physical activity in decreasing health issues. Regular physical activity can prevent multiple diseases from occurring, including cardiovascular disease, diabetes, cancer, hypertension, obesity, and more. (Warburton et al. 2006; Eveland-Sayers, Farley, Fuller, Morgan, & Caputo, 2009). Physical activity also provides psychological benefits, including the decrease of depression, anxiety, stress, and increase in self-confidence (Eveland-Sayers et al., 2009).

More primarily, obesity is very harmful to the body, causing many other health complications. A study done by Lanigan (2014) recruited 72 early learning and childcare providers and provided them with a retreat on the harmful effects of child obesity, as well as the barriers against obesity prevention. These childcare providers were also trained for three hours on integrating physical activity into their childcare programs. The results of this study showed that after engaging in this retreat, these childcare settings significantly improved in providing children with physical activity opportunities (Lanigan, 2014). This is one instance in which childcare providers increased physical activity for children because they were trained on the effective benefits that physical activity has, including the decrease of childhood obesity. The possibility of training teachers, using the same intervention settings, may be beneficial in increasing the implementation of DPA in everyday classrooms.
Donnelly et al. (2013) and Vail (2006) discuss the negative impact that obesity has on academic achievement, and yet many schools are still decreasing the time that students have to engage in physical activity. Donnelly et al. (2013) states that this is counteractive; as there is much evidence that shows physical activity decreases obesity rates and increases academic achievement. Physical activity is known to aid in moving into a healthier direction, therefore, Vail (2006) states that focusing on students’ health will only help kids, including their ability to perform academically. In Vail’s (2006) studies they also state that physical and mental processes influence each other in ways that are still being understood. There is a mind body connection, keeping the body healthy helps keep the mind healthy, as they are not separate entities; they work together.

In Vail’s article (2006), it is stated that elderly adults use exercise to maintain cognitive function in later life; this could be the same for children. It is also important to look at the life long advantages of engaging in physical activity. According to Lee et al. (2007), engaging in physical activity as a child increases the chances of adult participation in physical activity; therefore, the risks of the health concerns listed above would be less likely to arise. In this study done by Lee et al. (2007), the School Health Policies and Program study administered questionnaires to every state in the United States, assessing school physical education policies and practices. Results of this study showed that most states had policies in place to teacher physical education, yet few of these schools provided the necessary amounts of physical education. This study also concluded that each level of the school must take a new approach on physical education, even at the state and district level in order to create more opportunity for children to engage in physical activity, as it will provide them with the opportunity to be more likely to engage in physical activity throughout their lives (Lee, et al., 2007). In relation, physical
activity is equally as important to both adult and children brains (Pierson, 2002). Therefore, it is crucial to promote physical activity to increase well-being at all ages, starting from a young age.

In addition, physical activity does not only decrease physiological diseases and psychological disorders, it also shows an increase in our ability to do work, engage in recreation and sustain a better quality of life (Eveland-Sayers et al., 2009). The healthier a person is, the greater chance they will have to live their life and perform to the best of their abilities. The literature in this section focused on the body in regards to the mind-body connection, the next section will focus on the mind, and how physical activity affects our cognitive functions.

2.3.2 Brain Development and Learning Related to Physical Activity

There are many studies that focus on physical activity, its effects on cognitive function and the increase in academic achievement. Similar to the physiological effects that physical activity has on our bodies it also has effects on physiological mechanisms in the brain which include “increased cerebral blood flow, changes in hormone levels, greater arousal and stimulation, alterations in brain neurotransmitter activity” (Eveland-Sayers et al. 2009, pg. 103). Also, as previously mentioned, physical activity reduces tension, anxiety and stress, but also elevates self-esteem, which, according to Eveland-Sayers et al. (2009), Coe et al. (2006) and Shephard (1996), may be one of the mechanisms in relating fitness and academic achievement. The study conducted by Eveland-Sayers et al. (2009) recruited one hundred and thirty-four elementary school students, who were tested on multiple fitness tests, such as their one-mile run time, body mass index, curl-up and sit and reach data. Once these scores were collected, students were then tested on math, reading and language questions. The results of this study showed a link between some areas of fitness, specifically muscular fitness, and academic achievement.
Therefore, there is a connection between the movement of our bodies and our brain processes. Pierson (2002) also discusses how exercise increases blood flow and oxygen to the brain, which can be a factor in increasing reaction time. He also goes on to say that, “physical activity may increase the brain’s efficiency, alertness, creativity and memory” (Pierson, 2002, pg. 21). Additionally, these are components that students often utilize when completing tasks, whether it be at school or in other areas of life.

Looking more in depth at studies that evaluate the relation between physical activity and academic achievement, Hillman, Castelli, and Buck (2005) conducted a study that looked at physical fitness and cognitive performance. To determine whether or not cognitive function was affected, Hillman et al. (2005) used a computer task to evaluate accuracy and speed. Their results concluded that the children who were more fit responded more quickly and accurately to the task. Therefore, there were positive conclusions made in regards to physical activity engagement and brain function and improvement to cognitive health (Castelli & Hillman, 2007).

Smith and Lounsbery (2009) looked at studies that specifically targeted vigorous intensity activities, and these studies concluded that higher academic achievement were more strongly related to vigorous physical activity. Moderate to high intensity physical activity is what children should be engaging in during physical education, however, if PE is not scheduled in their day, it is easy to implement simple activities that exert this much intensity. Therefore, students are still able to acquire these benefits through DPA.

Physical activity can have a positive impact on minority children. Burton and VanHeest (2007) stated that physical activity might have even more benefits for minority children because they have higher risk of poor health outcomes and low academic achievement (Smith & Lounsbery, 2009). By giving these students the opportunity to engage in DPA during class time
they will be increasing their fitness, increasing their health, and ultimately have more exposure to a better quality of life. Lastly, Tomporowski, Davis, Miller and Naglieri (2008) conducted a study similar to previous ones and found that “physical activity scores of children in grades 5, 7, and 9 were strongly positively correlated with both measures of academic achievement, with girls evidencing a stronger relation than boys” (pg. 120). Therefore, there has been an abundant amount of research done in regards to physical activity positively effecting students’ academic achievement.

Another aspect that has been looked at in some of these studies is students’ lack of concentration in the classroom. Coe et al. (2006) looked at physical activity and its impact on increasing arousal and decreasing boredom levels. This may then lead to increased attention span and concentration, which are two components that students need to focus in the classroom (Coe et al., 2006). This will lead students to academically achieve better than before. If a student is bored in their environment, they will have a lack of concentration, therefore be deprived of the necessities they need to learn.

Finally, physical activity can also be used to increase academic achievement for students who learn better by being active. For kinesthetic learners, physical activity combined with academic learning will allow them to process the information better, and ultimately achieve greater success with the material taught this way (Vail, 2006). Although DPA cannot be used for all subjects during all hours of the day, it can be incorporated in some academic areas. By using these strategies, learners will be able to broaden their learning styles, and develop a deeper understanding as to how they learn best. By incorporating DPA, teachers are providing positive benefits to all students, whether it is learning benefits or health benefits.
2.4 Conclusion

Therefore, throughout this study, framed by the above concepts, the research question was answered: what are Ontario teachers’ opinions on the affects of physical education and physical activity in the classroom in relation to how it affects students’ academic achievements? In addition, other questions that were answered were: Why are teachers’ views on the importance of physical activity in the lives of students so relevant and how do these teachers perceive their students’ learning, in regards to when they become more engaged?
Chapter 3: Methodology

3.0 Introduction

In this chapter I describe the aspects of research methodology used within the study. Throughout this chapter, I discuss the general approach of the study, as well as the different parameters that were taken throughout the data collection process. Participant sampling will be discussed further as to how the participants for the study were recruited and what criteria they required. Participants’ brief biographies will also be presented, to give readers a sense of who the participants are in relation to the research at hand. Data analysis procedures will be reviewed within the chapter, as well as ethical considerations that were taken throughout the research study. Finally, this chapter will touch upon the certain limitations presented throughout the duration of the study, but will also point out the strengths within the methodological processes.

3.1 Research Approach and Procedure

In this study, I chose to conduct a qualitative study, due to the nature of the research project, in that the findings and results are based on participants’ opinions and perceptions through a semi-structured interview, completed by two elementary school teachers. The interview structure was created to obtain information that related to the research question that was based on Ontario teachers’ opinions on the affects of physical education and physical activity in the classroom in relation to students’ academic achievements and success, along with its sub-questions that follow. It was also structured to allow for additional information to be acquired through prompt changes and additions to the interview questions. The responses that were obtained throughout the interview process were analyzed and categorized into themes and patterns, which will be further discussed in Chapter 4. Participants signed a consent form,
informing each of them about the study and the parameters that were taken throughout the interview process. These decisions and rationales for each parameter will be further discussed throughout this methodology chapter.

Qualitative research can be defined as research that “begins with assumptions and use of theoretical frameworks that inform the study of research problems addressing the meaning individuals or groups ascribe to a problem” (Creswell, 2013, pg. 53). The process of studying the underlying problem is done through collecting data through participants’ personal experiences, and then analyzing the data in order to “establish patterns and themes” (Creswell, 2013, pg. 53).

Qualitative research is important, as it has allowed myself, as the researcher, to observe teachers in their everyday classroom settings and listen to their opinions, views, perspectives and experiences in relation to DPA and children’s mind-body connection. Due to the nature of qualitative research, it allows the researcher to go back to the data that was found and continuously review and interpret it, therefore, there is no linear fashion that must be taken when conducting the study, thus it allows for unstructured changes in the process (Maxwell, 2013). Interviews can be semi-structured to allow for spontaneous information or experiences to be expressed by the participants in an unplanned moment, therefore allowing genuine information that may be very crucial to the data to be revealed. Qualitative data also allows researchers to “construct and reconstruct” aspects of the study, in order to be able to continuously mold the study to answer the research questions appropriately (Maxwell, 2013).

One of the goals of qualitative research is to try and understand different perspectives on issues that are of concern through people’s experiences. It is about taking information from real life settings and analyzing it for what it truly is in a natural setting. It is also important because the researcher is collecting data based on opinions and identifying connections between their
opinions and perspectives and the research questions that are being presented. The outcomes that could be expected from qualitative research are themes and patterns that will be found throughout the interviews in which participants will expand on their practices, beliefs and values and how these aspects influence the people around them.

Qualitative research is a suitable approach for my research purpose because my research question focuses on how the opinions and values the teachers have on daily physical activity ultimately affects their students in and outside the classroom. In order to gather information that supported my research question, it was necessary to obtain data through person-to-person interactions through asking a series of questions where participants could answer based on their related experiences. It is necessary to know what opinions teachers have on mind-body connections in order to establish how they include their beliefs into their teaching practices.

3.2 Instruments of Data Collection

Within my research project I created a semi-structured interview to be used for the data collection process. A semi-structured interview process was the most beneficial instrument of data collection for this type of qualitative study because it allowed participants to elaborate on their opinions based on questions that relate to the research question. It also allowed participants to go off script and talk about other aspects that related to their experiences, but may not have necessarily been asked in the interview questions. This allowed for spontaneous discussions that triggered new and unexpected data that assisted in answering the research questions. This type of data collection process was appropriate in this study because it allowed for participants to share their opinions without being limited to what they wanted to say about DPA and student success. The interview questions consisted of a series of open-ended questions, which helped provoke
more detailed descriptions and experiences that participants had (DiCicco-Bloom & Crabtree, 2006). Semi-structured interviews are the most widely used interview formats for qualitative research and they elicit many benefits for research purposes, one being that more questions can emerge from in-person dialogue (DiCicco-Bloom & Crabtree, 2006). The dialogue of the interview was coded and underwent data analysis where themes and conclusions were made to support the research questions, which will be further discussed in Chapter 4.

The steps for the interview process were conducted through Creswell’s (2013) method, whereby my research questions were imbedded in the interview questions. The participants chosen for the study were people who had experiences relatable to the study. I pilot tested my interview and found appropriate places to conduct the interviews; ones that made the participant feel comfortable. Finally, once consent was received from the participants, I proceeded to ask the interview questions where I was attentive and interjected only when more information was needed or to ask a probing question (Creswell, 2013). The interview questions were set up in a way that allowed the participant to build on their opinions in relation to the research questions. Participants first answered a series of questions based on background information, where they spoke about how physical activity plays a role in their lives, and general information about being a teacher. The interview then proceeded in regards to their teaching practices and how they incorporate DPA in their classrooms, and why they do so. The original set of questions guided the interview to more in-depth questions that gathered information pertaining to reasons why the participants were being affected by their opinions, beliefs and practices on DPA.
3.3 Participants

In this section, sampling criteria is examined, and how participants were chosen for this study. In addition, sampling procedures are discussed in regards to how participants were located, as well as participant biographies in order to learn more about their backgrounds and what values they hold in relation to this study.

3.3.1 Sampling Criteria

The sampling criteria for the participants who were eligible to participate in the study were as follows:

- Five years of full time teaching experience
- Strong interest in health and physical education
- Willing to share their own experiences

The rationale for this set of criteria was to gain experiences that relate to physical activity in the classrooms; therefore, having five years of experience, as well as having an interest in health and physical education were created to obtain quality responses from participants, who were willing to share their experiences.

3.3.2 Sampling Procedures

Throughout the study, purposeful sampling was used due to it being a qualitative research study. Purposeful sampling allowed for participants to be chosen thoughtfully so that information gathered from the participants would be purposeful that could then be used to delve deeper into the research problem (Creswell, 2013). Firstly, participants needed to meet the sampling criteria in order to be prime candidates for the study. Secondly, participants were recruited using the
“snowball” or “chain” sampling strategy (Creswell, 2013, pg. 139). This strategy allowed participants to be recruited through colleagues who were familiar with teachers that met the requirements of the sampling criteria, and served as participants who were able to provide rich information in regards to the study’s goals (Creswell, 2013). This procedure was used to assist in finding participants who might be great candidates, and would be willing to participate in a study.

### 3.3.3 Participant Biographies

The first teacher that was interviewed was a female, whose pseudonym name is Sarah. Sarah is an elementary school teacher. She has been teaching for thirty-four years and has taught from grades three to seven. She teaches all subject areas including physical education. Sarah herself is very physically active; she runs at least four to five times per week, and has always been fit. She believes that she wouldn’t be able to do the things she does if it was not for being physically active. Sarah has a strong belief that it is necessary for everyone to keep healthy, and that students should have optimal physical activity experiences because they have been much more sedentary over the years. She is a promoter and role model for physical activity among all of her students.

The second teacher that was interviewed was also a female, whose pseudonym name is Nancy. Nancy is also an elementary school teacher. She has been teaching for eighteen years and has taught all grades and teaches all subjects. She is also the sole physical educator for grades one to three at her school. Nancy loves extra-curricular activities, coaching and being the athletic representative at her school. She is a very physically active person; she engages in physical
activity four to five times per week. She believes that all children need to engage in physical activity, and creates a safe and encouraging environment for all students to do so.

3.4 Data Analysis

Creswell (2013) has a three-stage process that is used in the data analysis portion of research studies, which includes: organizing data, reducing data into themes, and representing data through discussions and figures. I used this process to complete the data analysis portion for this study, which I will briefly describe. When the data collection process was completed, interviews were reviewed in depth and transcribed. Once interviews were transcribed I went through the data and identified patterns and themes through coding the information that was collected. The process of coding the interview entailed individually looking for important information that may have been relevant to the study. There were many codes that were created through the coding process, which then needed to be grouped based on similarity (e.g. teacher’s health background, vocation, encouragement were grouped together). Once the groups were created I formed themes that represented each of the important findings which included: teacher identity, physical activity encouragement, mind-body connection, student engagement, implementation strategies and limitations and available resources. Once the themes were identified, I used the existing literature found in my literature review to make connections between the data that was collected and key concepts that helped form my research questions. In order to support the data, literature was used as a reference to create evidence that the information gathered was in fact related to the research questions and did help support the research findings.
3.5 Ethical Review Procedures

There are four ethical review procedures that were executed through the research study. Firstly, a consent form was given to the participants prior to being interviewed, which explained the interview procedure, as well as, the general purpose of the study. They were also notified as to how their information was going to be used in the data collection process (Creswell, 2013). In the consent form, participants were informed that if they felt uncomfortable with the study or did not wish to participate any longer, they were able to withdraw from the study at any time.

Secondly, all information gathered during the data collection process was recorded using an audio recording device, where the information was transcribed and kept on a password protected computer. This ensured that participant’s information remained confidential.

Thirdly, throughout the research project, pseudonyms were assigned to each participant to protect the identity of all participants. Confidentiality and possible emotional consequences that may have occurred in the interview process were potential ethical concerns that were considered in this study as well (Whiting, 2008). Therefore, pseudonyms were used to maintain confidentiality throughout the entire study.

Finally, interviews may bring out emotional reactions when participants discuss their experiences (Whiting, 2008), which is why the interview process was conducted in a location that was convenient for the participant where they felt comfortable. As for the interviewer, it was important to keep a calm state so that the participants felt welcomed and open to answer the questions that were asked.
3.6 Methodological Limitations and Strengths

Within this study there were limitations to the research, however there were also great strengths that have been taken into consideration. Two of the limitations to this study that have been recognized were time constraints and the restriction of teacher-only interviews. Due to the nature of the study, being a Master’s research project, there was a time limitation of two years to have the study completed. Less time also resulted in a smaller sample size, and therefore a limited number of participants to interview. It is possible that through semi-structured interviews, researchers may only be able to obtain small amounts of data per interview question and therefore would be more beneficial to have a larger number of participants in order to gather more information (Morse, 2000). In this case, the time limitation did have an effect on the number of participants that were used in the study.

Another limitation to this study was the data collection process of only interviewing teachers and not students. It would have been very informative to ask the opinions of students on how they view their learning experiences as a whole, including their daily physical activity experiences, and how it affects them. By speaking with students, the research would have two perspectives to the research questions at hand, and would have created a chance for more data to be collected. Ethical approval would have been needed to conduct a study that involved students, and due to the time constraint on the study it would not have been practical.

3.7 Conclusion

The findings of this study were collected through all of the procedures that have been mentioned throughout this chapter. This study underwent the steps of a qualitative research study, with its main data collection instrument being a semi-structured interview. Interviews
were given to participants who met the sampling criteria. The participant’s information was organized and transcribed, and finally grouped into categories and themes. This information underwent analysis, where interpretations and meanings of the collected data were revealed. Many ethical review procedures were made throughout the length of this study, where participants signed a consent form, informing them about the purpose of the study, and that they were able to leave the study at any time. As well, pseudonyms were given to each participant, to ensure for the highest quality of confidentiality. Finally, time and solely obtaining teachers as participants were the limitations within this study, however there were many strengths as well, including gaining quality information due to teachers observing students every day.

In Chapter 4 the research findings will be reported.
Chapter 4: Research Findings

4.0 Introduction

Throughout this chapter, I present the findings that were compiled from the two interviews with elementary school teachers, who teach between grades one and eight. The findings assist in answering the research question: what are Ontario teachers’ opinions on the affects of physical education and physical activity in the classroom in relation to how it affects students’ academic success. I have broken down my findings into three themes which include: teachers’ values and beliefs related to DPA, teaching practices and perceptions related to DPA and influencing factors on the implementation of DPA. Each of these themes contains sub-themes that will allow for a complete breakdown of the findings that were present throughout the interviews. These themes will help the reader gain insight on the study’s research question and sub questions from the perspective of professionals within the field of teaching.

4.1 Teachers’ Values and Beliefs Related to Daily Physical Activity

4.1.1 Teacher Identity

When conducting the interviews, both participants reported that physical activity (PA) plays a major role in their lives; not just as educators, but through their personal lives as well. Both Sarah and Nancy are passionate teachers, who carry a strong belief in PA and its benefits. Sarah has been active her entire life and continues to be active at least four to five times a week. “I wouldn’t be able to do half of what I do. I don’t fatigue, I don’t have a lot of aches and pains”. Sarah had reported this when I asked her if she finds benefits in the PA she engages in. Very similarly, Nancy participates in PA a minimum of four days a week and truly has a love for it. Both Sarah and Nancy also have a background in physical health and education as well, so they
have existing knowledge on the benefits of being active. Due to both of their strong values of PA in their own lives, their dedication, behaviours and decisions seem to be affected and brought into their teaching values. Sarah states that “because I’m physically fit I try to encourage it”.

Pajares (1992) refers to teachers as having their own belief systems that guide their behaviours and decisions that they make in the classroom. Both Sarah and Nancy are dedicated coaches and thrive in providing students with extra curricular activities. Nancy states that teaching is her life and that she especially loves extra-curricular activities. Their passion and commitment in PA allows them to encourage and motivate students to join extra-curricular activities. A teacher’s identity with PA shows the values that the teacher has with the benefits of PA, which leads to the values that the teacher holds for role modeling to students the importance of PA and a healthy body and mind. If PA is not important to a teacher, the likelihood of them incorporating it into their classroom is very unlikely due to the limitations. Teachers must truly believe in the value that PA holds in order to continue to implement it in their classroom. For these teachers, it is easy for them to disregard it because they need to focus more time on academics. What they fail to realize is that the break and benefits which DPA bring to students may actually assist in their implementation of academic subjects. What I found in both interviews was that the encouragement that these teachers possess is giving students what they need, this is because the teachers value the purpose of PA. Their beliefs allow Sarah and Nancy to be active role models inside and outside of the classroom. Allender, Cowburn and Foster (2006) explain that it is necessary for teachers to be actively involved in ensuring that students are engaged and enjoying their physical education experiences in order for them to acquire the benefits. As it is necessary for the active role of educators to promote engaging physical education classes, I believe the same active role is needed for in class DPA as well.
Throughout the two interviews my beliefs regarding teacher identity were confirmed, in that teachers’ values and opinions truly affect their students. Nancy reported a time where some teachers who have been in the profession for years do not incorporate DPA into their classes because they rather focus on academics and they do not feel the need to incorporate DPA. The DPA mandated policy has been around since 2006, that’s ten years in which teachers are still not consistently implementing the required amounts of PA for students daily. This is also supported by Robinson and Melnychuk (2008), who states that many teachers do reject the implementation of DPA based on their own beliefs about it; that it takes extra work for something they do not value. Nancy is also the athletic representative for her school, so she encourages teachers to do DPA within their classroom. She sends emails to teachers who either do not open, or just ignore them. To these teachers, PA is not a priority. Abbott, MacDonald, Hay and McCuaig (2011) discuss that teachers are too preoccupied with reaching curriculum goals, and do not want to use their time to incorporate DPA. Regardless of reaching curriculum goals, physical activity should not just be an option, it should also be a priority because it is a necessity of life and it is what keeps us healthy. DPA should not be an option, it is mandated by the government to be implemented every day when students do not engage is physical education classes.

4.1.2 Teacher Identity and the Mind-Body Connection

A teachers’ identity, values and beliefs have a direct impact on their students overall well being. To be fully able to be present at school with a clear mind and ready to learn, students must be healthy and concentrated. Sarah and Nancy both mention key components in regards to the health of their students. The fact that both teachers perceive PA as essential for keeping students healthy is vital because there is a mind-body connection. Unfortunately, the direct correlation
between DPA and academic success was not able to be seen within this study, however, teachers’ perceptions of how students reacted after PA showed increases in factors that did increase when children engaged in DPA. These factors, do however, relate to students’ eventual growth in academics. Some of the factors that were present within the findings were an increase in focus, decrease in restlessness, decrease in boredom and an increase in readiness to learn, which have also been results seen in many studies that have been done regarding the benefits of physical activity (Peirson, 2002; Smith & Lounsbe, 2009; Shephard, 1996; Coe et al., 2006; Vail, 2006). Throughout the interview process, the word focus was used a total of twelve times when talking about how they perceived their students after engaging in daily PA. Being better focused was the major finding in regards to students’ relationship between PA and academic success. If a student is not able to focus or is bored in their classroom, they will not be able to concentrate or absorb the learning material that is being taught. Due to these teachers’ beliefs in PA, they incorporate “natural breaks” which may not seem like a lot, but can have quite a large impact on a student in the long run. These teachers’ perceptions on students’ PA levels have decreased over the past years due to a number of reasons, socio economic status, safety concerns and video games were some of their examples for reasons for potential PA decline. They have also noticed an obvious increase in sedentary behaviour and obesity, therefore they feel that there is a “need to exercise more”, this is also supported by Tremblay and Willms (2003) whose study results show that watching television for more than three hours per day led to an increased risk factor for obesity, whereas participating in sports showed the opposite effect, resulting in less risk of obesity.

Another finding was that both interviews revealed that the schools are in low socio economic status areas of their cities. Therefore, these children are not getting the benefits of
extra-curricular activities outside of schools because their families cannot afford it. Also, they live in areas where it is unsafe to stay out with their friends and play. The interviews revealed that teachers recognize that children are sitting for too long and they tend to drift and be less focused. As they said, DPA is a natural break. Teachers see children for majority of their day; therefore, they greatly impact what their students do. In the interviews teachers raised concerns for children who do not have a lot of PA opportunities after school, such as children with low SES, these children have few opportunities to be enrolled in extra-curricular activities and may be unable to be physically active at home; therefore, teachers need to be able to provide proficient amounts of PA for all of their students’ well-being. This is also supported by research in which youth with lower SES as well as minority students are more at risk to being overweight as adolescents because they are not getting enough PA, which is related to the low rates of participation in school sports (Johnston, Delva, O’Malley, 2007). Giving them these small opportunities will increase their total PA and therefore increase their overall health. This in turn will contribute to their likelihood of success. Incorporating DPA into the classroom allows for all students to receive the benefits of being physically active (OME, 2006). As Sarah put it, “They do say healthy body, healthy mind”, which can also be supported by the Ontario Ministry of Education Daily Physical Activity Document (2006). In recent literature, Vail (2006) states that increasing health helps children, including academically:

Focusing on student health can only help kids, including their ability to perform academically. "It's critical that school boards understand that the best thing they could do for the kids' grade point averages and test scores is to ensure kids are healthy," says Paul Rosengard, the executive director of SPARK, a physical education program developed by researchers at San Diego State University. (p. 19)

It is clear through the interviews that both teachers believe in the mind-body connection. There was a noticeable correlation that students who are disciplined with sports are often disciplined
with their work as well. Very similarly, it was also noted by teacher in the interviews that kinesthetic learners learn better when implementing daily PA in the classroom because they have different learning styles and it helps them become more focused. Sarah also explains that “a lot of students who are disciplined with sports are often disciplines with their work as well”. The two go hand in hand. In the article written by Vail (2006), the author talks about sports being a motivator and a member of the USA Football non profit organization stated that “you can’t succeed in sports without discipline in mind and body” (pg.18). Therefore, there is a noticeable connection between the mind and body, and is being noticed by these teachers. Being physically fit is also related to cognitive functioning (Hillman et al., 2005). PA allows these individuals to thrive in their academics. Nancy explains that children need break just as much as we as adults need break:

Your brain can only absorb certain amount information so you get up naturally to get a cup of coffee or get something. Just like the students, they can’t just focus on one thing. And now with video games, their attention span has decreased over the years since when I first started teaching.

Creating a learning environment that will benefit all students, one that is critical and necessary for some to succeed, may assist all students on their journey to success. These physiological benefits also lead to positive health and well being. Throughout the interviews, my findings showed that teachers perceived the students to be letting their guard down, having fun and laughing with one another. In the literature it is shown that an increase in PA actually decreases anxiety, stress and tension, and increases self esteem (Eveland-Sayers, 2009; Coe et al., 2006; Shephard, 1996). The alleviation of stress and anxiety can affect school performance (Vail, 2006). Students can learn to use PA as a way to self-regulate when they are feeling anxious or stressed. This tool can be used throughout their academic lives, even up until they are adults. By creating these PA opportunities for students, teachers are creating a better learning environment,
therefore creating a higher chance of academic success. PA also increases efficiency, alertness, creativity, memory, concentration and decreases boredom (Peirson, 2002; Smith & Lounsbey, 2009; Shephard, 1996; Coe et al., 2006). Concentration and attention span are two of the most critical components that help students focus in the classroom, without focus or concentration, students would not be able to academically achieve fully.

4.2 Teaching Practices and Perceptions related to Daily PA

During the course of the two interviews, both participants shared their insights on how they implement DPA into their classrooms, through different strategies and how they encourage all their students to be physically active. Both Sarah and Nancy implemented DPA on the days of the week where physical education classes were not scheduled. Both Sarah and Nancy find that one of the most beneficial times to conduct DPA is right before recess, this way the students can continue to be active for another fifteen to twenty minutes outside as well. Another time where both teachers incorporate DPA is during times of their days where there are little breaks in the time table, and a lot of academic subjects. They find it beneficial to incorporate DPA to create a “natural break” between subjects to allow students to take a mental pause in their academics. Within the interviews I learned that both teachers use callisthenic exercises as their main outlet for DPA.

4.2.1 Student Engagement and Enjoyment

One of my major findings was that the implementation of these activities allowed their students to get excited and happy. Both teachers perceived that their students enjoy being active. Sarah explained that, “they smile, they giggle, they laugh, they joke around with each other, and
they like to move around”. Nancy also described that students “react positively; they love it”.

Having teachers create this type of learning environment is extremely beneficial for the students, because it gives them an outlet where they are able to be kids; laugh, engage with one another, and be active. Allowing students to have fun in the classroom will allow them to have an overall sense of relaxation, and allow them to relieve some of the stress that they are experiencing throughout their classes. Vail (2006) describes that PA allows students to attend school and have a more positive attitude when at school. He states that recess and physical education classes allow students to “let their guard down” this allows them to enjoy their time and have fun. Vail (2006) further explains that this helps motivate students in school. The better their attitude and mood, the more they are motivated to do better. Therefore, the learning environments that these teachers create for their students are essential to allow students to better achieve. Within Nancy’s interview, I asked if she thought students enjoyed when she incorporated DPA in the middle of their school day. Her response was, “YES! Any excuse to get up and move around and be loud”. Students enjoy classroom environmental changes that allow them to be loud and have fun. Both teachers found the need to ensure that students did get this time to release energy.

4.2.2 Implementation Strategies

Another major finding in regards to DPA strategies was that both teachers found it most beneficial to have student leaders in the classroom guiding the activities. When students are able to take initiative and lead their classmates, it motivates them. “The fact that they are leading it too sometimes get them more interested and involved”, which was said by Sarah. This strategy encourages students share different DPA activities with their classmates. It also teaches them leadership skills that can be transferable in many areas of life. Therefore, teachers are using DPA
to teach leadership qualities that can be used in variety of areas.

Another strategy that both Sarah and Nancy had done at their school in the earlier stages of the mandated implementation of DPA is school wide initiatives. Both teachers believed that when DPA was done as a school wide initiative, it was better accepted in their schools by all teachers. When Sarah implemented it, she was responsible for the DPA initiatives at her school and had grade seven and eight leaders go around the classrooms to lead the activities. Sarah talked about her experience with the DPA school wide initiative:

When its done as a whole school then you do it over the PA. They play the music, you have student leaders in each class, and it just becomes part of the daily routine like prayers or Oh Canada. And personally from my experience, because like I said I’ve been involved with it since the beginning, that was to me the best way to implement it and it seemed to be the most successful, and then pretty much everyone did it then. Even teachers that say aren’t physically active and do not know too much about exercises and things like that, well everybody would have student leaders in the room and they really didn’t have to worry about that, they were just in there to supervise.

Having everyone involved allows the school to have a united community that allows students to see the benefits of being physically active. This sense of community allows students who are not as active to engage in PA because they have positive role models around them in the school as a whole.

4.2.3 Teachers Encouragement

Another finding in regards to the implementation of PA within schools is that a teacher’s positive encouragement in regards to being active is extremely important when motivating students to engage in PA. Both teachers are providing encouragement in extra-curricular activities as well as implementing the required DPA into their classes. Their students are receiving the PA that they need throughout the day, as opposed to a classroom that is not participating in DPA. These students would be seated for six hours a day, with no breaks
between subjects, unable to engage in being active. Both Sarah and Nancy demonstrated that their own passion in physical activity and their prior knowledge in health and physical education assists in their encouragement and implementation of physical activity to their students.

4.2.4 Integrating DPA in Academic Subjects

One aspect that I was hoping to find throughout my study but did not receive the information through the two interviews was the integration of DPA and academic subjects. Although, one example that Sarah used was teaching the health curriculum, such as properly being able to locate pulse and how their heart works as a muscle. This is a great example of how her values and beliefs support her reasoning for using this in the classroom during DPA and shows that she is teaching the value of PA and why students should continuously engage in it because it supports a healthy lifestyle. However, I was hoping and expecting to find new insights on integration of DPA and academic subjects, such as math and literacy, since a major limitation is that teachers perceive the importance of academics as being highly more important than the implementation of DPA. When asked in the interviews if academics and DPA were combined in the class, both teachers said that DPA and academics were kept separate. Donnelly et al. (2013) completed a study where they trained teachers to implement DPA and academics together so that it would lead to no reduction in academic instruction time. However, teachers do not find this a natural habit, to combine the two. Through my own experience I have incorporated DPA and math, where I saw an extremely positive reaction with students. Students who would never volunteer answers in class were suddenly answering questions, laughing and having fun, all at the same time. Incorporating academics and DPA allows students to learn in different ways, and may create better learning opportunities for students who have trouble with attentiveness and
concentration (Vail 2006).

Therefore, the use of creating a fun environment, school initiatives, leadership roles, natural breaks and positive encouragement are all positive implementation strategies that both Sarah and Nancy find to benefit their students in their classroom.

4.3 Barriers on the Implementation of Daily Physical Activity

Throughout my research I found, as expected, there are many influencing factors that impact the implementation of DPA in the classroom. In this section I will discuss the barriers and available resources regarding DPA. Firstly, one of my major findings are the barriers that accompany the implementation of DPA. These barriers that are consistently repeated throughout my findings consist of time, space and colleague support.

4.3.1 Time as a Barrier to DPA Implementation

The allotted time in a school day seemed to be a recurring theme when discussing barriers or challenges in regards to implementing DPA. Teachers feel that it is difficult to find time to incorporate DPA, because it will always be interfering with another academic subject. Not only did they find the time aspect a challenging part, but it was also connected to the fact that a lot of teachers believe that it “disrupts their academics”; that implementing DPA practices takes way from academics. Teachers do not feel that they have enough time to fit everything in the curriculum into a school day as it is, and a lot of teachers are time pressured especially when having to add in PA. Academics become the number one priority, when there is no time for DPA it is not considered as an important aspect of the day that was missed. The students’ reactions after DPA may also take up time, because they are more “hyper”, “loud”, and sometimes
“disruptive”, therefore it takes longer for the teacher to get the class ready for their next academic subject. Literature reveals that “school-based physical activity interventions suggest that teachers were preoccupied with reaching literacy and numeracy testing targets... (e.g. Abbott et al. 2011)” (Macdonald, Abbott, Hay, McCuaig, 2014, pg. 438). Previously looked at in the literature review, Coe et al. (2006) revealed that many schools have reduced their physical education classes to once a week, to help focus on academics and increase academic achievement. Physical activity has already been diminished in the students’ school week, and teachers still attempt to cut more classes or get around the mandated DPA initiative. This gives students even less time for PA. Thinking back to the children in low income families, where are they getting their PA from? Although the teachers in this study find time to incorporate DPA into their daily schedules, not all teachers are motivated to do so. If physical education classes are being reduced to one to two days a week, then it is crucial that the time is taken to incorporate DPA in order for students to be getting their recommended PA they need to keep them healthy. Being healthy assists in the overall well being of students and therefore will naturally assist students in their overall success.

4.3.2 Physical Space as a Barrier to DPA Implementation

Another barrier to implementing DPA is physical space. Both teachers discussed how space was a factor in limiting their ability to do certain activities. It is difficult to conduct quality DPA experiences for the students because there is very limited space for them to move around. The limited space also leads to the issue of safety concerns, and again limited movements. Both teachers explained how the majority of their DPA activities consist of callisthenic type exercises, ones that can be done from their desk. Even moving the desks to the side has been done, to
decrease risk of any safety hazards, however, the space is still limiting. I also found that both teachers enjoy taking their students outside for DPA, however, that is also dependent on the weather conditions. Therefore, physical space is a challenge that is presented when trying to implement quality DPA initiatives in the classroom.

4.3.3 Colleague Support as a Barrier to DPA Implementation

The final barrier that is present within my findings is colleague support. Before starting this research, I suspected that many teachers were not incorporating DPA in their classrooms, even though it is mandated by the government. My uncertainties were confirmed by the teachers in my interviews, revealing that many of their colleagues do not incorporate DPA in their schools, due to a variety of reasons, which have been listed throughout this section of the research paper. Teachers do not want to implement it in their classrooms because of time constraints, academic goals, not feeling confident in leading DPA or simply do not feel the need to implement it based on their own negative values of PA. There seems to be a disconnect between teachers who do incorporate DPA and those who refrain from it. Nancy reveals that teachers still try to use physical education or DPA as collateral:

There are teachers that believe that if kids don’t finish their work that they can use gym as collateral. So they tell me that their child wont be participating in gym and I always respond with, well it is a subject and I have to assess it so if you are going to take away something, then take away something on your own time not my gym time. And that’s not fair. And I never take away gym from kids, not as a punishment, I would never do that.

The obvious disconnect between teachers is affecting their students crucially. These students do not have a say in their time table for the day, but get extremely excited when physical education class is part of there day, Nancy observes. Teachers have the key that allows or forbids children to be physically active. Their support is needed in order for the entire school to implement DPA
frequently and consistently. An excerpt from the quote below by Macdonald, Abbott, Hay, & McCuaig (2014), shows that teachers are preoccupied with academics, however it goes on to show that there are multiple reasons why teachers may disregard physical activity implementation:

In Australia, recent accounts of school-based physical activity interventions suggest that teachers were preoccupied with reaching literacy and numeracy testing targets, lacked confidence and competence in leading physical activity, and were largely dismissive of schools being burdened with another responsibility (e.g. Abbott et al. 2011). (p. 438)

Also, there is no formal evaluation of the implementation of DPA in schools (Stone, Faulkner, Zeglen-Hunt, & Bonne, 2012). This makes it easy for teachers to disregard the importance of it. It also leads to a disconnect between teachers. Evaluations should be mandated if the implementation of DPA has been mandated. This would give teachers incentive to incorporate PA in their classrooms. Nancy also discussed some of the challenges with implementing whole school initiatives for DPA. Although both teachers saw many benefits with doing whole school DPA initiatives, there are also some challenges considering there are teachers who do not believe in the role of PA in school, who complain of the disruption in their schedules. Nancy described her experience:

Another challenge like I was saying before I encountered is teachers that don’t want to incorporate the DPA in their classrooms. And when I did incorporate the whole school’s activity you know you have the complaints of, “well this is during my planning time” or “its right in the middle of my math lesson” or “its right in the middle of my language lesson”. So you have a lot of complaints that way, so that’s been a big challenge.

This disconnect between teachers is made clear to students, especially when they know their peers are engaging in DPA in other classes and in their class they do not engage in DPA at all. The whole school initiative is a great way to encourage DPA, and both interviews showed this, however there were challenges, and this was one of the reasons for their implementation turning into individual class routines. Principal support is also very crucial in regards to directing the
DPA initiative in the school. Sarah goes on to say that if a school does not have the principal’s support, then the initiative will not continue. Therefore, support from all colleagues and staff in the school is crucial when implementing DPA initiatives, and seems to be a challenge that most schools are encountering.

4.3.4 Available Resources

Another influencing barrier that I found to have come up in my data analysis was available resources in which teachers have access to. While going into schools, I observed that many teachers were not incorporating DPA in their classrooms, and I believed lack of access to resources may have been one of the major factors for this. However, to my surprise, through my findings, the interviews proved that there is an abundant amount of resources made available for all teachers. Through the use of workshops, online websites such as OPHEA, and the athletic representatives in each school, teachers have many opportunities to seek assistance if they have any questions or challenges when implementing DPA.

4.4 Conclusion

The mind-body connection benefits that PA allows students to gain are clear, through what the teachers have perceived in the classroom and what the literature expresses. The major finding presented within this theme is that teachers’ perceptions of PA truly has an impact of whether or not they will implement DPA in their classrooms (Robinson and Melnychuk, 2008). Their identity, values and beliefs within PA allow them to recognize the disconnect between students being active, and that being active does allow them to concentrate and focus more, which relates to their academic achievements.
In regards to teaching practices and implementation strategies connected to DPA, teachers found it most beneficial when the initiatives were led by student leaders. This motivated students and allowed them to gain value in what they were modeling to their class. Also school initiatives seemed to be a recurrent practice that both teachers viewed as beneficial and allowed for everyone to engage, even if their values were not strong in the belief of PA. Finally, the barriers that affect the implementation of DPA are time, space and colleague support.

All of these findings and analysis lead back to teachers’ identity, and how the value that the teacher has for PA will effect whether or not they incorporate DPA into their students’ lives to allow them to become healthier individuals, which will lead to more successful lives. Implications and recommendations will be included in Chapter 5.
Chapter 5: Implications

5.0 Introduction

The chapter’s main purpose and discussion will focus on the implications and recommendations in regards to teachers’ perceptions on daily physical activity (DPA) and students’ success and achievement. Throughout this chapter, I will discuss the key findings from the study, the implications, recommendations and further areas of research regarding teachers’ perceptions of DPA and its effects on student success. An overview of my themes on teacher identity, mind-body connection, positive learning environments, and the potential barriers for DPA implementation will be discussed. All findings relate to the literature in regards to DPA implementation and its effects on students.

Implications will also be discussed, focusing on suggestions that can be made for the educational community as a broad spectrum, as well as the narrow implications for myself as a teacher. These implications will focus on what I have learned throughout my study and how this new knowledge will benefit and assist in further progressing teacher perceptions and DPA implementation.

In addition, I will also focus on recommendations for implementation and integration of DPA in classrooms, as well as recommendations for overcoming consistent barriers in which teachers perceive when attempting to implement DPA in their classrooms. I will also include recommendations for various educational partners on how their role can assist in greater and improved quality DPA implementation, such as teachers, administrators, school boards and teacher education programs. Finally, I will discuss further questions of concern, as well as areas for further research that can be beneficial in regards to DPA implementation.
5.1 Overview of Key Findings and Significance

Throughout my Chapter 4 discussion, I shared multiple examples of teachers’ views on DPA implementation and its affects on students. My major themes included teacher identity, in regards to their beliefs and values towards physical activity, teachers’ perceptions about the mind-body connection, creating a fun and engaging learning environment, and barriers that teachers encounter when implementing DPA.

5.1.1 Teachers Beliefs in DPA

The first key finding was that both teachers had very positive beliefs and values in regards to physical activity and the importance that it holds in everyone’s lives, especially children. Both teachers interviewed stated that physical activity was a major part of their lives, and in effect both teachers have implemented DPA practices in their everyday schedules. Their past and current experiences in physical activity engagement, encourages them to be positive role models for their students at school, and promote engagement in physical activity. The significance of teachers’ beliefs in DPA is supported by Parajes (1992) in that teacher’s behaviours and decisions are highly effected by their values and beliefs. Fletcher and Temertzoglou (2010) also discuss that teachers must “deconstruct and reconstruct their experiences” (pg. 21) in order to create optimal learning environments for today’s classrooms; meaning that they must re-evaluate their stance on physically active and be positive role models for the students to recognize that physical activity is an important part of life. Positive experiences in physical activity, as seen through this study, increases teachers drive to implement DPA in classrooms, whereas negative experiences in physical activity may lead teachers to
refrain from implementing mandatory DPA practices. Therefore, their experiences play a major role in developing their practice (Fletcher & Temertzoglou, 2010).

### 5.1.2 Mind-Body Connection in DPA

Another key finding was that teachers did perceive a mind-body connection in regards to DPA. Sample teachers expressed that they did believe that a healthy body also meant a healthy mind. The significance of this finding represents that physical activity increases physical and mental health. Students need to be healthy in order to achieve in school. This finding is supported by a vast amount of literature, including Shephard (1996), Coe et al. (2006), Vail (2006), Smith and Lounsbery (2009), who all make the connections that increasing physical activity also increases concentration. In this study, teachers found that focus levels were much better after engaged in physical activity. The more focused, the more learning can be attained. It was also found that teachers believed that physical activity was increasing students’ health, which is a determinant to increased achievement in academics (Vail, 2006). Also connected to the mind-body connection, teachers mentioned a noticeable increase in sedentary behaviours throughout recent years, which has created an even larger need for DPA implementation. Literature shows that an increase in sedentary behaviour, leads to an increase in obesity, which is a large determinate for increased health issues (Rey-Lopez, Vicente-Rodriguez, Biosca, & Moreno, 2008). Better health of students is positively related to their cognitive functioning and students’ readiness to learn, which is supported by the research in an article by Vail (2006). Therefore, the significance of this key finding is that teachers do perceive that there is a mind-body connection, and DPA will increase students’ physical activity levels, in turn positively affecting their overall physical and mental health.
5.1.3 Fun, Enjoyable and Engaging Learning Atmospheres

Furthermore, an additional key finding was that implementing DPA into the classroom created a more fun, enjoyable and engaging learning atmosphere, demonstrated through the students’ behaviours. The significance of this finding is very important because creating learning environments where students feel comfortable and are able to have fun will increase their motivation to do better in school, which is supported by Vail (2006). It was found that not only was this allowing for an engaging experience for all students, but an integral experience for kinesthetic learners, who thrive in a classroom that allows them to be more active (Vail, 2006). Therefore, creating these optimal learning environments was key for students’ engagement.

5.1.4 Barriers for DPA

Finally, the last key finding was the barriers that teachers encounter when implementing DPA in the classrooms. These barriers consisted of lack of time, physical space and colleague support, which are all significant impeding factors on the successful implementation of DPA practices in the classroom. These barriers will be further discussed in the recommendations section of this chapter.

5.1.5 Conclusions

Teachers’ beliefs and identities in regards to physical activity is crucial in the implementation of DPA. Better health, increased rates of concentration and engaging in a fun learning environment that allows students to let their guard down in school, are all of factors of increased chances of higher academic success, and are all benefits that can be obtained from incorporating DPA. There are potential barriers that teachers may encounter when engaging their
students in DPA, such as time, space and lack of colleague support. These barriers can eventually be overcome with the proper DPA implementation strategies, which need to be further researched.

5.2 Implications

In this section, I will discuss the broad and narrow implications in regards to DPA implementation.

5.2.1 Broad: The Educational Research Community

Firstly, the broad implications of these findings focus on the effects on the educational community. DPA was mandated by the Ontario Ministry of Education (OME) for a very important reason; to create healthier students (Ontario Ministry of Education, 2006). Healthier students result in healthier minds (Vail, 2006; Lee et al 2007; Castelli & Hillman, 2007). With the implementation of DPA in schools, there is a higher capacity for quality learning to take place, and ultimately increased academic success. When looking at the OME (2006) in relation to DPA, their focus is to have all schools within each school board to be following the DPA guidelines. In order for this to occur, all teachers, administrators, and school boards must share the same values and opinions in regards to implementing DPA practices into their school. One of the key findings presented within the study was that teachers’ identities, beliefs and values in regards to physical activity may be different and will reflect their decision making in DPA implementation, which is supported to the literature that was reviewed within this study (Parajes, 1992; Fletcher & Temertzoglou, 2010). Both teachers shared their concerns regarding their colleagues’ reactions about DPA implementation, and that many teachers simply do not
incorporate it into their daily classes. In order for the DPA initiative to be fully effective, all academic staff must be willing to adopt these practices into their schools.

The mind-body connection findings are also important in regards to the educational community because they align with what the ministry documents have proposed for possible benefits of DPA, which include increase in students’ achievement and readiness to learn (Ontario Ministry of Education, 2006). The most important implication for the educational community to take from this study is that incorporating DPA will increase students’ focus and concentration which increases students’ ability to achieve, which is supported by a vast amount of literature (Peirson, 2002; Smith & Lounsbey, 2009; Shephard, 1996; Coe et al., 2006; Vail, 2006).

However, it is necessary for all colleagues to reconstruct their own beliefs and experiences in regards to physical activity and shift their thinking into ways that will benefit children in positive ways, which is supported by Fletcher and Temertzoglou (2010). Providing our students with optimal opportunities to be active and live healthier lives, while creating environments for all to succeed and excel in, are key factors in DPA implementation.

This study supports the Ontario Ministry of Education policy on DPA (OME, 2006) by concluding that there are multiple benefits that can be acquired, including decreased sedentary behaviour, which increases positive health, as well as increased focus, concentration, and enjoyment, and decreased boredom levels in the classroom. The strategies that can be implemented to help overcome the barriers found, such as time, space, and lack of colleague support, are integrating DPA into academic subjects, going outside when possible, and possibly integrate a whole school initiative for DPA, in order to create a positive physically active community.
5.2.2 Narrow: Your Professional Identity and Practice

In regards to the implications, focusing on myself as a teacher, I have learned that there are barriers that will be present when attempting to integrate DPA into my classroom. Barriers such as lack of time and physical space are ones that are more manageable to overcome. The barrier of colleague support is one that will be more difficult to overcome when trying to create a school wide community that is committed to the implementation of DPA. Even though these barriers will be present, it is extremely important to overcome them to achieve the positive outcomes and benefits that result from the implementation of DPA, which have been supported through this study, as well as the literature. The implications of my findings have also allowed me to realize the crucial role that teachers have on students’ overall well being (Fletcher & Temertzoglou, 2010). Being a positive role model is an integral part of getting students active, and through my own positive experiences with physical activity, this will allow me to integrate physical activity in their environment so that they can have the optimal environment that they need. My positive experiences with physical activity also allows me to understand the values and benefits that it has for children, and will ensure that I encourage students, teachers and administration to promote the implementation of DPA in schools. The findings also initiated my thoughts about students in my practicum classrooms and how I wanted to provide them with opportunities to be active and create that environment where learning is optimal for everyone. Therefore, incorporating DPA into a variety of subject’s every day was a change that I made to my practice.
5.3 Recommendations

In this final section of Chapter 5, I conclude with recommendations based on what I have learned throughout my study for teachers, administrators, school boards and teacher education programs. The recommendations that I have for teachers in regards to DPA initiatives are related to the implementation procedures, available resources and overcoming time and space barriers.

Throughout my findings, it was consistent that there were two times that were most beneficial in regards to the implementation of DPA. The first time is before students’ recess, because it allows students to have continued physical activity outside. The continuity creates more prolonged activity, which will allow students to keep their heart rate up for a longer period of time. The other beneficial time to implement DPA is when there are very few breaks between subjects. This creates mental breaks for students, and will allow students to refocus and concentrate, which is supported by literature reviewed in this study (Eveland-Sayers, 2009; Peirson, 2002; Smith & Lounsbey, 2009; Shephard, 1996; Coe et al., 2006; Vail, 2006). These opportunities create positive outcomes for students during their academic subjects. It is important for teachers to learn how integrate DPA into academic subjects, which will not only get students to be physically engaged in the lesson, but will also decrease the time taken away from academic subjects. Therefore, this recommendation attempts to overcome the time barrier that teachers perceive DPA encounters. An example that I have integrated in my own practice is reinforcing multiplication factors and rules using DPA. All students were engaged and having fun; in addition, no time was taken away from their math period, students remained focused on the mathematics task, as well as receiving optimal physical activity during class time. Finally, there are many available resources that teachers can access, one example being OPHEA. If teachers need assistance for integrating DPA in different subject areas, there are multiple websites that
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provide ideas for creative ways to promote physical activity in the classroom. If teachers are not confident in creating DPA opportunities for students, they can access the resources that will assist them in supporting their students’ well-being.

The recommendations that I have for administrators are related to creating whole school initiatives, and overcoming the barriers of physical space and colleague support. My findings supported the implementation of whole school DPA initiatives. Both teachers discussed how creating this opportunity promoted a sense of community which engaged the school as a whole in regards to physical activity. All staff, students and administration should be involved, allowing this sense of community to truly create positive reinforcement for students’ thoughts about physical activity engagement. Administration staff must be the ones to promote school initiatives to ensure the encouragement of their staff. This also creates opportunities for overcoming the barrier of negative colleague support; having administration advocate for DPA will progressively allow all staff to be involved. Therefore, creating these opportunities for teachers and students is optimal in promoting a more welcomed DPA initiative. Finally, administration must also focus on creating more safe and available space outdoors for teachers so that they can conduct higher quality forms of DPA in a larger space. Since this was one of the perceived barriers, administration can ensure that outdoor space is managed and available; creating a schedule for teachers to use different areas of the playground may encourage teachers to bring their students outside during various times of the day.

Another recommendation that is important is that school boards should start to implement structures that evaluate whether or not the mandated requirements are being met for DPA at school. Without this type of evaluation, teachers who are not implementing physical activity regularly will continue to avoid DPA practice. Assessment of DPA implementation is important
because it will ensure that teachers take the appropriate measures to attempt to implement it in their classes on the days where their students are not engaged in physical education classes. This also connects to the findings related to lack of colleague support; the higher level of assessment in regards to the amount of DPA that was implemented in each school, the more likely all teachers would implement it in their classes. Therefore, colleague support would start to become less of a barrier because implementation would be evaluated.

Finally, my recommendation for teacher education programs is to focus on pre-service teachers’ belief systems and ingrain the importance of physical activity in students’ lives and successes. It is important for teaching programs to acknowledge that everyone has different experiences with physical activity in their lives, but throughout their years in their teaching programs it is important to provide them with multiple opportunities to learn to value the important affect that it has for students. Starting teachers off with these values may increase their likelihood of implementing DPA practices into their own classrooms.

5.4 Areas for Further Research

Throughout this study, I have realized that there is still an abundant amount of research to be done in the area of DPA in schools. There are many variants as to why DPA implementation is not being done by teachers, and it would be very interesting to see what other factors affect this lack of involvement. It was very useful and important to get teachers opinions on the affects of DPA, but while completing this study, I wondered about how students might respond to the questions regarding how they feel after engaging in DPA. Studies that could compare students work before and after a DPA implementation initiative throughout the year may be beneficial to see the direct impact that it could have on students’ academic achievement.
5.5 Concluding Comments

In this qualitative study I interviewed two Ontario teachers to find out what their opinions were on the affects of physical activity in the classroom in relation to how it affects their students’ academic achievements and success. The findings represented that teachers’ ability to be a positive role model is extremely important when promoting the effectiveness of the mind-body connection. Teachers did perceive that physical activity has positive effects on students, and that a healthy body results in a healthy mind. Therefore, it is important to create fun and engaging opportunities for students to be able to be willing to participate in this type of learning environment. Although there were many barriers presented within the paper, they are barriers that can be overcome with time and practice. This research is significant for all members of the educational community to create the most optimal environments for all students, to provide them with physical activity and health opportunities to support their overall well being. It is important that students be as healthy as possible, as this would lead to a healthier state of mind, and in turn can improve their academic success.
References


Appendix A: Letter of Signed Consent

Date: _______________________________

Dear ____________________________,

My name is Natasha Fuda and I am a graduate student at the Ontario Institute for Studies in Education at the University of Toronto, and am currently enrolled as a Master of Teaching candidate. A component of this degree program involves conducting a small-scale qualitative research study. My research will focus on teacher’s opinions on the use of daily physical activity in the classroom and how these practices affect their student’s academic achievement and success. I am interested in interviewing teachers who have at least five years teaching experience and also have some health and physical education knowledge. I think that your knowledge and experience will provide insights into this topic.

I am writing a report on this study as a requirement of the Master of Teaching Program. My course instructor who is providing support for the process is Peter Joong, who is also my research supervisor. The purpose of this requirement is to allow us to become familiar with a variety of ways to do research. My data collection consists of a 30-60 minute interview that will be audio-recorded. I would be grateful if you would allow me to interview you at a place and time convenient 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 and/or potentially at a conference or publication. I will not use your name or anything else that might identify you in my written work, oral presentations, or publications. 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. The only person who will have access to my assignment work will be my research supervisor and course instructor. The information will be stored on my password-protected computer, and the files will be encrypted so that only myself and my research instructor will have access to the data. You are free to change your mind at any time, and to withdraw even after you have consented to participate. You may decline to answer any specific questions. I will destroy the tape recording after the paper has been presented and/or published which may take up to five years after the data has been collected. There are no known risks or benefits to you for assisting in the project, and I will share with you a copy of my notes to ensure accuracy.

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

Yours sincerely,

Natasha Fuda
Consent Form

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

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

Signature: _________________________________

Name (printed): _______________________________

Date: ______________________
Appendix B: Interview Protocol/Questions

Section 1: Background

1. What do you teach? Where do you teach?
2. For how long have you been teaching?
3. Can you describe the value that the teaching profession brings to your life?
4. What did you study in your undergraduate degree?
5. Would you say you are a physically active person?
6. Have you received any knowledge or training in any health and physical education courses?

Section 2: Teacher Practices (What/How?)

7. In general, would you say that your students enjoy being physically active? If so, what makes you believe this?
8. How do you incorporate daily physical activity in the classroom? Do you allow students to engage in DPA everyday? Typically, how long are these DPA activities?
9. Do students enjoy when you incorporate DPA in the middle of the day? How is this evident?
10. Do you encourage that the students engage in all physical education classes and activities that are being implemented? How do you do so?
11. How do you engage students in DPA activities while still keeping them engaged with their academic work? Do you try to merge the two?
Section 3: Beliefs/Values (Why?)

12. Why do you believe DPA was made a mandatory part of the curriculum? In your opinion, do you agree with this? And can you give an example of an experience in your classroom that can support your opinion?

13. What do you believe students can gain from daily physical activity in the classroom? How do your students generally respond after engaging in DPA activities? Do you notice a change in students’ behaviors after being physically active?

14. Do you believe that you have enough resources available for you in order to execute your DPA plans? What resources do you use?

15. Do you believe that you will continue the use of DPA practices, and if so, do you think it would be more beneficial to use more or fewer practices? Why?

Section 4: Influencing Factors

16. Have there been any challenges that you have encountered in regards to DPA in the classroom? If so, can you give me an example?

17. Have there been any influencing figures inside or outside of school that have encouraged you to try different DPA techniques, or even figures that may discourage the use of DPA in the classroom?

18. How do the students react when they are able to be physically active during class time? How do they react when they come back from PE class? Their recess time? Do you notice a change in students’ attitudes?

Section 5: Next Steps (What next?)

19. What do you think teachers can do to allow themselves to be better able to conduct quality DPA activities within their classrooms?