Teachers’ Perceptions of the Effects of Physical Activity and Movement on Student Learning and in the Classroom

By

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Abstract

Physical activity and movement are important aspects for students in the learning environment. This study looks at three teachers’ perceptions of the effects of physical activity and movement on students in the classroom. This research shows that teachers see a positive effect on students that include benefits to student overall wellbeing (physical, mental and emotional), benefits to student learning (focus and physical literacy), and benefits for students with special needs. The findings also include methods that the teacher participants revealed they use to include physical activity and movement in their classrooms and lessons. The insights and views shared by the participants in this study conclude that the implementation of physical activity and movement in the classroom is overall advantageous to all students. The findings of this research corresponded with the existing literature.

Key Words: educators, physical activity, movement, behaviour, focus, education
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Introduction to the Research Study

Many different strategies and methods exist to engage students in the educational environment and to benefit their learning. Physical activity and movement are one way to engage students into lessons and keep them interested in what they are learning. In my own experience, physical activity and movement were used as a reward for good behaviour in the classroom, such as extra phys. ed. class or early recess. It acted as its own entity outside of the basic classroom environment. This study will be looking at the effects of the incorporation and inclusion of physical activity and movement by teachers into the learning environment and classroom lessons.

Purpose of Study

This research aims at discovering the effects educators witness of physical activity and movement in the learning environment on students. This research was done by interviewing three teachers on their classroom practices of physical activity and movement and what they see. These interviews were used to collect information and conclusions about how teachers believe physical activity and movement incorporated into the classroom effects their students.

It is important to determine if adding more physical activity into daily classroom lessons will help students become more engaged with the subject matter. Having data regarding this subject will be beneficial and encouraging to teachers contemplating the incorporation of physical activity and movement in their classroom environment. Hopefully this research inspires all educators to include movement in their educational setting to benefit all students.
Research Questions

The main research question for this study is: What are elementary educators’ experiences with the integration of physical movement and exercise in their classroom lessons? I will frame this with the subquestions:

- How do educators’ describe their implementation of the physical activity in their classrooms in terms of the types of activity, frequency of physical activity each day or week, differentiation or accommodations of students with various abilities etc.?
- What are educators’ preferred strategies to increase physical activity among students in the classroom?
- What are the views of educators on the effect of increased physical activity on students?
- What are educators’ beliefs on the relationship between physical activity and student behaviour?
- What are teachers’ beliefs on the relationship of physical activity and movement to student learning?

Researcher Background

I am currently a second year graduate student in the Junior/Intermediate division of the Masters of Teaching program at the Ontario Institute of Studies in Education at the University of Toronto. I received my Bachelor of Arts degree with an Honours Specialization in English Language and Literature from The University of Western Ontario. While completing my undergraduate degree, I volunteered with a program called Making Waves Canada. This program works with students with disabilities, teaching them swimming and water safety skills. I witnessed amazing results from the physical activity and movement these children received during their lessons. I taught one child for four years of the program whose mother told me she saw changes in his
focus level and behavior after some form of movement while in school. This experience engaged me to pursue researching this area of study.

Overview

Chapter 1 includes the introduction and purpose of the study, the research questions, as well as how I came to be involved in this topic and study. Chapter 2 contains a review of the literature on this topic. Chapter 3 provides the methodology and procedure used in this study including information about the participants, data collection instruments, and limitations of the study. Chapter 4 identifies the research participants and describes the data as it addresses the research questions. Chapter 5 includes what was learned, insights, recommendations for practice, further study, and the limitations of the study. References and a list of appendices follow at the end.
Chapter 2: Literature Review

For the purpose of this paper, the focuses in this literature review will be an introduction to physical activity and movement in the classroom, researched benefits and disadvantages in the learning environment and its accessibility to students with exceptionalities. Furthermore, for the purpose of this paper and for additional understanding of my thesis argument, I shall offer my meaning of physical activity and movement in the classroom.

A Definition of Physical Movement and Activity in the Classroom

Physical activity and movement does not have to be its own entity or subject. It is integrated into the teacher’s lessons and activities so that students are moving around within the classroom/learning environment. Examples of this could be breaks for stretching, group activities that require moving around the classroom or activities that incorporate motion into learning. In this paper, Daily Physical Activity (DPA) activities, in which students are moving explicitly for health reasons, will be included. Therefore, the incorporation of physical activity or movement does not have to be explicit exercise, but rather an active execution on the part of the teacher to help students with self-regulation and an understanding of their bodies’ need to move frequently. The understanding of their own bodies can be taught explicitly in physical education classes and health to students, or it can be something that is used in bouts to stimulate students within the learning environment. An understanding of the need for physical activity and movement in the classroom is offered by Patton, Thomas and McDougall (2009), which reads “it has been reported that up to 50% of children’s waking hours are spent in school. Therefore, school is an important point of intervention that should be utilized fully for
educating children about healthy behaviours, including physical activity” (pg. 17). Students’ needs to move and be physical can be met in the classroom through the insertion by teachers.

The Importance of Physical Activity and Movement

The importance of physical activity and movement in the classroom is raised many times throughout the literature and is a growing need for students in their everyday lives. A study by Ian Janssen and Allana G LeBlanc (2010) states that “physical activity is associated with numerous health benefits in school-aged children and youth” (pg. 13). The increased need for physical activity and movement in student’s lives is due to the many changes in childhood that many North American youth experience today. Videogames, television, computer-time and other sedentary activities have become more prevalent and common amongst students in their afterschool and weekend activities. In his article, “The Influence of Physical Activity on Mental Well-being”, Dr Kenneth R Fox emphasizes that this sedentary lifestyle can lead to “morbidity and mortality from coronary heart disease and stroke” (pg. 411). Though these outcomes are due to extreme cases of inactivity, he also accentuates that these low levels of activity are main causes for obesity and diabetes (pg. 411). These major issues in current students’ lives are paralleled in large part to the changing and development of technology. Thus, as children are spending large parts of their days in the classroom, it is important that their time in school is used to benefit student physical health.

In addition to benefiting student’s physical well-being, the literature also advocates for using movement to benefit student’s mental and emotional well-being. As
previously mentioned, students are spending large portions of their lives at school and within the classroom setting. Just as each student has different learning needs and abilities, each student has different needs to help themselves with self-regulation and awareness of their mental state.

**Benefits**

**Classroom Behaviour**

There are many benefits to incorporating physical activity and movement into the classroom environment and lessons. Children are eager to move around and often struggle to stay stationary. Students may struggle with their abilities to stay inactive and focus on the teacher or a lesson for long periods of time. They may be unable to pay attention and therefore may disturb or disrupt the lessons. Students work better in the classroom if they have had a chance to move around. This change in behaviour after being able to move around, as discussed by Tomporowski (2003), shows that there is a relationship between movement and behaviour in the classroom environment.

**Concentration**

Another area that can benefit from movement and physical activity in the learning environment is student concentration. Teachers face the challenge of incorporating different strategies into their lessons in order to reach students of different learning styles and abilities. Physical activity and movement can help teachers diversify their teaching and classroom lessons to help their student’s abilities to concentrate on what they are learning. In his study “Effects of Acute Bouts of Exercise on Cognition”, Tomporowski (2003) researches exercise and movement and its effect on students. He found that “observations indicated that children’s frequency of disruptive behaviors was
substantially lower following exercise sessions than on non-exercise days” (Tomporowksi, 2003, pg. 301). From this he draws that movement and physical activity help students to relax and enter a state in which they were able to concentrate. Physical activities’ role in this study gave students a time to release energy that would have inhibited their ability to focus in the learning environment.

**Self-Efficacy and Effects on Socio-emotional Development**

The benefits of physical activity and movement in the classroom reach further than a change in behaviour and helping students with concentration. Movement also allows for benefits that are not necessarily consciously made or planned by the teacher. In the article “Associations between Socio-Motivational Factors, Physical Education Activity Levels and Physical Activity Behavior among Youth” Weihong Ning (2012) discusses that “self-efficacy, the perception of one’s ability to successfully perform a particular behaviour [is] most frequently regarded as the psychological correlate of adherence to physical activity” (pg. 4). While students are in their developmental years, they are going to encounter many situations, both educationally and socially, that require them to exercise confidence and resiliency. Movement in the classroom can assist with this. Weihong Ning (2012) also states that “in terms of peer support, it has been evident that the frequency of adolescents' participation in physical activity with friends, especially in shared physical activity, has a positive association” (pg. 6).

Physical activity and movement can help with students’ social lives. Movements such as grouping activities or whole class breaks with student lead exercises can help students with their interactions with their peers both inside and outside of the classroom. Tomporowski’s study found that “children who participate in physical activities that
promote cooperation, sharing, and learning to follow rules that transfer to classroom settings” (2008). This research shows that when students are participating in physical activities with one another, their own self-confidence and abilities to work with others improves.

**Effects on Learning**

Physical activity and movement has a relationship with learning in the classroom. The former benefits of movement in the classroom, improvement in overall behaviour and self-efficacy, both aid in a student’s performance in the classroom. If students are able to move around, their abilities to learn will also be increased. Jenkins, Mulrine and Prater (2008) discuss this in their article, stating that movement can “increase activity in the parts of the brain involved in memory, attention, spatial perception, language, and emotion. There are indications that movement can strengthen learning and memory and boost learner motivation and morale” (pg. 18). Thus, physical movement can directly correlate to other parts of a student’s life such as their memory and their motivation in what they are doing. Tomporowski states that in “exercise can, under certain conditions, amplify response speed and accuracy, and it can facilitate cognitive processes that are central to concentration and problem solving” (2003). The research shows that physical movement and exercise can improve a student’s learning in the classroom, and a teacher’s incorporation of it can benefit their students overall education.

**Students with Special Needs**

As mentioned previously, movement and physical activity in the classroom benefits students of all learning abilities. In a study done with seven children between the ages of five and seven who have autism who were provided with time to move, it
was found that “antecedent activity resulted in decreases in children’s self-stimulatory behavior and increases in academic classroom behavior” (Tomporowski, pg. 129, 2008). In addition, Tomporowksi’s (2003) paper states that “the self-stimulatory behavior of [children with autism] is reduced immediately following periods of physical activity” (pg. 305). This research shows that the implementation of bouts of physical activity and movement can be of great benefit to students whose exceptionalities or special need causes self-stimulatory behavior. Movement can help students with exceptionalities, in this specific case with autism, to self-regulate which can lead to increased focus in the learning environment.

Students with exceptionalities can have additional issues focusing in class for extended periods of time. For example, students with Attention Deficit Hyperactivity Disorder (ADHD) often display disruptive behaviour in class and display “distractibility and often impulsivity” (OED). Students with ADHD can be penalized for their inabilities to pay attention or the fact that they disrupt the flow of the class. In their paper, Jenkins, Mulrine and Prater (2008) explain the paradigm in which “teachers often require students with ADHD to make up…assignments during non-academic classes, recess, gym time, or after school” (pg. 20). This action does not work in favour to the teacher as keeping students with ADHD in a stationary space does not “allow the students the opportunity to engage in physical activities that provide them appropriate time for movement and give their minds a needed rest from academics. There is even evidence that indicates keeping students with ADHD from exercise may actually cause some classroom-related problems” (Jenkins et Al, 2003, pg. 20). This research emphasizes
the importance of having time for students to be physical and move in the learning environment.

**Multiple Intelligences**

For teachers in the classroom, exercise and movement are excellent ways to improve in the areas of differentiated instruction and teaching to the kinaesthetic learner. Changing the way a lesson moves and develops with physical activity allows for students who learn differently to excel, when in a sedentary lesson they might not. Jenkins, Mulrine and Prater (2008) write that “exercise impacts oxygen levels in the brain, with resulting effects on brain chemistry, cerebral metabolism, and growth and development, establishing the link between exercise and learning. Oxygen is essential for brain function, and enhanced blood flow increases the amount of oxygen transported to the brain. Physical activity and exercise increase blood flow and allow for more oxygen and nourishment to flow to the different parts of the brain through the blood vessels, arteries, capillaries, and veins" (pg. 20). Teachers bringing in differentiated instruction that reaches out to kinaesthetic learners can benefit their students through the use of their bodies, increasing their potential to learn.

**Disadvantages**

**Reverse Effect/ Teacher’s Abilities and Willingness**

Though limited research could be found on the disadvantages of exercise in the classroom, some studies of movement did show negative effects or no effect at all. A study presented by Tomporowski (2008) showed the negative effect short bouts of movement had on a student with ADHD. This case study “reported that 20-minute aerobic runs had a negative impact on a three-year old boy with ADHD; the exercise
resulted in higher levels of disruptive behavior than when treated with methylphenidate” (pg. 129). Though it is not 100 per cent proven that the physical activity was the cause of the disruptive behaviour, it is proposed as a source that could further distract students rather than the intended point of helping them to focus.

Research has also been done to discover why there might be resistance from teachers to implement physical activity and movement into the learning environment. The study performed by John Dwyer, Kenneth Allison, Maru Barrera and Barbara Hansen (2003) “Teachers’ Perspective on Barriers to Implementing Physical Activity Curriculum Guidelines for School Children in Toronto”, produced that “teachers had problems implementing the required program because the provincial curriculum document is unclear about expectations for physical activity during instructional time which, in turn, makes it difficult to measure performance” (pg. 448). This study revealed that, though the ministry has created policies (DPA mentioned above) for increased physical activity in the classroom, teachers find it confusing and are unsure how to implement this into the classroom.

The study also mentions another negative aspect of movement in the classroom being space. Due to the fact that “physical activity is not usually done in classrooms because classrooms are not large enough and it disrupts other classrooms” teachers avoid its inclusion (Dwyer et Al, 2003, pg. 448).

**Conclusion**

Jenkins, Mulrine and Prater (2008) write that:

The literature from physical education, special education, and neuroscience on the effects of exercise and learning suggests that physical activity is a viable
teaching strategy worth implementing. Integrating the general strategy of active response into the curriculum and using varied and interesting movement tasks during classroom transitions, lessons, recess, and gym might have a positive effect on a child’s well-being and learning. (Jenkins et Al, 2008, p.17).

Overall, the literature is relatively united on the positive effects of implementing physical activity and movement into the learning environment. The positive effects can be seen in student behaviour in the classroom, student focus and student overall well-being. In Ontario, physical movement and exercise for children is promoted inside and outside the classroom through many initiatives, including but not limited to Daily Physical Activity (DPA) and Bring Back Play from ParticipACTION. In both cases, physical activity is promoted for children at the Elementary school level in order to benefit their overall health. DPA is a newer policy from the Ministry (2005). Thus, there is clearly a necessary shift in Ontario that is moving towards more active classrooms. Alderman and Gralla (2013) address this in their article “Effects of Physical Education on Cognition and Total Daily Activity” by articulating “today’s youth are falling well short of physical activity recommendations. Given the amount of time children spend in school, schools have been called upon to take a leadership role in the promotion of PA” (pg. 126). However, though this is an initiative, there is a gap in the research about how exactly teachers can implement this activity into their classrooms without it being its own separate entity. There is a lack of information on teachers’ experiences and interactions with physical activity and movement as a direct part of the lesson plan and what works. Therefore, this study will provide information that is related to the first hand experiences of teachers.
Chapter 3: Methodology

Process

This research study investigates the opinions of teachers on the effect of physical activity and movement on the learning environment of students. The research done for this paper comes from exploration in the field of education and physical activity. It will also come from first hand interviews conducted with three teachers.

Throughout the process of literature research, I found several pieces of literature that explore the use of physical activity and movement in the classroom as a positive way of teaching and articulated that movement can help students in their learning. Studies have found that the use of activity by teachers in their lessons helped students to focus their attention and furthered their learning in the classroom setting. The examination of research found that movement in the classroom provided more benefits for students than negative effects. In this research study, I explored the effects of physical activity and movement on learners of all abilities, and found in the literature review that its use in the classroom is beneficial.

The literature research done for this paper supports the purpose of study and allows further discovery within the field of education and exercise. Through the process of literature research, I was able to further develop my topic and develop questions for my interviews with teachers. The literature showed that physical activity serves to help teachers facilitating student learning in the classroom environment.

I furthered my research by conducting interviews with three teachers that investigated their practices and attitudes as they relate to inclusion of physical activity
and movement in their classrooms and its effect on students' behavioural patterns and learning abilities. I asked them questions that survey their views and their own practices to better understand their opinions of my topic of study.

**Instruments of Data Collection**

The instrument of data collection that I used for this qualitative study was three formal interviews. Previous to each interview, each participant signed a consent form for the anonymous use of their answers as data in my study. The participants were not given the interview questions previous to the formal interview. Each interview was recorded and later transcribed. I then coded the transcribed interviews and created a coding list that I used to interpret the data. I later used this in my findings and discussion portion of this study.

**Participants**

The participants I selected for this study were public school teachers. I selected three participants for this study. I chose my participants using my connections to Associate Teachers I had during my practicums.

**Data Collection and Analysis**

The data was recorded on an Iphone 4. Once collected, the data was reviewed and coded looking for themes and key points. The codes were organized into a Data Analysis Genesis that was used in each interview. The coded interviews were then analyzed for findings relating to the research and new information.
Ethical Review Procedures

Previous to performing my interviews any ethical considerations were satisfied through the use of the Letter of Consent (see Appendices) from the ethical review approval procedures for the Master of Teaching Program. This letter of consent was sent to my participants previous to the interviews so as to ensure they were consensual previous to the act of the interviews and fully aware of their participation in my study.

Limitations

The purpose of this study was to attain information about educators’ opinions on the effects of physical movement and activity on the students’ abilities and learning in their classes. The limitations on this study were the small number of participants in the study. Another limitation on my research was timing. The timing given to perform the study does not allow for as in depth findings to be made. Another limitation that is put onto this study was the willingness of participants due to the strain on their own lives participating in the study would cause.
Chapter 4: Findings

The results of the data retrieved from the three interviews conducted are summarized in the following section. The findings of this study are organized into five themes that relate directly to my subquestions. The themes are: Teachers’ implementation and uses of physical activity and movement in the classroom, Teachers’ perceptions of the benefits of physical activity and movement on their students overall well-being, Teachers’ perceptions of the benefits of implementing physical activity and movement on student learning, Teachers’ perceptions of the benefits of physical activity and movement in the classroom for students with special needs and Barriers teachers experience when attempting to incorporate physical activity and movement into the classroom.

Participants

The three participants chosen for this study all teach in the Durham District School Board. For the purposes of the anonymity of this study, they will be referred to as Kate, Layne and Tara.

Theme 1: Teachers’ Implementation and Uses of Physical Activity and Movement in the Classroom

Kate

Kate is a grade 6 teacher that teaches her students all subjects except for French. She has been teaching for 2 years and has taught both elementary and secondary grades. She has a specialization in music. Kate reveals that she sees physical activity and movement as a very important aspect of the classroom. She
describes the many ways she uses it in her classroom as “stretching/ yoga, short exercises as breaks in the day, and warm-up for music”. Kate uses movement in her classroom to break up long periods of sitting and working. She describes how her students can tend to be overly energetic, or on the other hand, really lacking energy. In both cases she tries to incorporate some physical activity to help students with getting back on track or regulating their behaviour.

Kate teaches music as her specialization, and uses physical activity to help with warmups before the students start singing. She describes that this tends to get the students “ready to contribute and feeling more comfortable before they sing”.

Layne

Layne teaches grade 4 homeroom language and physical education for grades 1-4, 7 and 8. She has been teaching for 20 years and in this time has taught all grades at the elementary level. Layne has her specialization in Physical Education and Health. For her own students, she explained that they receive at least 30 minutes of physical activity in her own classes a day. Though some of this is during phys. ed. time, she says that she works hard to incorporate movement into her classroom lessons as well. She describes that this is done through “co-operative games, yoga, dance and small fitness activities in the classroom”. She describes that during her classroom lessons, she tries to incorporate games that involve some form of fitness or stretching so that students are moving around during lessons and not sitting still. She emphasizes that these sort of games should be included in the classroom atmosphere as co-operative work time so that students are working together as well as gaining time for movement.
Tara

Tara is a grade 3/4 teacher and teaches her students all subjects except for French. She has been teaching for 8 years and in this time has taught all grades at the elementary level except for grade 5. Her specialization is in English. In talking with Tara, she described that her students receive two 40 minute gym periods a week, “we do yoga twice a week for 10-15 minutes, then we have movement in all lessons”. She explains that she incorporates movement and physical activity into her lessons through getting up to share answers, move to music to give think time, they use an app called Go Noodle, dancing through the application of just dance and small energizers as she sees needed throughout the day. Other ways that Tara said she includes physical activity and movement throughout lessons were “activities such as drama activities to show how plants grow and we use dances to remember the steps of parts of writing formats”. To elaborate further on her use of energizers in the classroom, Tara explained that she incorporates movement breaks into the classroom to get students into the appropriate learning state and she uses yoga to help focus their thinking.

In speaking about her classroom movement, Tara also revealed that she uses movement and physical activity when her students “get squirrely to give their bodies a break from sitting”. She states that she makes sure students are moving to keep their brains going and their bodies awake. One initiative that she uses in her classroom is the colours of self-regulation that students use to assess how they are feeling. If they are in the red (angry), yellow (anxious) or blue (sad) zone, they can use movement to help adjust their bodies and their moods to get into the green zone (active and alert).
Theme 2: Teachers’ Perceptions of the Benefits of Physical Activity and Movement on Their Students Overall Well-being

Kate

Kate describes that she sees many positive outcomes and benefits through using physical activity and movement in the learning environment. As has already been described, Kate stated that she finds it very useful when working with children in the Junior division because it is harder for them to sit still for longer periods of time. Through movement and physical activity, Kate explained how she is able to help her students self-regulate.

In talking with Kate she also said, as mentioned before, that movement in the classroom helps students when they are lacking energy. In her opinion, this could be for many reasons, but using some form of physical activity that requires students to move their bodies give them a chance to wake up and re-energize.

Along with all of these benefits, Kate placed an emphasis on the benefits provided to student’s mental well-being. She explained how physical movement and activity helped to raise positive energy levels in her students. Accompanying this she said she felt that it “gives teachers and their class some bonding time outside the strict curriculum coverage as a break and a refreshing moment”. She extended this by saying that using physical activity was a time for her to have fun with her students. “If it is a lesson where there is movement involved I find that it gives me time to circulate and have some fun moments and discussion with individuals and small groups of students that I wouldn’t normally get”. Kate sees this as beneficial to her students’ well-being
because it gives her a chance to gauge how they are feeling that day and a chance for them to check in with her.

Layne

As a Junior teacher as well as a phys. ed. teacher, Layne feels that physical activity and movement are crucial to the learning environment and to students’ overall well-being. She explains that the incorporation of physical activity ensures that students’ health is being prioritized. She describes that “students work at desks in the learning environment for the most part. It is therefore important to give time to get up and work in small groups, work in the hall or to do a quick two minute stretch”. Layne stated that this is acceptable and necessary because some students need to move around to keep themselves regulated. She also states that “as educators we are responsible to ensure children realize the importance of a healthy body and how this also impacts their learning and overall mental state”. Similar to Kate’s opinion, Layne discussed how building a sense of physical activity and movement as important in students helps with both their physical and mental well-being.

Tara

The opinion of benefits for students is similar among these teachers’ interview results. Tara also discussed that she found physical activity and movement to be very important for her students inside and outside of the learning environment. She explained her use of it to keep her students’ brains going and bodies awake. She said that by using physical activity, “students know how to activate their bodies to get themselves into the best state for learning”. Comparable to both Kate and Layne, Tara
described the benefits of movement as they relate to student self-regulation. As mentioned before, she uses it to help students think about how they are feeling and what they can do in order to move their bodies into the green zone. She explained that “if students are sleepy, it helps them to understand how to get themselves into an alert and ready stage for learning”.

Tara extends the benefits she witnesses to the fact that students love phys. ed. and crave movement and she described that you can feel they are upset if they don’t have it that day. In order to avoid situations and for her students well-being, Tara said she will “do some sort of physical movement following an indoor recess or if we can’t have gym to refocus and burn off some of their pent up energy”.

**Theme 3: Teachers’ Perceptions of the Benefits of Implementing Physical Activity and Movement on Learning**

*Kate*

Kate related the benefits of physical activity and movement in the learning environment directly to students focus. She explained how “they are able to focus much better as they have had time to release some energy and get endorphins going” after some form of movement in the classroom. She also stated that due to the fact that many students she has taught have been kinaesthetic learners, movement in their learning environment helps their focus on the lesson. She admitted that as an adult herself she finds it difficult to sit for extended periods of time without moving, so she can understand why students struggle with it. By giving students a chance to move around
in their classroom, they are able to better concentrate on the task they are working on or what they are learning.

Kate also described the benefits of using physical activity and movement in the learning environment as a way to teach students that it is useful to them outside of the classroom. She explained that, just as they read at home, study for a math test or play music, “students have to learn to do all of these things outside of the “purpose” of curriculum and see the benefits of doing all of these things for themselves”. Kate wants her students to understand that they have to practice being active outside of school in order to stay healthy. She stated that by incorporating these into their learning, it also helps with students’ physical literacy. It gives them a sense of what is needed to stay healthy throughout the day and that physical activity is natural and necessary in all parts of their lives.

Layne

Akin to Kate’s observations and feelings about physical activity and movement in the learning environment, Layne sees a definite change in students’ abilities to focus. She stated that immediately after some form of movement; she sees an increase in her students’ focus and effort. She described that “students use their time wisely and get down to the task at hand much quicker”.

For her own teaching, Layne said that she likes to explain to students why she uses physical activity and movement in the classroom. She explained that she does this because “the inactivity and obesity rates in North America are sky-rocketing. Most children do not walk anywhere, play outside or do household chores. They are
constantly inactive and this is leading to an increase in disease and physical disabilities at an alarming rate”. Layne prefers to explain to her students that things like being active, playing at recess, climbing stairs and action in the learning environment help them to stay strong and live a healthy life. She explained that she wants her students to be physically literate.

Tara views are related to the views of the previous two interviews. She feels that including physical activity and movement in the learning environment makes it so student are more focused and able to work during the time given. She described that sometimes students work even harder because they view that movement as a sort of reward from their teacher. From working in the younger grades, she finds that her students “become more focussed and less wiggly” after or during movement in a lesson. She describes that “they are able to focus on full body listening and participate actively in all activities”. She also explained how some form of physical activity or movement in the learning environment before a test or independent work allows for students to have time to interact and then they can refocus when it is time to concentrate.

Tara also mentioned a similar benefit as the other two participants in that it helps students to understand their own bodies and physical literacy. She said that “I also often tell kids that it is part of their physical education since physical literacy is throughout our day and exercise is not limited to the gym”. Tara also explained how kids are usually happy when their teacher uses physical activity and movement in the learning
environment because it shows that the teachers care about them and because they are trying to teach them to care about themselves.

**Theme 4: Teachers’ Perceptions of the Benefits of Physical Activity and Movement in the Classroom for Students with Exceptionalities**

*Kate*

Kate described that physical activity and movement provide another way for students to connect to lessons, “so it can only help students of all kinds to find another lens through which to see the lesson”. In order to reach all of her students, Kate described that she modifies and accommodates the physical activity and movement in her classroom in many different ways. She explained that she provides verbal modification suggestions and uses all types of movement and activity that target different parts of the body so that students who may struggle to use one part of their body can also join into the activity. She also stated that she “constantly reminds students that everyone has different capabilities and not everyone can do everything, and that is okay”. Kate emphasizes that inclusion is a necessary part of movement and physical activity in the classroom. She modifies and adjusts her lessons for all students, including those with special needs.

*Layne*

In speaking to Layne, she made it very clear that she does not think students benefit any differently. She explained that she believes “all students benefit physically and mentally”. She believes that physical activity and movement in the learning
environment helps to build confidence in all children, “helping with friendships and social skills”.

When accommodating or modifying her physical activity and movement in the classroom, Layne explained that if you are using equipment or manipulatives you could use something that is softer or more brightly coloured if necessary. She detailed further that sometimes students will work with specific partners or groups if they need assistance. Layne articulated that, in the case of a student having anxiety or trouble working in groups, they can choose to work alone. She also stated that a modification can “often just be a case of showing all students the activity or movement more than a few times to ensure understanding”.

Tara

Tara stated that she sees a definite benefit of physical activity and movement in the learning environment for students with exceptionalities, but unlike the two previous interviews she specified that “especially students with Attention Deficit Hyperactivity Disorder (ADHD) require that extra outlet and the focus on teaching them how to understand their bodies”. To accommodate and modify for students with ADHD she described that she always uses explicit instructions when explaining any activity.

Similar to Kate’s accommodations and modifications, Tara explained that students participate as they are best able to. Also similar to the previous two interviews, Kate described that she makes sure a student receives extra input if necessary and modifies any physical activity for a student with a physical disability to make sure they are able to do it.
Theme 5: Barriers Teachers Experience When Attempting to Incorporate Physical Activity and Movement into the Classroom

Kate

Kate describes that in her opinion it is easier to add in physical activity and movement to classroom lessons and “is also a necessity as the students at this young age can only sit still for a certain amount of time”. Kate then moved to say that in the older grades of 9 and 10, she finds it much more difficult to find that time. She describes that there is so much curriculum that teachers are expected to cover and with this challenge it is hard to set aside time for movement. She also mentioned that because students are older, they can sit for longer periods of time without disrupting the class. Kate states that because of this “teachers forget that it is just as important to give them even a small amount of time for physical movement”.

Layne

Like Kate, Layne also sees challenges for incorporating movement and activity into the classroom and lessons. However, differing from Kate she describes many more challenges that she faces when incorporating movement into her class than time. She states that there are several challenges teachers face. “Ensuring safety for students during this time can be a challenge, especially in the small spaces of the classroom. You really have to be careful of the activity you choose”. Layne also notes modifications for students with disabilities (vision, hearing, wheelchairs) as a challenge that she faces in the classroom. On the same topic, Layne describes space for activities in a confined
classroom and keeping it interesting for older students/behaviour expectations as barriers she faces.

_Tara_

Similar to what Kate described as a challenge she sees in incorporating physical activity and movement into her lessons, Tara also states that curriculum is heavy and she needs to be able to get through it all with her students. This then leads her to sometimes not prioritizing the use of movement in the classroom. Tara contextualizes this by describing her pressures of being in an EQAO year. She teaches grade six and explains how she often feels anxious that there will not be enough time to teach everything she needs to with her students.
Chapter 5: Discussion

How Teachers Implement and Use of Physical Activity and Movement in the Classroom

Each participant revealed different ways to implement physical activity and movement into the classroom. Kate discussed using yoga, stretching as small breaks and incorporating physical activity into her warmups for music class. Layne also described using yoga in her lessons, as well as “co-operative games, dance and small fitness activities in the classroom”. Correspondingly, Tara uses yoga to implement physical activity and movement into her classroom lessons. She also uses Just Dance, Go Noodle, and Move to Music to get her students up and energized. This study proves that there are practical ways for teachers to include movement into their students’ education.

Teachers’ Perceptions of the Benefits of Physical Activity and Movement on Their Students Overall Well-being

In each teacher interview, similar results were found for teachers’ opinions on the overall benefits that physical activity and movement had for their students.

Physical

Each teacher described that their students benefited from bouts of movement throughout their lessons. Kate stated that movement gave her students a chance to self-regulate and wake up their bodies when they were lacking energy. Layne also described how it was important to give her students a chance to move around because
it helps them stay regulated. Tara similarly suggests that physical activity helps to keep her students awake and helps students “to activate their bodies to get themselves into the best state for learning”. These findings align with the research done by Ian Janssen and Allana G LeBlanc (2010) that states “physical activity is associated with numerous health benefits in school-aged children and youth” (pg. 13).

**Mental Well-being**

The three participants also described that students’ overall mental well-being benefited from the use of physical activity and movement. Kate sees that it helps “to raise positive energy levels in her students”. Layne placed more of an emphasis on the role of the teacher in her students’ mental well-being. She stated that “as educators we are responsible to ensure children realize the importance of a healthy body and how this also impacts their learning and overall mental state”. Tara described the benefits she sees to her students’ mental states as well, but mentions the use of zones. She has students use physical activity to move themselves into the green zone (happy and ready to learn) to help them prepare for their day. This is linked to existing literature as physical activity and movement are beneficial for students’ overall mental states (Fox, 1999).

These results suggest that teachers see benefits for students’ general well-being through the implementation of physical activity in the classroom.
Teachers’ Perceptions of the Benefits of Implementing Physical Activity and Movement on Learning

All three participants had similar opinions on the effects of physical activity and movement on student learning, highlighting its effect on student learning of physical literacy and on their abilities to focus in the classroom.

Physical Literacy

Kate explained that using physical activity in the classroom allows teachers to show their students that movement is important throughout their day and for their health. Layne stated that she likes to explain the physical activity in her lessons to students as a way for them to stay strong and be healthy. Likewise, Tara mentioned that she explains to students that physical activity and movement should be used in all parts of their lives and that it helps her students to understand how to take care of themselves. The use of physical activity and movement in the classroom to help students with physical literacy is portrayed in the research of Janssen and LeBlanc (2010) when they discuss that it has many health benefits for students in elementary school.

Student Focus

Kate articulated that once students have moved around during a lesson, they can focus better because “they have had time to release some energy” which leads to their motivation to pay attention to what they are learning. Layne described her observations of student’s immediate focus after a form of physical activity and movement in the lesson. Tara explained how her students engage in full body listening and focus after
physical activity. This change in student behaviour and focus is reflected in the research done by Tomporowski (2003) and his study that found students displayed less disruptive behaviour and increased focus on exercise days as opposed to days with no exercise.

Overall, this study suggests that teachers perceive the effects of physical activity and movement on student learning as an increase in student focus and understanding of physical literacy.

Teachers’ Perceptions of the Benefits of Physical Activity and Movement in the Classroom for Students with Exceptionalities

Benefits for All Students

This study found that these teachers believe that physical activity and movement in the classroom provides benefits for all students, including those with special needs and exceptionalities.

Kate expressed that movement is another way to reach all students and different learners, and inclusion is a necessary part of the classroom. She believes that this does not change for students with special needs. Layne similarly expressed her view that she believes all students benefit from physical activity “both physically and mentally”. Tara explained parallel views to the two previous participants, but specified that she sees a definite benefit for students with ADHD. This relates directly to the research done by Jenkins et Al. (2008) which explores the positive impact of physical activity and movement on students with ADHD.
Barriers Teachers Experience When Attempting to Incorporate Physical Activity and Movement into the Classroom

In some way, all three participants saw barriers when trying to implement physical activity and movement into their classroom lessons.

Kate and Tara both stated that they found the immensity of the curriculum content to be an obstacle. Kate described that in the older grades there is more material for the teachers to cover, making it “hard to set aside time for movement”. Tara explained that it is difficult to focus on physical activity and movement in the classroom, especially in an EQAO year in which there is a lot of pressure to fit everything in. This barrier is supported in the research by Dwyer et Al (2003) which states that “teachers had problems implementing the required program because the provincial curriculum document is unclear about expectations for physical activity during instructional time which, in turn, makes it difficult to measure performance” (pg. 448).

Unlike Kate and Tara, Layne described the more physical aspects of barriers. She described that confined classroom spaces make safety an issue for incorporating physical activity and movement into the classroom. This barrier is exposed in the study done Dwyer et Al (2003) that found classroom size to be a significant reason as to why some teachers do not include movement in their lessons.

Overall, the literature review and findings of this study yielded similar results in the study of teachers’ perceptions of implementing physical activity and movement into the classroom.
Implications and Recommendations

This study suggests that physical activity and movement are important for teachers to include into their classroom lessons and classroom environments. All of the teachers in this study described their students’ physical and mental well-being benefiting from the inclusion of movement. They also saw it as beneficial to their students’ physical literacy and understanding of their own bodies, as well as seeing an increase in student focus. Lastly, each participant viewed physical activity and movement as important for students with special needs and exceptionalities as an everyday part of their learning.

According to these teachers, there are practical ways through which teachers can include physical activity and movement into their classrooms for the advantage of their students. From using small bouts of movement weaved into an activity to taking a break for some physical activity, these teachers perceive it as possible.

Based on the findings of this study, I would recommend that teachers include small amounts of physical activity and movement daily throughout their students’ classes, both included in a lesson and on its own. I suggest that teachers do this as a benefit to their students overall wellbeing and health. This study supports the idea that physical activity and movement incorporated by teachers into the classroom environment can help students with their learning and focus on classroom lessons. Additionally, I would recommend that teachers use physical activity and movement as a way of including and reaching all different kinds of learners. It is a tool that can be used
to access students who cannot cope with sedentary classroom lessons, as well as all other students.

**Limitations**

The limitations on this study included the small number of participants in the study, timing and the homogeneous results from the participants. The small number of teachers chosen to participate in this study does not provide the widest range of data possible. The timing given to perform the study does not allow for as in depth findings to be made. Additionally, all three participants showed similar views on the importance of including physical activity and movement into the classroom. This limits the research to similar findings from each participant. The results may have varied if teachers did not enjoy physical activity themselves.

**Further Study**

Further study should be done into how to implement physical activity and movement into the classroom by teachers. Though this study reveals some methods used by teachers to increase movement in their classrooms, more research should be done on different aspects about the execution of physical activity. I suggest that research be conducted on the amount of time and how often physical activity should be used in the classroom in order for the most benefits to be gained. Additionally, further research should be done into the differences between all levels of education, from grades K-12, to see which methods of implication work best at what age. Finally, research should be conducted to determine what the best way is to making the importance of physical activity and movement in students’ education a school wide
initiative. This would be valuable information to help schools move towards healthier classrooms. Through this research, I have discovered the important benefits teachers perceive for their students through using physical activity and movement in the classroom.
REFERENCES


APPENDICES

Appendix A: Letter of Consent for Interview

Date: ____________________

Dear ____________________,

I am a graduate student at OISE, University of Toronto, and am currently enrolled as a Master of Teaching candidate. I am studying __________________ for the purposes of investigating an educational topic as a major assignment for our program. I think that your knowledge and experience will provide insights into this topic.

I am writing a report on this study as a requirement of the Master of Teaching Program. My course instructor who is providing support for the process this year is Dr. __________________. My research supervisor is ___________________. The purpose of this requirement is to allow us to become familiar with a variety of ways to do research. My data collection consists of a 40 minute interview that will be tape-recorded. I would be grateful if you would allow me to interview you at a place and time convenient to you. I can conduct the interview at your office or workplace, in a public place, or anywhere else that you might prefer.

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

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

Yours sincerely,
Researcher name: _________________________________

Phone number, email: ______________________________

Instructor’s Name: _________________________________

Phone number: ______________________ Email: ______________________

Research Supervisor’s Name: _______________________________

Phone #: ______________________ Email: ______________________

Consent Form

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

I have read the letter provided to me by ______________________(name of researcher) and agree to participate in an interview for the purposes described.

Signature: _______________________________________

Name (printed): ___________________________________

Date: ______________________
Appendix B: Teacher Interview Questions

1) Approximately how many minutes per day do your students participate in physical activity?

2) What sorts of physical activity do you use in the learning environment?

3) How do you implement physical activity into the learning environment (during lesson, before, after)?

4) What challenges do you face in allowing students this time for physical activity and movement?

5) What benefits do you see from students having time to participate in physical movement within the learning environment?

6) What differences in student concentration do you observe in the learning environment after they move and participate in physical activity?

7) How much of an emphasis do you place on physical activity and movement within the learning environment?

8) How do you connect physical activity to the curriculum, or does it act as its own singular entity?

9) What do you explain to students about why you implement movement and physical activity into their lessons?

10) How do movement and physical activity in the learning environment aid in student’s overall learning?
11) How do you think students with exceptionalities can benefit from movement and physical activity during lessons?

12) What sort of differentiation or accommodation would you use in your physical movement/activity program for students with exceptionalities?

13) What effects does physical activity and movement in your teaching environment have on your relationship with the students? Explain.