A Comparison of Policy and Practice Pertaining to Physical Activity’s Inclusion in Secondary Classrooms in Saskatchewan and Ontario

By

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Abstract

The benefits and effects of physical activity (PA) on students are well documented and supported (Tremblay, Inman, & Willms, 2000; Trudeau & Shephard, 2008). This qualitative research study sought to explore the factors that affect the implementation of physical activity and movement in secondary classrooms in Ontario and Saskatchewan. The data that was collected by way of semi-structured interviews with educators from both Ontario and Saskatchewan revealed three distinct findings. First, attitudes of teachers, administrators, parents, and students greatly affect the success of PA initiatives. Second, teachers perceive many benefits of PA on their students including improved focus and alertness, better behavior and fewer classroom management issues, and enhanced content absorption and retention. Finally, many teachers’ methods and suggested practices were revealed including justifying and introducing PA initiatives to students, different types of PA, and miscellaneous strategies for success. These results incited several implications for three different levels of the educational community including Ministry and Board policy makers, administrators, and classroom practice.

Key Words:

Physical activity, kinesthetics, secondary, high school, attitude, benefits, strategies.
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Chapter 1 – Introduction

1.0 – Introduction

The benefits of physical activity for people of all ages have been well known to society for many years now and it is widely accepted that keeping active is essential to living a healthy life (Centre for Disease Control and Prevention, 2015). Among the common benefits and specifically pertinent to my research is improved thinking and learning skills. Though physical activity plays a role in lives of all ages, it is important to stress the idea earlier on in life, in children and adolescents—or school aged children.

1.1 – Research Context

The Ontario Ministry of Education has taken the research supporting the need for physical activity in the school setting under serious consideration. A great deal of the Ministry’s attention has focused on incorporating physical activity into elementary classrooms. So much so that in 2005 the Ministry implemented a policy called “Daily Physical Activity” (DPA) as a “healthy school initiative” that mandates students have twenty minutes of daily physical activity each and every day (Ontario Ministry of Education, 2005). The Ministry goes so far to argue that daily physical activity is “critical to making publicly funded schools healthier places to learn and improve student achievement” (OME, 2005). Similar to Ontario’s policy, the Saskatchewan Ministry of Education has daily physical activity guidelines that fall under their Inspiring Movement frameworks mandating 30 minutes of physical activity per day (Saskatchewan Ministry of Education, 2010). What is more, an external organization, Saskatchewan in motion, works alongside schoolboards ensuring these goals are met (Saskatchewan in Motion, n.d.). I must make clear that when I refer to physical activity, I do not mean a strenuous gym class or
cardio work out, I simply mean some sort of movement, disruption to sitting, or opportunity to use some other muscles.

1.2 – Research Problem

Despite the well-recognized and acknowledged benefits of incorporating movement into the classroom, the Ontario Ministry of Education only applies this policy to K-8 students. This exclusion of students in Grades 9-12 subjects them to sedentary learning environments, which in turn may prohibit improved academic achievement, or worse, can have negative effects on academic achievement (Pate, Heath, Dowda & Trost, 1996; Trudeau & Shephard, 2008). Furthermore, very little research has been done specifically in a secondary school setting to justify an exclusion of physical activity at the high school level. Interestingly however, Saskatchewan’s policy extends to K-12 students ensuring all students through all grades engage in physically active learning environments.

1.3 – Research Purpose

In light of this discrepancy, the goal of my qualitative study was to explore factors that affect the implementations of physical activity (PA) or kinesthetics and movement in secondary classrooms, specifically with a focus on Ontario where PA is not a Ministry mandate for secondary students, and Saskatchewan where it is.

1.4 – Research Questions

Specifically, and as alluded to in the previous section, the three questions that drove my research were as follows:

- What possible factors are affecting implementation of PA in secondary classrooms?
• What potential benefits do teachers (who incorporate PA into lessons) perceive in their students?

• What are some possible examples of effective practices that increase students’ in-class physical activities?

1.5 – Significance to the Researcher

Physical activity has always been and will forever be integral to my way of life. Growing up a competitive athlete in Regina, Saskatchewan training upwards of 24 hours per week, I learned to crave exercise. Though no longer on a strict training regimen, and exercising far less than 24 hours per week, I still make it my mission to get moving on a daily basis, and at the very least, ensure I do not sit the day away.

I have always found that on days where I do not manage to exercise, I am unproductive, I feel poorly, I do not sleep as well as I do on the days I exercise, and I feel an all-around imbalance to my being. The summer of 2014 was the first time in my life where I had worked a 9-5, Monday-Friday office-setting job, and I quickly noticed that sitting and not moving in front of a computer for hours on end was not very conducive to my productivity. I found myself losing focus and losing inspiration for completing a project. However, when I got up and went for a walk every now and again, I could return to my desk with a new found vigor and get some serious work done.

As someone who has always enjoyed and benefited from being able to get up and move in a learning or work setting, and who has always found exercise a good way to clear my mind and refocus, I take a personal interest in understanding why physical activity is not part of every lesson in high school. Again, when I refer to physical activity in this study, I do not specifically mean going to the gym for a work out. I am referring to a much more general ‘get up and move
around’ situation that can be included in a classroom with minimal to no disruption to a lesson or timeline.

1.6 – Preview of the Whole

In response to my research questions, I used a qualitative approach interviewing three experienced secondary school educators who teach courses outside the realm of physical education using a semi-structured format about their thoughts, beliefs, and opinions on the inclusion of physical activity into daily lessons. I also tried to elucidate effective practices that teachers who include activity in their lessons use and what other teachers feel are barriers to incorporating physical activity. Consisting of five chapters, this current one being the first, my project took on the following structure:

In chapter two, I prepared a literature of review of the relevant research pertaining to physical activity, academic achievement, effective practices, and roadblocks to physical activity’s inclusion in the classroom. Next, in the third chapter, I described methodology and how I intended to go about collecting and analyzing data. Chapter four entailed my describing the research results and their pertinence to existing research and finally, in chapter five, I discussed the significance of my findings to me as a teacher and to other educators collectively while also suggesting questions and areas for further exploration.
Chapter 2 – Literature Review

2.0 – Introduction

In this chapter I reviewed the literature within the scope of my project. Specifically, I examined three aspects. First, I looked at physical activity’s (PA) effect on academic performance and achievement in regards to direct grade point average (GPA) results, psychosocial elements, disruptive behaviour and focus, and the benefits to students with special needs. Second, I looked at barriers, perceived or otherwise, to PA’s incorporation into the classroom, and finally, I reviewed the relevant literature about best effective practices, strategies, and techniques for PA’s inclusion to daily learning.

2.1 – Academic Performance and Achievement

Physical activity has many positive effects on students (Trudeau & Shephard, 2008). Though not all effects of PA are directly measurable like GPA, each of the effects becomes evident when placed within the context of its study. Below I reviewed the effects of PA on GPA, psychosocial elements, behaviour, and benefits to students with special needs.

2.1.1 – Grade point average. Before I discuss support for PA’s positive influence on GPA, I must first make note that research indicates socioeconomic status remains the greatest predictor of academic achievement (Willms, 2003). Research reveals that regardless of the amount of PA in a student’s day, if that student comes from a lower socioeconomic status, the likelihood of his/her/their GPA being influenced positively is minimal. A study conducted by Nelson and Gordon-Larsen (2006) looked at PA’s effect on GPA, but unlike many other studies, the researchers adjusted for demographics and socioeconomic status. They found that more active students were more likely to have higher grades. Field, Diego and Sanders (2003) also found similar results after adjusting for socioeconomic status.
Similarly, but from the another angle, research has shown that little or no involvement in daily PA is associated with low academic performance (Pate et al., 1996). Pate and his colleagues reviewed data from a youth risk behaviour survey that illustrated this point exactly. Further contributing to this argument, a review conducted by Trudeau and Shepard (2008) found many more examples of studies showing PA’s positive affect on students’ GPAs. However, they also discovered two studies that contradicted the trend. After controlling for sex, family structure, and socioeconomic status, Tremblay, Inman, and Willms. (2000) found that PA negatively affected academic achievement in specific areas. They found that increased PA in a day correlated with lower grades in English. Another study conducted in the same year found a negative correlation with PA and GPA, however there were notable positive effects on self-esteem (Daley & Ryan, 2000), which brings me to our next section: PA’s resulting psychosocial effects.

2.1.2 – Psychosocial effects. In this context, I referred to psychosocial elements consisting of body image, self-esteem, emotional well-being, and classroom climate. Similar to GPA, PA’s impact on psychosocial elements is also profound and well documented. To get the discussion moving, I started with the claim that exercise can increase activity in parts of the brain involved in memory, attention, spatial perception, language, and emotion (Mulrine, Prater & Jenkins, 2008).

In 2001, Hausenblaus and Symons Downs claimed in their study that participation in PA is associated with a more positive body image. In further support of that claim, two additional studies found a correlation between increased PA, improved self-esteem, and self-image (Kirkcaldy, Shephard & Seifen, 2002; Nelson & Gordon-Larsen, 2006). As well as self-esteem, Nelson and Gordon-Larsen (2006) found positive associations between PA and other
components of mental health such as emotional well-being, spirituality, and expectations of the future. Finally, further to improving self-image, Akande, VanWyk, and Osagie (2000) claim that exercise helps students cope better with stress and promotes clearer thought and improved memory.

Further to this discussion, Brown and Evans (2002) found links between PA, school satisfaction, and connectedness. While that does not seem to directly correlate with improved student performance, these elements are suggested to be instrumental in preventing school dropouts (Libbey, 2004). Preventing school drop outs aligns with the Ontario Ministry of Education’s “Reach Every Student” initiative and additional policies implemented for ensuring students’ progress to graduation, which in itself, is a very good measure of student success.

Like GPA, the psychosocial effects of PA are well documented. However, while GPA is an easily measurable indicator of student performance, improved self-esteem, for example, is not. Tremblay et al. (2000) believes that though PA is not directly related to academic performance, there may be an indirect effect by improving physical health and self-esteem. The researchers did find that PA is significantly related to self-esteem and that a very weak relationship exists between PA and academic performance in math and writing. Interestingly, these results are in direction contradiction of their other findings that PA had a negative effect on English scores. However, it does remain unclear if better academic results can be attributed to the relationship between PA and self-esteem (Tremblay et al., 2000). In another study, Whitehead and Corbin (1997) found that PA can positively influence self-esteem and cause students to experience renewed motivation.

One final note on psychosocial effects, Lengel and Kuczala (2010) bring light to a study that suggests a positive emotional and classroom climate play a major role in one’s ability to
learn new information (Sousa, 2006). Because movement is the principal manager of student learning states and resulting classroom climate (Jensen, 2000), one can see how incorporating PA or movement into a classroom can change the mental states of students to promote enhanced learning.

2.1.3 – Disruptive behaviour and focus. A number of studies have supported the notion that increased PA in the day promotes better focus and reduced disruptive behaviours (Lengel & Kuczala, 2010; Trudeau & Shephard, 2008). Allison, Faith, and Franklyn (1985) found that exercise prior to classes led to significantly reduced disruptive behaviours while Barkley (2004) found that implementing exercise throughout the day could reduce disruptive classroom and social problem behaviours, in addition to improving academic performance.

In regards to focus, it is believed that PA can completely revamp one’s ability to pay attention. Taking all benefits of PA into consideration, Kuczala and Lengel (2010) claim that refocusing attention is the most useful or drastic benefit of movement in a classroom. They go on to say that after movement, it is simply “normal” to feel more focused and attentive than if left in a sedentary position for longer periods of time. This claim was based on a study by Mitchell (2009) who found that movement explicitly allows students to “refocus and strengthen their ability to pay attention.” Finally, and bringing us to the next section, in a study involving PA and its effects on students with ADHD, it comes as no surprise that the researchers discovered all students were able to focus and pay better attention when given opportunities to be active (Mulrine et al., 2008).

2.1.4 – Students with special needs. In the preceding section, I reviewed the impact of PA on student focus and in reducing disruptive behaviour. The same impacts hold true for special needs students, specifically those with ADHD (Mulrine et al., 2008). Students with
ADHD exhibit a number of deficiencies which include poor study skills and a general disorganization that causes academic, behavioural and social problems. Much of their deficiency can be attributed to an inability to pay attention (Slavin, 1997). As well, an attribute common to those with ADHD is an inability to sit still for a short or long period of time (Mulrine et al., 2008).

Mulrine et al. (2008), discuss a case study involving teachers who include PA as a means to improve results for students both with and without ADHD. The paper suggests that including transition exercise, lesson energizers, and structured movement games help all students, particularly those with ADHD, to focus and pay closer attention (Mulrine et al., 2008). Furthermore, it helps to reduce problematic classroom behaviour and better focus students’ attention on content instruction. Specific to those with ADHD, Mulrine et al. (2008) claim that exercise assists with concentration and provides an outlet for healthy impulse discharge helping to curtail impulsivity and their inability to sit still. There is even evidence suggesting that keeping students with ADHD away from exercise may actually exacerbate poor classroom behaviour and contribute to symptoms (Holtkamp, Konrad, Müller, Heussen, Herpertz, Herpertz-Dahlmann & Hebedebrand, 2004). Interestingly, and cementing the benefit of PA on students with ADHD, evidence has been gathered indicating children with ADHD who run before class see improvements in behaviour to such a degree that their medication can be reduced (Shipman, 1985).

2.2 – Barriers

Like all initiatives or policies, barriers exist and inhibit the facilitation and incorporation of PA within daily practice. Principally, it comes down to teachers’ being hesitancy for a number of reasons, and/or to lack of support from administrators. In fact, Castelli, Centeio, and
Nicksic (2013) go as far to say that administrator support is crucial for the effectiveness of such PA initiatives.

2.2.1 – Time constraints and transition time. A major perceived barrier to including physical activity or kinesthetic learning into daily lesson plans is that there simply is not enough time (Lengel & Kuczala, 2010). The idea of allowing time for brain-breaks takes away from time that could be spent covering curriculum or new content. However, the idea is not to replace academic time with PA, but rather to learn while doing and incorporate PA into lessons to create a kinesthetic learning environment (Lengel & Kuczala, 2010).

Tremblay et al. (2000) suggests that there is a preconceived notion that spending more time on PA inhibits academic success, and that it may be a better use of resources to allocate money traditionally spent on PA on to other academic areas (Hanson & McKenzie, 1989). However, research suggests that time spent on PA does not inhibit academic success (Trudeau & Shephard, 2008). Shephard (1997) found: “academic learning per unit time is actually enhanced in physically active students,” suggesting a complete negation of the claim that time spent on PA instead of other academic pursuits inhibits academic performance. Supporting Shephard’s (1997) claims, ten years later, Ahamed, Macdonald, Reed, Naylor, Liu-Ambrose & McKay (2007) found also that less time focusing on academics did not affect academic performance.

Another concern is transition time. If a teacher does choose to include PA in a lesson, a question often arises as far as how to effectively and efficiently get the students back in their seat in a timely matter ready for further learning. Lengel and Kuczala (2010) acknowledge that students might find it difficult to return to their seats in silence after engaging with invigorating activity. However, they suggest that with a little patience and routine, this barrier can be overcome with time. Further discussion about effective practice will be discussed in section
2.2.2 – Effective classroom management and safety. Classroom management and the maintenance of safety is a constant concern for teachers. There are a number of aspects of classroom management that come into play when considering creating a kinesthetic learning environment. These include but are by no means limited to: including under-motivated students who do not want to participate, hyper-motivated students who become a risk to other students, noise levels, transition back to seats, and an overarching loss of control of the classroom (Lengel & Kuczala, 2010).

In regards to under-motivated students or those unwilling to participate, Lengel and Kuczala (2010) suggest this may be the result of many years linking academic learning to sitting for hours at a time and that there will be an initial adjustment period to overcome. Further reasons for this unwillingness to participate may include poor self-perception, negative or limited past experience with PA, or a feeling of pressure. However, as addressed in earlier sections of this chapter, PA can actually have positive effects on many of those aspects but with the aforementioned initial adjustment and realization period causing unwillingness (Lengel & Kuczala, 2010).

Although more uncommon, there is also the problem of hyper-motivated students at the secondary level (Lengel & Kuczala, 2010). These students have the ability to derail even the most well thought out kinesthetic learning activities and contribute to a loss of control of the classroom and increased safety concerns for the rest of the students.

In the course of adding activities to the day that requires students to be out of their desks and milling about, there is an added risk of injury (Lengel & Kuczala, 2010) and a corresponding risk to teachers’ being called in front of the ethics board for negligence. However, such risks can be avoided with careful planning and preparation.
2.2.3 – Teacher personality and beliefs. Teacher personalities, beliefs and personal comfort constitute another set of barriers inhibiting teachers’ implementation of PA. For example, if a teacher does not believe in the benefits of PA, then they are not going to work to include it in their classes (Lengel & Kuczala, 2010). However, they also suggest that reserved teachers can overcome their hesitations by simply taking things slowly and starting small with activities they are comfortable with trying. Conversely, teachers who strongly advocate for the benefits of physical fitness and PA will likely have more success incorporating kinesthetic within the classroom simply because they hold firm beliefs in it (Lengel & Kuczala, 2010).


Like many philosophies, frameworks, strategies, and initiatives in education, incorporating kinesthetic activities into the classroom sounds wonderful on paper and in theory, but the question remains as to how to actually do it. How can teachers be successful at incorporating PA so students can reap the many benefits it has to offer? Though it is difficult to provide specific examples, my research has indicated beneficial supports for implementation and additional suggestions to consider.

2.3.1 – School policy, administrative support and professional development.

According to Erwin, Beets, Centeio, and Morrow (2014), one of the best supports to have available is the development of a school wide policy. These authors suggest that PA should be part of the core curriculum extending outside of the physical education classroom. In their article they also outline seven steps to develop a school wide PA policy that includes: establishing a committee and PA leader, conducting assessment of existing opportunities, creating a vision statement and goals, identify desired outcomes, implement plan, and finally evaluate success of plan (Erwin et al., 2014). The idea is that with the whole school being
supported by a school wide mandate, teachers and students alike will be more inclined to buy in to PA.

Another support which compliments school wide policy is the importance of supportive administration (Castelli & Rink, 2003). An administrative staff that supports teachers in their efforts to diversify pedagogical techniques and embrace new concepts and ideas is hugely helpful to adopting PA techniques into daily lesson plans. Specifically, in regards to making systematic changes, Castelli et al. (2013) believe that a supportive administration is crucial to the success of such changes.

Finally, to increase the comfort level of teachers implementing PA within the classroom, it has been suggested that adequate training must be provided (Erwin et al., 2014). Professional development days focusing on how to implement these changes and demonstrating best effective practices are a very good way to ensure that teachers receive necessary (Castelli et al., 2013). Erwin et al. (2014) also suggested that collaborating with universities in design, implementation, and development of best effective practices may be a helpful way to train teachers and provide them with the necessary tools.

2.3.2 – Suggestions. In their book The Kinesthetic Classroom, authors Lengel and Kuczala (2010) offer myriad pieces of valuable information on the implementation of a PA into the classroom. More specifically, they provide suggestions for a smooth implementation of PA into a lesson. Generally speaking, they suggest teachers define clear expectations, prepare the room, and establish a set routine for preparing the room. They advise to use basic cues keeping them simple and clear, use partners effectively, provide time limits, repeat objectives, start small, and to make sure the teacher moves around the room letting students know that they are watching and participating (Lengel and Kuczala, 2010). As well, the Saskatchewan Ministry of
Education’s (2010) framework outlines a number of activities and strategies that help teachers ensure students get up and move such as going outside whenever possible, having students stand while working, or even taking time to clean the classroom.

Specifically, in addressing concerns of classroom management and preventing misbehaviour, they suggest that teachers use rewards carefully, avoid power struggles, build on students’ strengths, provide a secure environment, take ownership, set high expectations, and encourage cooperation. When the need to address poor behaviour arises, they suggest stating consequences consistently, responding immediately, being consistent and fair, avoid giving attention, and providing feedback (Lengel & Kuczala, 2010).

Though there is some information in the literature about how to incorporate PA into the daily lessons of teachers in a safe and effective way, it has become apparent to me that there is a gap in information on the “how” or best practices. As well, concerns like teachers’ needing to move from room to room and sharing class space need to be considered.

2.4 – Conclusion

In this literature review, I examined research on physical activity’s effects on GPA and other psychosocial elements, barriers or road-blocks to including PA into the classroom, and finally suggested best practices for ensuring a smooth incorporation of PA into the daily lesson plan. This review has shown that the benefits of daily PA for students are many, profound, and irrefutable. It also brought to light how very real the barriers are and that supports or general how-to information on how to overcome the barriers are lacking. Finally, it revealed how information on best practices is in short supply. In light of this, my research purpose was to learn how teachers have found ways to overcome barriers, how they have found ways to
effectively incorporate PA, what their best practices are and whether or not they think it is a worthwhile endeavour.

The next chapter addresses research methodology, sampling procedures, recruitment, data analysis, ethical considerations and limitations to my study.
Chapter 3 – Research Methodologies

3.0 – Introduction

In this chapter I described the research methodology that I used. I began with a review of the general approach, procedures, and data collection instruments followed by a more specific discussion on participant sampling and recruitment. I also explained data analysis procedures and review ethical considerations pertaining to my study. As well, I identified a range of limitations and strengths to the methodology I used and then concluded the chapter with a brief summary justifying key methodological decisions given my research purpose and questions.

3.1 – Research Approach and Procedures

This research study was conducted using a qualitative research approach involving a literature review and three semi-structured interviews with educators who teach in either the Ontario or Saskatchewan education system. I used a qualitative method because as the literature suggests, it provides a naturalistic approach that seeks understanding in context-specific settings (Hoepfl, 1997). Unlike quantitative research, where the goal is to find statistical significance in a data set and generalize findings, qualitative research seeks to find illumination, understanding, and perhaps extrapolation to similar situations (Hoepfl, 1997). This purpose fit exactly with the goals of my study—to understand how and why teachers promote movement in secondary classrooms.

A qualitative methodology was a good choice because it can be used for a number of purposes such as learning about phenomena of which little is yet known, to gain new understanding on phenomena of which much is known, and finally, to illustrate findings that might be difficult to show quantitatively (Strauss & Corbin, 1990). One further note as to the value of having chosen a qualitative approach is that research problems and questions can be
designed as open-ended questions allowing for the discovery of new information (Hoepfl, 1997). As such, I used open-ended questions in my interview protocol, as I will discuss in the next section.

3.2 – *Instruments of Data Collection*

As my exclusive instrument of data collection for this study, I used the semi-structured interview protocol. I chose the semi-structured interview format because as suggested by Horton, Macve, and Struyven (2004), it allows for flexibility in both the designing of the interview protocol and the conducting of the interview. In creating a flexible structure, interviewees are left a degree of freedom that allows them to elaborate on their thoughts and opinions, and perhaps focus on areas of special interest or expertise (Horton et al., 2004). As well, this structure can enable further probing into responses unforeseen by me, the interviewer (Horton et al., 2004). Because my research questions were open-ended, having freedom built in to the interview permitted more natural responses that helped in finding answers to my questions.

3.3 – *Participants*

In this section I discussed the sampling criteria I established for participant recruitment and the possible avenues for teacher recruitment to occur. I also included a section for which to introduce each of my participants.

3.3.1 – *Sampling criteria.* The criteria for selecting my sample interviewees are outlined below. In order to have been considered for an interview, teachers must:

- actively and consciously work to ensure students have opportunities to move around during a class period; and,
- teach subjects outside the realm of physical education.
It was important to me that the teachers I chose to interview showed a dedication in their teaching practice to allowing for movement in the classroom. I wanted someone who has witnessed and experienced first-hand the benefits of an active classroom versus a sedentary classroom and who has experience or suggestions for best practices that permit students to leave their desks while at the same time ensuring a safe environment for all.

Second, I wanted teachers who taught outside the realm of physical education. As a physical education teacher, the very nature of their course material is dedicated to movement so their insights into active classrooms over sedentary ones would be inconsistent with the information I was looking to gather. Therefore, I felt a teacher who teaches outside physical education would make a better candidate.

3.3.2 – Sampling procedures. There are many procedures for which to select a sample, among them being purposive, opportunistic and convenience sampling methods (Ritchie, Lewis, & Elam, 2003). Given the small-scale nature of my study, and the methodological parameters with which I was working, I largely depended on convenience sampling because as a graduate student at the Ontario Institute for Studies in Education (OISE), I was immersed in a community of teacher colleagues, and mentor teachers who could help with finding interviewees. Convenience sampling implies just as the name sounds—choosing interviewees based on ease of access (Patton, 2002), and because I had access to the community at OISE and could take advantage of the connections that I had made, sampling was made largely on a convenience basis. Similarly, this sampling aligns with my growing up in Saskatchewan and the connections I have in that province.

However, I also used elements of purposive sampling and opportunistic sampling. In purposive sampling, the interviewees are chosen because of a particular feature or characteristic
that allows exploring and understanding in the field the researcher is interested in (Ritchie et al., 2003). So though I relied on convenience sampling, I purposely chose candidates who met my selection criteria outlined in section 3.3.1. Similarly, I used elements of opportunistic sampling, or taking advantage of unforeseen circumstances (Patton, 2002) in finding interviewees, but these too were subject to the criteria in the preceding section.

In order to recruit participants, I used two different methods. First, I simply asked them in person when afforded the opportunity. For example, when in a practicum setting working with teaching staff who met my selection criteria, I asked them if they would be willing to participate in an interview for my research project. The second method involved contacting the candidate directly via email kindly asking them if they would be willing and able to participate in a short 30 to 40-minute interview for my project. All email correspondence was done so in such a way that the candidates were not subject to a feeling of obligation and only participated on a voluntary basis.

3.3.3 – Participant bios. My first participant, Janelle, was a secondary mathematics teacher from the Regina Catholic School Board. She has taught in a number of schools both elementary and secondary in her seven years as a teacher with the board. Janelle developed an appreciation for PA in a classroom through her very own grade seven experiences with a teacher who firmly believed in brain breaks and Gardner’s Multiple Intelligence theory.

My second participant, Zak, was a secondary science and history teacher who also is part of an athletics academy program in the Regina Public School Board. He has also taught in both elementary and secondary schools during his three years as a teacher. Being part of an athletics academy program, Zak has a rare perspective on the mind-set of his unique school program. Zak
developed an appreciation for PA going through his university courses with a professor who emphasized the importance of brain and body breaks.

My third participant, Kali, was a secondary science and chemistry teacher who works in the Toronto District School Board. Like, my other two participants, she has worked at a number of schools in the district during her 17 years as a teacher. Kali became interested in PA from her own experiences in the classroom as a student, the research she has read, and from direct observations she has noticed in her students.

3.4 – Data Analysis

I analyzed my data after completing transcriptions of my three interviews. I then used both descriptive and in vivo coding to begin breaking down the data. Next, I grouped my codes into categories before finally determining my final themes.

3.5 – Ethical Review Procedures

As a student in the Master of Teaching program at OISE, the Ethics Review Committee of the University of Toronto approved my methodology and interview. Prior to conducting any interviews, all participants needed to provide me with express written consent to participate in my study by way of consent letter.

The participant candidates were contacted via email and provided with a copy of the consent letter and interview protocol, in which information regarding my study could be found. The information included a brief summary of my project, privacy and confidentiality implications, the data collection process and participant expectations. Those candidates who agreed to the terms in the letters were agreeing to participate in a 30 to 40-minute audio-recorded interview and were required to sign the forms in expression of consent.
The study was designed such that many procedures were in place to protect the identity of participants and any of the schools or school boards with which they work. All participants were given a pseudonym so their identities would remain fully confidential and any information that directly identified their school, school board or students was removed. As a final safe-keep for participant identity, all audio recordings were stored on my password-protected computer and will be destroyed after five years.

In regards to the interview itself, participants were given access to reviewing the full transcripts and maintained the right to clarify or retract any information before I conducted data analysis. Finally, though there were no known risks to participation in this study, participants were expressly made clear that they held the right to withdraw from participation at any such time that they no longer wished to participate and could refrain from answering any questions they were not comfortable with answering.

3.6 – Methodological Limitations and Strengths

Like all methodologies, the methodological choices I made also have their inherent strengths and limitations. In regards to limitation, it warrants mentioning that the small sample size in itself is a limit to the study. As such a small study, I was unable to generalize any findings to a broader scale (Morrow, 2005). Similar to that point, because I only sampled from the Toronto District School Board (TDSB), the Regina Public School Board (RPSB) and Regina Catholic School Board (RCSB), there is a regional specificity that may not speak to a broad range. Again, this limits generalizability into other settings or populations (Morrow, 2005).

However, given the inherent limitations, on the contrary some of these limitations are also strengths. In regards to small sample size, qualitative research fundamentally relies on small numbers with the aim of studying for depth and detail, or “seeking a richness of data about a
particular phenomenon” (Mays & Pope, 1995). The methodology that I followed was chosen for a number of reasons. The first and perhaps most prominent is that the interviewees have an opportunity to comment on their lived reality. That is to say, given the level of freedom in the semi-structured design, interviewees could explain their thoughts, beliefs and freedoms fully and highlight their own experiences, interests or expertise they felt they had (Horton et al., 2004). Further to this point, the discussion ensuing from the interview questions allowed me the researcher to glean far more insight than a typical survey might allow.

3.7 – Conclusion

This chapter outlined the research methodologies and methods that I undertook in order to complete my study. I used a qualitative approach with semi-structured interviews as my principal tool of data collection because it allowed for participants to comment on their lived experiences and talk freely about their thoughts and beliefs. In choosing interviewees, I used largely convenience sampling because of my position within the large educational network of OISE. Also, I set out criteria that my interview candidates must have met before participating in the study. In the next chapter, I will report on my research findings.
Chapter 4 – Research Findings

4.0 – Introduction

The following chapter discusses the findings of my qualitative study that looks at exploring the implementation of physical activity (PA) in secondary classrooms, specifically with a focus on Ontario where PA is not a Ministry mandate and Saskatchewan where it is. I collected my data by way of interviews with educators, each with a minimum of three years teaching experience, who teach in a subject area other than physical education, and who have put a vested effort into including PA into their classrooms. Each participant took part in one 20-30 minute semi-structured interview, going by the pseudonyms Janelle, Zak and Kali so as to maintain anonymity. They were recruited by a number of sampling techniques that took advantage of new connections forged while at OISE and old connections that came from growing up in Saskatchewan. These techniques included convenience—choosing based on ease of access, purposive—choosing based on specific features or characteristics, and opportunistic—taking advantage of unforeseen circumstances. Analysis of the data involved using both descriptive coding—summarizing the text, and in vivo coding—direct use of the interviewee’s own words, followed by my grouping into categories before finally determining themes.

When analyzing the data, three themes emerged. The first is that of the attitudes of different parties towards PA and how they may affect the extent that PA is included in classrooms. These parties, which became my sub-themes, include teachers, administrators, parents, and students. Divided into four categories, this first theme is dedicated to answering the first research question: what possible factors are affecting implementation of PA in secondary classrooms? The second theme that will be discussed is in regards to teachers’ recognizing benefits of PA on students. These benefits, which again became my sub-themes include student
focus and alertness, improved behaviour and easier classroom management, and finally information or content absorption and retention. This section is dedicated to answering my second research question: what potential benefits do teachers that do include PA into lessons perceive in their students? The third and final theme that emerged pertains to teachers’ methods and suggested practices. This section is divided into four sub-themes that include introductions and justifications, mid-lesson brain breaks, longer kinesthetic activities, and general tips. These four categories seek to answer the third and final research question: what are some possible examples of effective practices that increase students’ in-class physical activity?

4.1 – Attitudes towards Physical Activity in the Secondary Classroom

The following sections discuss the importance and the power of attitude on the extent in which PA may be implemented in the secondary classroom. These attitudes coming from many angles, teachers, administrators, parents, and students, all might have a serious impact on implementation and are affected by many different factors.

4.1.1 – Teachers’ attitude, willingness, and priorities. The first group of people whose attitudes affect the success of incorporating PA into the classroom are the educators or teachers themselves. It is their beliefs, willingness and priorities that directly influence how PA is included or excluded from the day. It became clear in my data that teacher attitude may be affected by a number of factors including past experience, research, empathy, classroom management fears, and curriculum mandate or timing.

It is essential that teachers appreciate, value, and believe in the positive effects of PA in the classroom. My research illuminated a few different factors that contribute to this belief, the first of which is positive personal experiences. Janelle claimed to have had a fantastic experience with her own schooling experience with teachers that included PA in their lessons.
When asked why she makes it part of her own pedagogy, Janelle responded with “I definitely believe in the brain breaks and SMARTS” because her teachers also believed in them and educated their students, Janelle among them, on the importance of PA. Similarly, Kali referenced a situation where she went to an all-day workshop and had been sitting for hours. She found herself tired and yawning and lethargic. Her verbal response to this was: “oh my gosh, sometimes this is the way the kids feel when they have four blocks, 75 minutes [each] and they haven’t moved”. It was her own experience with sitting and not moving that led her to actively work to include PA in her lessons. This notion is supported in The Kinesthetic Classroom (2010) that was discussed in section 2.2.3, whereby the authors claim that if teachers do not themselves believe in the benefits of PA, then they are not going to work to include it in their classroom.

Another factor affecting teacher attitude is through personal research. Kali made reference to research when discussing why she believed in PA. She said: “it’s reading about sitting and how deadly it is for this generation… it’s the research”. Kali believes in the importance of PA and staying up to date with new research so much, that when asked what her goals were looking forward with regard to PA, she says she hope to maintain what she is doing and “read more”. It was also suggested in my literature review that training or professional development days that directly interact with research and research institutions like universities are a good way for teachers to begin feeling confident in including PA in their classroom (Erwin et al. 2014).

The third element that affects a teacher’s attitude towards PA’s inclusion is that of a teacher’s empathy towards the sitting students. Zak made note of a situation not uncommon where students are working on a project for an entire period. He comments that everyone “appreciates a break at some point […] doing a real big assignment that takes up virtually the
entire hour and ten minutes, that’s a long time to just sit in a desk”. So Zak does not let them sit in their desks for the entire period, but rather actively works to give them physical breaks.

Similarly, and as mentioned earlier with Kali’s experience at an all-day workshop, because she felt so lousy and lethargic after a day of sitting, she does not want her students to feel the same way. She also commented on her “own experiences in high school sitting and just copying down notes” and remembering “feeling very tired at the end of the day” even though she “couldn’t justify [being tired] because [she] hadn’t done very much” throughout the day except sit. These two teachers recognize how lousy it is for students to sit endlessly and do not want to subject their students to doing so.

Another element that came up was that of classroom management. Typically, when looking at the literature, classroom management is seen as a fear and large barrier affecting teachers’ attitudes towards PA (Lengel & Kuczala, 2010). While this is no doubt the case in some situations, each of my interviewees commented on how management issues are actually reduced with PA’s inclusion. This will be discussed further in section 4.2.2.

The final factor, and a factor that is often quoted, was curricular requirements and lack of time. Curricular mandate and requirements are important to teachers, and rightfully so. Zak clearly stated that “your number one priority is always to meet a certain amount of [curriculum] outcomes” and my literature review research supports this notion. So while Zak firmly believes in the benefits of PA, he also, like many teachers are concerned with curriculum. Again, in their book The Kinesthetic Classroom (2010), authors Lengel and Kuczala acknowledge that time constraints can indeed be a barrier.

This section addressed the power of certain factors that affect a teacher’s attitude towards PA in the classroom including personal experience, familiarity with pertinent research, empathy,
classroom management, and curricular demands. In doing so, these subthemes collectively indicated the importance of having teachers buy-in to PA. Next, I discuss the importance of administrative support.

4.1.2 – Administrative support. The next group of people whose attitudes matter are the administrators—principals and vice principals. These individuals without a doubt have an influence on what happens in their school, and as such, they have the power to support and encourage PA initiatives. What is more, discussed in section 2.3.1, Castelli and Rink (2003) claim that supportive administration is hugely helpful in adopting PA techniques and diversifying one’s pedagogical techniques. My interviewees suggest that administrators seem to do this through two avenues, the first by way of providing specialized equipment and the second through appraisal and emotional support that promotes confidence in trying new initiatives.

Firstly, administrators have the authority to supply teachers with specialized equipment and technology. Janelle spoke to having specialized desks in her classroom. She called these stand-up desks and wobble chairs. I will speak more to these pieces of equipment in section 4.3.2, however what is important in this section, is that it was supportive administration that provided Janelle with the desks. She claims “my admin would be super supportive… that’s where [we] got the special desks from… many teachers have them”. In this school, the teachers can request these pieces of equipment for their classroom, and because the administrative staff is on board, they have no qualms in fulfilling the request.

Secondly, administrators may provide appraisal and emotional support to teachers. Gaining approval from administration goes a long way in promoting the success of PA. After discussion on the noticeable effects she has seen after a PA break, Kali commented on how she thinks “[administrators] like to see [that] students are engaged in their learning, versus the
teacher with the slides or the teacher on the board”. She also commented on how in her Teacher Performance Appraisal, the administrators commented on how much they liked the hands-on and kinesthetic aspect of Kali’s lessons. It is this type of support and praise that can allow teachers to feel free and confident to try new kinesthetic activities and take the risks.

This section spoke to the value of supportive administration in the success of incorporating PA into daily lessons. First, in regards to access to specialized equipment and second in regards to gaining overall approval and praise promoting confidence in trying new things. Though a non-supportive administrative team would be very detrimental to PA’s success, my research did not return any examples of administrators being anything less than supportive. In the following section I will discuss parental support.

4.1.3 – Parental support. Another powerful set of attitudes that could sway the success of PA initiatives is those of the parents and guardians of the students. These individuals also hold serious influence over the success of PA’s incorporation by way of influencing or biasing their children—the students, or on the contrary, by providing support and praise of a teacher’s pedagogy.

When asked outright if parents had given any feedback about her initiatives, Kali replied with “parents have said that the like how my course is just, or their kids have said to them how much they enjoy it because it’s so hands on […]”. Hearing this was support for Kali to press on with her initiatives. She went on to say “yeah, it does [feel good] … because then it justifies what you’re doing”. This support and praise from the parents, similar to that of the administrators, was inspiration for Kali to keep up what she has been doing. Like she said, it “justifies” what she is doing.
Neither Zak nor Janelle could make comments on parental support because neither had heard anything from parents at the time of the interviews. Whether that is simply because parents were unaware of their initiatives or they were indifferent, is up to interpretation. I do not believe the lack of data is indicative of one way or the other.

In this section I discussed the power of parental support over creating a safe environment for which to use kinesthetic techniques and get students moving. Similar to that of the administrators, I did not find any examples of unsupportive and intrusive parents putting up barriers to PA’s success. In the final section, I will discuss student perception and acceptance.

4.1.4 – Student perception and acceptance. One final set of attitudes that really can make or break the success of incorporating PA into a classroom is those of the students themselves. Without their willingness, PA initiatives may not succeed. Like teachers, there are factors that affect student attitude such as personal preference and situational effects.

The first factor is that of students’ personal preference. The most glaring finding from this part of my research is that, like many things with children this age, student perception and acceptance is random, inconsistent, and continually variable. Zak explains:

It really depends on the student… so some students, you know, really love it, they really take to it, get into it... umm you know, some students will kind of do the bare minimum and you know, wonder why we’re still not doing our assignments […].

Kali said that “the vast majority of kids like it. But there is always a minority of kids who on their reflection about [her] class that will say, ‘I wish we sat more’”. In these two instances, we have a simple variance between students who like it and students who do not. Supporting this, and again discussed in my literature review, Lengel and Kuczala (2010) speak at length about
under-motivated and hypermotivated students and how these differences can derail a teacher’s initiatives.

There are other more miscellaneous variations in the way students perceive and accept PA initiatives. First of all, you have the students who do not want to participate because they are too shy. Janelle noted that some of her students are in this situation where they are too shy to participate and perhaps it is because they do not have many friends in the class. She also commented on how peer pressure can play a role in that if their friends are not on board, “students don’t want to stand out and be like that one student to say ‘oh I really liked that’”. Lengel and Kuczala (2010) also speak to the power of peer pressure and limited past experience with PA as causes for students’ unwillingness to participate. However, on the opposite side of the spectrum, there are students who are aware of the benefits. After asking if she could comment on her students’ responses to her initiatives, she said that “most kids find that they’re more attentive”. She even had a student who wanted to do a science fair project, a comparative analysis between two classes: Kali’s class with kinesthetic opportunities and another class where the students sat the entire period. Again, this illustrates a broad spectrum of differing student attitudes and perceptions.

The second factor that affects student attitude as turned up by my research had to do with circumstance, specifically, class composition and time of day or week. Janelle commented on how she believes that class composition has an effect. For example, “maybe you have more boys in your classes and they’re more like, ‘yeah, let’s do that’” and so a teacher may find it easier to facilitate these activities because more students are excited. In regards to temporal variation, Janelle noted that she thinks it really depends on the day, “when it’s a Friday or a Monday, they’re like, ‘oh we just want to sit and talk’ rather than just, if that could be our break rather
than get up and move”. Zak had similar things to say in regards to students that on certain days are “feeling the groove” and “don’t want to take a break”. But then on other days they’re asking “how many more minutes before we get to play the little toss-around game or out little trivia game?” And then finally he notes, as most educators can attest, some days “they just don’t want to do anything at all”.

This section discussed the vast spectrum of student attitude in regards to physical activity and the factors that affect these. While there are students that are non-receptive to the idea of PA, there are many more who enjoy it and also see value in it. It is this realization that helps alleviate the barrier of poor student reception. Next, I will introduce my second theme, that of observable effects.

4.2 – Teachers’ Perceptions of Visible Effects

This theme discuss teachers’ perceptions of the visible benefits that PA has on students. These effects manifested themselves in three ways including that of improved focus and alertness, improved behaviour and classroom management, and finally, information absorption and retention.

4.2.1 – Student focus and alertness. The first type of observable effects noted by my interviewees pertain to that of focus and alertness. All three interviewees commented on how student engagement picks up noticeably after some movement which is fully supported by Mitchell’s (2009) study discussed in section 2.1.3 that found movement promotes students’ ability to refocus and improve their ability to pay attention”. Janelle claimed that “once they’re getting up and moving and that 2.5-3 minutes is over, […] definitely more, you know, engaged and ready to learn and more awake”. In addition to focus, Kali even commented on how she can get more done. She said after movement and talking, that she is “able to achieve a lot more, and
they stay alert more”. Interestingly, she also noted that when “[she] finally [does] let them sit, they’re more focused because they’ve outed a lot of their energy”. This is in direct alignment with the idea discussed in section 2.1.4 that exercise can assist with concentration by providing an outlet for healthy impulse discharge (Mulrine et al, 2008). Zak claimed that he can recognize the “toad-lifestyle” in his students and see how they can become “tapped out mentally” after sitting too long. In response, he gets them moving and sees immediate results in improved engagement and focus. Another example that I already mentioned in section 4.1.4 was the student wishing to do a comparative analysis between Kali’s and another less active class. This is a prime example of the students themselves noticing improved focus and alertness.

In this section I discussed the observable effects of focus, alertness and how that impacts engagement. In the next section I will discuss my second category of observable effects, behaviour and its effect on classroom management.

4.2.2 – Student behaviour and classroom management. A huge effect that my interviewees commented on was how PA can create a positive classroom climate and thus makes for easier classroom management. Similar to improved focus, Trudeau and Shephard (2008) claim that PA also reduced disruptive behaviour that contributes to more difficult classroom management. Kali, who in fact rarely allows her students to sit for more than a few minutes at a time during the action part of her lessons, has had colleagues enter her room to find students working away diligently, silently and focused. They have asked, “how do you get those kids when they’re sitting to work so quietly and focused?”. She responded with: “it’s because they’ve been talking all period, they’ve been standing up, […] so when [they] get that pleasure of the sit in the last 15 minutes of the period, [they] enjoy it and [they’ve] gotten all their energy
out.” In this situation, in Kali’s classroom, sitting is the exception while standing and movement is the standard and so when students get to sit and work, they can appreciate it.

Another effect on behaviour comes in regards to students with exceptionalities, in particular, students with Attention Deficit Hyperactive Disorder (ADHD). As noted in my literature review, students with ADHD may struggle with sitting still or may need an outlet for healthy impulse discharge (Mulrine et al., 2008). In response to this, Janelle notes how beneficial PA and in particular things like stand-up desks or wobble chairs can be, and so she uses them successfully to manage her classroom. She said “for those ADHD students, those students who like to fidget, definitely I think a benefit for them”. She also commented on how some of her colleagues had taken note of her use of the special desks and their effectiveness and so approached administration to seek getting special desks for their own classrooms.

In this section, I spoke to how physical activity and movement provides an opportunity for healthy impulse discharge, to expend some energy and improve behaviour. All of which result in fewer classroom management issues. In the next section, I will discuss the final category of observable effects, information retention and absorption.

4.2.3 – Information retention and absorption. A final effect that is suggested by one of my interviewees pertains to information retention and absorption. This suggestion is also supported by the work of Mulrine et al. (2008) that claims exercise increases activity in parts of the brain involved in memory. Zak claims that content retention is his main end goal of kinesthetic learning:

It helps with what I’m teaching about and maybe for whatever reason the student who can’t really pick up on what I’m trying to teach, umm, for whatever reason maybe that’ll help them out, and they’ll be able to finally make it click because it’s taken their mind off
of it, or maybe helped them think a little more abstractly because the movement are
different um, you know, its’ really my end goal with kinesthetic learning, just helping
with content and retention.
As illustrated by this quotation from Zak, he spoke candidly about how he believes his concerted
effort to include PA in his lessons works to help students with content absorption and retention.
Kali also remarked how through her research, she has learned that when kids move, they learn
better. That is to say, “when something is hands on and you connect it to the mind, you code it
better”.

In this section, I spoke to how PA may help with content absorption and retention. Next, I
will introduce my third and final theme, methods.

4.3 – Teachers’ Methods and Suggested Practices

The following section discusses teachers’ implemented methods and suggested practices
that can be used to successfully implement PA into their classrooms. These methods are
presented in three categories: introductions and justifications, type of PA, and general tips for
successful implementation.

4.3.1 – Introducing and justifying physical activity. The first best practice that was
communicated was the importance of introducing movement and kinesthetics and justifying to
your students why you are including it in your lessons. As mentioned in section 4.1.4, a large
contributor to PA’s success is student attitude or buy-in. So if teachers can get their students on
board at the beginning, it will make it easier to infuse movement into their lessons. Zak
commented on how at the start of semester he always gives the basic theory behind his initiatives
before getting into it. Similarly, Janelle likes to bring up the different intelligences and how “we
all think, feel and move a different way”, explaining her reasoning and providing the students
with the “why”. Kali tends to show her students a little four-minute video clip clearly explaining the physiology of all the things that shut down when you have been sitting too long, and then tells them “I’m going to make you stand a lot, and here’s why”.

The importance of student buy-in cannot be overstated. Students need to be on board with your initiatives, and as my interviewees have found and demonstrated, introducing, explaining or justifying why you are making them get out of their desks can go a long way to fostering success of such initiatives. In the next section, I will discuss how mid-lesson brain breaks are a great way to start infusing PA into your lessons.

4.3.2 – Types of physical activity. There are two types of PA that my participants seemed to practice. The first is that of short, mid-lesson brain breaks and the second is that of longer, more involved kinesthetic lessons and activities.

Movement and PA in a classroom does not have to be anything big or involved. But rather, can be more like a short two-minute break in the middle of a lecture. Kali stressed the importance of ensuring that students have regular opportunities to get up and move. She said, “it’s also just as simple as having kids get up, if you’re let’s say, showing a video, stopping at 20 minutes and getting them to walk around the room”. She also suggested that putting on music and having the students chat while moving around the room is a great way to add a social element to the brief brain break. Zak is a big proponent of having his students stand up and “toss a ball around a classroom” hot-potato style for a few minutes to allow students to completely take their minds off content for a brief period of time.

In addition to brief brain breaks, PA and movement can also be an integral part of a lesson. Entire lessons can be based upon moving around. She believes that “the student should be sweating more than the teacher” and so she stressed the importance of using “many activities
that kind of exemplify what you’re trying to teach”. Being a science teacher, she also commented on how simply using lots of laboratory activities in itself gets students out of their desks and moving for entire periods. Another suggestion was to move all group work to the lab benches. For example, Kali uses something she called an anticipation guide in place of a traditional lecture. She said “I could go into a set of PowerPoint slides to check against their reading, but instead I made an anticipation guide with key statements and they go to their table and they’re standing and debating them”. With minimal effort, or even less effort than a traditional lecture, Kali has her students standing and moving for a good portion of her lesson.

In this section, I spoke to ways in which teachers can begin to use PA as small mid-lesson breaks that do not have to be a large activities requiring significant amounts of planning, or use PA throughout larger portions of their lessons. In the next and final section, I will speak to various strategies and methods my interviewees suggested for successful implementation of PA.

4.3.3 – Miscellaneous strategies for success. The tips suggested for successful infusion of PA into the classroom are presented in four categories. These include: the importance of routine, starting small, taking advantage of space available, and using humour.

The first tip suggested that was consistent from all three of my interviewees was the importance of setting a routine. “It’s all about routine” Janelle answered when asked if there was an adjustment period or learning curve for her students when she began incorporating PA. She went on to say: “if it is part of your routine you’re doing with them […] incorporate[ing] kinesthetic learning and moving around the classroom, I think students will just get in that routine, will just embrace it”. When asked the same question, Kali responded with “95% of them just do it”. Kali put it simply, “it’s all about routine”. Setting the routine paves the way for decreased student resistance and thus an easier implementation. Lengel and Kuczala (2010) also
recognized the importance of routine in saying that defining clear expectations, preparing the room and establishing a routine are a good way to smoothly implement PA.

The second strategy is to start small. Nowhere does it say PA brain breaks need to take up excessive amounts of time. Zak makes his breaks short and sweet and this is also one of the recommendations made in *The Kinesthetic Classroom* (2010), to start small. When asked what advice he might give to a new teacher looking to begin incorporating PA into their lessons, Zak replied “just start it up right away”. The literature and my interviewees both seem to suggest that the trick is to start with minor activities and build up your repertoire. Some days there will be time for a longer activity, other days only time for a short two-minute break, and others there will be no time for anything. Zak comments on how like anything in the teaching profession, “it’s something you gotta grow on and add new things to”. He suggested trying one new thing a semester, maybe a new game, and to not be afraid of it failing. He finished with “it’s like anything else, you just have a feel for it, go slowly and try a few things at a time”.

Third, take advantage of your space. Kali is a big proponent for using lab benches for all group work even if it is not lab work. Janelle likes to make sure her stand-up and wobble desks are being used to their full potential. If you have features in your classroom or in your school, do not be afraid to use them.

Finally, approach it with humour. When asked what specific supports she uses to make her initiatives work, she responded immediately and simply with “humour”. Brain breaks and kinesthetics are an ideal opportunity to have some fun with your students, and so when met with resistance, Kali has found that making humour out of the situation is a great way to get students back on board. Also, if the kinesthetic activities are fun and engaging, humour fits in nicely to reinforce the task. In addition to this, Lengel and Kuczala (2010) have more suggestions on how
to curb disruptive behaviour such as clear and consistent consequences, and providing constructive and positive feedback.

In this section, I spoke to various tips my interviewees had for successful infusion of PA and kinesthetics into one’s teaching practice. In the next section, I will conclude the chapter summarizing my findings in response to my research questions.

4.4 – Conclusion

This chapter discussed the data I collected and how it helped answer my research purpose, to explore factors that affect the implementation of physical activity in secondary classrooms with a specific focus on Ontario and Saskatchewan, as well as methods and procedures that can be used to support teachers’ using PA in their lessons. After analysis, three themes emerged from the data: that of the attitudes of various parties towards PA in the classroom, that of teachers’ perceptions in observable effects of PA on students, and finally, suggested practices and methods for the successful inclusion of PA initiatives.

It became clear in the data that attitude towards PA greatly affected the successful implementation of kinesthetic initiatives. These attitudes that came from many different parties including teachers, administrators, parents, and students, were also affected by a number of differing factors. Teachers, for example were swayed by personal past experience, familiarity with research, empathy and curricular or timing concerns. Administrators held sway in their ability to provide specialized equipment and providing emotional support and praise promoting confidence in teachers. Parents have the power to influence their children one way or another and also allow for the teacher to feel confident in trying new initiatives. Finally, students are affected by personal preferences and other circumstantial parameters such as time of day or
week. Collectively, these factors and these attitudes greatly control whether or not PA initiatives in the secondary classroom will be a success.

In addition to attitudes, the theme of teachers’ perception in the visible effects on students as a factor contributing to PA’s inclusion in secondary classrooms emerged as another important area of discussion. These perceptions were that of improved focus and alertness, easier classroom management by way of improved behaviour, and finally enhanced content absorption and retention. Similar to attitudes, these perceptions provide teachers with the inspiration or determination to continue or to begin using PA in the classroom.

The third and final theme was teachers’ methods and suggested practices for the effective and successful implementation of PA in the classroom. The categories that quickly emerged were the importance of introducing and justifying teachers’ initiatives to the students, the distinction between different types of PA such as short brain-breaks and longer full-lesson activities, and lastly, general tips for success such as setting routine, starting small, using the space, and employing humour. Together these methods provide a framework, a starting point for teachers to begin implementing PA initiatives in their own classroom.

As discussed in this chapter, there are many factors that affect teacher attitude and implementation of PA, many perceived benefits of PA and many suggested practices for effective use of PA in the classroom. Collectively, these findings can be used to assist teachers in making PA more accessible to more students. In the next and final chapter, I will discuss the implications of these findings on the educational community as a whole and in my personal practice, my own personal recommendations, as well as areas for future research.
Chapter 5 – Conclusion

5.0 – Introduction

My qualitative research project sought to explore the implementation of physical activity (PA) in secondary classrooms in two separate provinces, Ontario and Saskatchewan. In exploring this topic, I pursued answers to the following three research questions:

1. What possible factors are affecting implementation of PA in secondary classrooms?
2. What potential benefits do teachers (who incorporate PA into lessons) perceiving in their students?
3. What are some possible effective practices that increase students’ in-class physical activity?

In this chapter, I summarize and conclude my research project. I start with presenting an overview of the key findings and their significance, followed by a discussion on the implication in respect to both the educational community as a whole, and to my own professional identity and practice. Next, I discuss my recommendations based on my findings for teachers, schools, and school boards, as well as suggesting areas for future research. Finally, I conclude the chapter with a comprehensive summary of my study.

5.1 – Overview of Key Findings and Their Significance

My research project revealed three principal findings that informed and helped answer my research questions. The first finding reveals that attitudes of different stakeholders towards physical activity greatly affect the likelihood and success of PA initiatives employed in the secondary classroom. These stakeholders include teachers, administrators, parents and the students themselves. The significance of this finding indicates the importance of buying in to PA
and changing attitudes to a more pro-PA stance. It also highlights how achieving this goal needs to become a major initiative of school boards, administrators and teachers.

The second finding addressed teachers’ perceived benefits of PA in the classroom. Specifically, it was found that teachers noticed improved focus and alertness, improved behavior and fewer classroom management issues, and finally, enhanced information or content retention and absorption. This finding is significant because it provides strong rationale for changing students’ and teachers’ attitudes and applying PA in the classroom.

The third and final finding outlines possible effective and suggested practices for PA’s successful implementation into the classroom. These practices materialized into three distinct categories: introductions and justifications, types of PA, and general strategies for success. These findings are significant because they give practical strategies and methods of implementation to help hesitant policy-makers, administrators and teachers begin to take on a more pro-PA stance.

5.2 – Implications

In this section I discuss the implications of my findings in two general contexts. The first of which is for the educational community at three different levels—policy makers, administrators, and teachers. The second implication addresses my own personal and professional practice.

5.2.1 – The educational community. My findings have implications for the educational community at three distinct levels. The first pertains to policy makers. When considering the role of attitude and the perceived benefits of PA in a classroom, policy makers at the Ministry and Board level should work towards creating a rationale and framework to help implement PA. Because policies help guide teachers’ work, a PA policy for secondary school teachers, in
addition to providing professional development opportunities for staff working in schools, would help with the seamless implementation of PA initiatives. Saskatchewan is in a fortunate position for already having such a policy in place with their *Inspiring Movement* framework mandating 30 minutes of physical activity a day outside of scheduled Physical Education classes (SME, 2010). Kali, my interviewee from Ontario thinks it is “problematic” that there is no physical activity policy for secondary level education. She believes that a Ministry policy could inspire administrators and teachers alike to make PA “part of the school culture”. Ontario should design a similar policy whereby high school students are also subject to a daily physical activity mandate and teachers are encouraged by policy and administrators to incorporate PA into their lessons. However, I do not believe a specific number of minutes per day is necessary to achieve such goals. Rather, I would suggest that policy focus more on providing ideas, strategies and resources for administrators and teachers to use in their schools. In addition, my findings provide tangible practices and approaches that can be readily implemented in classrooms, thus making it easier for teachers to begin incorporating PA into their lessons.

The second level of implications involves administrators. In response to these findings, administrators need to take an active role in setting a pro-PA school climate. Administrators have the power in their schools to set the climate, start initiatives and support staff where needed or desired. The findings regarding attitudes should encourage principals and vice principals to exercise such a power. An administrator who is enthusiastic about PA and movement can inspire the teachers and students to become similarly enthusiastic. Kali believes it would be beneficial to “introduce something like maybe doing [physical activity] breaks between classes” for example. She also stressed the importance of raising teacher awareness on the importance of PA, a goal that could be achieved by administrator-directed and school-wide policies. Similar to
the significance to policy makers, these findings would provide research-based data to help
administrators recognize the importance of PA for students. Administrators could then provide
space and time for professional development on PA and assistive technology for teachers who
are interested. They would also set the climate in the school to get more teachers aboard.
Having tangible examples of practices as ready-to-use resources will also help administrators
encourage their staff to begin using PA in their pedagogy.

Finally, the third level of the educational community implicated by my findings is that of
teachers. The findings show that teachers first and foremost need to adopt a pro-PA mentality
when it comes to designing their lessons. Like that of the administrators, an enthusiastic teacher
has the power to encourage students to also become enthusiastic about PA and reap the benefits
of such initiatives. In regards to my findings on perceived benefits, and similar to both policy
making and administration levels, these benefits can be used to change teacher attitude and
increase their buy-in. Practically speaking, my findings appeal to many things teachers often
worry about like classroom management issues with a rowdy classroom or content retention
issues for students who struggle to remember topics learned in class. Finally, my findings on
methods and practices have the most profound effect on teachers in a classroom because they
provide teachers with a basic understanding of strategies and ways to successfully implement PA
into their classrooms. Often teachers do not know how to implement new initiatives, but these
findings illustrate how to do so effectively.

5.2.2 – My professional identity and practice. What was most striking to me was the
significance and power of attitude on the success of implementing PA in a classroom. The
students, the principal, and the parents all have the power to entirely derail such activities simply
by way of attitude. However, most important to myself is my own attitude and initiative that will
drive PA in my classroom. Upon reflecting on my own practice and experience, I was reminded of how we can get busy or side-tracked and often put things aside or forget about them temporarily. Despite this, knowing that my attitude has the power to undermine a climate of activity only makes me more adamant to remain pro-PA in my attitude. It is up to me, the teacher, to take the initiative. As such, I will actively work to ensure my students know the value of PA and know why I make it an integral part of my pedagogy. Furthermore, teachers wishing to incorporate PA may require professional development in order to feel equipped and confident to do so. I would like to be someone who provides training and professional development, as well as be a model for my colleagues in order to change their attitudes and stances towards PA. I could do this through lunch and learn sessions or other more formal contexts sharing ready-to-use strategies and tips for success.

Secondly, and as alluded to briefly in the previous paragraph, I was surprised at the importance of justifying PA initiatives, specifically to students, for successful implementation. I have learned that being transparent to students with such things is paramount to achieving a positive student mindset. Armed with the strategies provided by my interviewees, I feel like I can now better implement my initiatives than I previously would have been able to. Because of this finding, I intend to justify and explain my reasons for making my lessons active in future practice.

5.3 – Recommendations

In this section, I discuss recommendations in response to the implications from the previous section. I directed my recommendations at the three distinct levels of the educational community: policy makers, administrators and teachers.
Policy makers in Ontario need to make physical activity and movement in classrooms a priority as a way of promoting student success and wellbeing for high school students. Saskatchewan has a PA policy, and my two interviewees from that province actively work to make movement part of their lessons. The framework and legislation is in place to create an environment safe to try new PA initiatives given the opportunity or desire. Ontario needs to follow Saskatchewan’s example and make it policy. A PA policy for Ontario high school students could provide the motivation in schools that administrators and teachers need to try such things so students can reap the benefits.

However, even without the support of Ministry or Board mandate, principals and vice principals can and should take matters into their own hands promoting PA initiatives in their own schools. Administrators can implement school wide policies creating a climate of activity and movement that promotes the mindset of having an active day at school, in and out of lessons. It is the people in these positions that can have a positive influence on PA initiatives providing professional development for staff outlining the benefits and providing practical tips and strategies. If administrators were to make PA initiatives a priority, they could positively influence parents’ and students’ attitudes. They could do this by facilitating events like a Parents’ Night where parents and guardians are invited to come to the school and try out some strategies and activities in hopes of convincing them of the benefits and importance of PA. The whole student body, including students with mental and physical exceptionalities could reap the rewards outlined in my findings, resulting in a more inclusive school. Moreover, these initiatives can be tailored for accessibility giving all students equal opportunities to benefit.

Teachers need to adopt an attitude that prioritizes and values the benefits of PA for their students. If teachers do not have a positive attitude towards PA, they may not seek to learn more
about it. Moreover, my findings clearly illustrated that if a teacher does not believe in the merit of PA themselves, then they will not bother making it part of their pedagogy. As always, if a teacher does not believe or value something, students will not be convinced. However, exposing teachers to the benefits and providing real-life practices and approaches may encourage teachers to change their beliefs, see merit in PA and facilitate teachers’ seeking professional learning. That said, teachers need to seek out professional development opportunities, make requests to their administration to bring these professional development opportunities to their school, and be open to trying out new and upcoming strategies.

5.4 – Areas for Future Research

This research paper successfully answered my questions about possible factors that affect implementation of physical activity in secondary classrooms. However, there are two areas for further research that could increase or broaden my understanding of these factors. The first of which is a mixed-methods analysis over a greater number of teachers in Ontario to determine their attitudes, perceptions and approaches to including PA in the classroom. This could be done similar to how I conducted my research but on a broader scale. That is to say, researchers could interview teachers from different areas across Ontario asking questions about their thoughts and beliefs around PA in the classroom, but also ask specific questions in regards to policy or lack-there-of. In addition, researchers could collect surveys from these teachers to collect data on the frequency of their professional development opportunities, their use of kinesthetic activities, and the amount of time students spend out of their desks. This extension would allow for a broader analysis drawing from different parts of the province with different and unique social, environmental, and socioeconomic landscapes, as well as a broader pool of which to glean strategies for PA’s implementation. As a second step, the researchers could take a survey of
each of the provinces’ and territories’ policy documents around this topic. A broader, perhaps
nation-wide analysis would provide us with many different perspectives and policies. A national
task force with representatives from each province and territory could analyze these perspectives
and if deemed worthwhile, could create a national strategy to be implemented across all
provinces and territories based on their analysis. In my study, I looked at Saskatchewan and
Ontario, two very different provinces with unique social, environmental, geographical and
socioeconomic features, both of which with different policies surrounding PA. There would be
incredible value in looking at other provinces just as unique as Saskatchewan and Ontario.

Another area for research that may inform or be part of the prior suggestion is to look at the
effectiveness of Ministry policy and the tendency of school boards, administrators or teachers
to adhere to such policy. Policy is used to provide a framework to guide teachers and
administrators in their schools, but if these people do not agree with the policy and there is no
legal obligation from provincial and national legislation, it is unlikely that the policy will be
applied or followed. A natural extension to this question is to qualitatively analyze why policy is
not being followed and what factors affect successful implementation of policy. Examining
factors that affect translation of policy into practice could help inform policy makers on how to
make PA more accessible, more practical, and more appealing to educators to begin
implementing.

5.5 – Concluding Comments

Throughout this chapter I have provided a thorough conclusion of my study. First, I
reintroduced the topic, purpose and the questions I sought to answer. Then, I summarized the
key findings and their significance to my research. These findings were organized into three
distinct themes. The first of which is that attitudes strongly affect the likelihood of PA being
implemented into classrooms. The second was that of teachers’ perceived benefits of PA for their students, and finally the third was in regards to teachers’ suggested methods and strategies. I then discussed the implications of these findings as they pertain to various levels of the educational community as well as to my own professional practice and identity. Based on these implications, I then made recommendations for the various levels of the educational community to respond to the implications. Finally, I suggested areas for further research to seek further understanding of the topic.

Student success and wellbeing are often touted as a significant area of focus for educators in their time at school. Educators can use many strategies, new and unique or tried and true to achieve such a goal of promoting success and wellbeing. Because it is indeed widely accepted that physical activity is an essential factor in living a healthy life, then one could ask: why not use physical activity and movement strategies as a means to promote student success? As far as my research and I are concerned, the teacher has everything to gain from trying it out.
References


Appendix A: Letter of Consent

Date:

Dear ______________________________,

My name is Mark Thomas and I am a student in the Master of Teaching program at the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT). A component of this degree program involves conducting a small-scale qualitative research study. My research will focus on physical activity and movement in secondary classrooms. I am interested in interviewing teachers who actively and consciously work to ensure students are not left to sit in their desks for the entire period and who teach courses outside the realm of physical education. I think that your knowledge and experience will provide insights into this topic.

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

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

Sincerely,
Mark G. Thomas

Phone Number: ____________________
Email: ____________________
Course Instructor’s Name: ________________________________
Contact Info: _______________________________________

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

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

Signature: __________________________________________

Name: (printed) ________________________________________

Date: _______________________________________________
Appendix B: Interview Protocol

*Introductory Script:*

Thank you for agreeing to participate in this research study, and for making time to be interviewed today. This research study aims to learn about the value of a kinesthetic classroom and best effective practices for the purpose of shedding light on ways to help more students get out of their desks more often while maintaining an environment conducive to learning. This interview will last approximately 45-60 minutes, and I will ask you a series of questions focused on your experience and beliefs with respect to kinesthetic learning techniques. I want to remind you that you may refrain from answering any question, and you have the right to withdraw your participation from the study at any time. As I explained in the consent letter, this interview will be audio-recorded. Do you have any questions before we begin?

*Section 1 - Background*

1) What do you teach? Where do you teach?
2) How many years have you worked as a teacher? At this school?
3) How did you become interested in kinesthetic teaching methods?
4) So I can get a better picture of your students, what are they generally like?
   a. What is their life outside the classroom?
   b. What are their interests?

*Section 2 - What/How?*

5) How do you introduce physical activity (PA) into your classroom?
   a. What steps do you take to familiarize students with your methods?
6) What made you feel that PA was something that should be included in secondary classrooms?
7) To what extent have your students embraced PA and kinesthetic learning?
**Section 3- Why?**

8) What prompted you to begin incorporating PA in your lessons? (single event? Personal beliefs and values?)
   a. Are you aware of the Ministry’s Daily Physical Activity Policy that extends from K-8?*
   b. What are your thoughts on the gap in policy from Grades 9-12?*

*Sub questions a) and b) were only asked to my Ontario participant.*

9) What do you believe or see that students gain from PA in the lesson?
   a. Can you speak to how students in general respond to PA?
      i. Do they like it? Get excited? Appreciate it?
      ii. Do they grudge having to get up?
      iii. Do they ever comment on how it affects them?
   b. Is there usually an adjustment period, a learning curve before students embrace your initiatives?

10) Are there specific supports you use to make this work successfully?

**Section 4- Who?**

11) Have you faced any obstacles or challenges when trying to use kinesthetic learning approaches?
   a. If so, how did you respond?
   b. If so, from where or from whom?
   c. If not, why do you think that is? (supportive admin? open-minded staff?)

12) What kind of feedback have you had from people outside the classroom regarding your practice of using kinesthetic learning approaches?

**Section 5- What Next?**

13) What advice would you give a beginning teacher looking to include kinesthetic learning in their classroom?

14) What goals do you have for your use of kinesthetic teaching techniques in the classroom?