

# **Benefits of Movement in a Montessori Classroom on Children's Behavior and Focus**

---

Advisor's Signature

---

Date

By: Abby Akkerman  
Plan B Paper  
Required for the Degree of

Master of Science in Education

University of Wisconsin-River Falls  
2014

### **Abstract**

*Students, who have a hard time staying on task or concentrating on one thing at a time, often need breaks in between their lessons. There is evidence to support the benefits of “movement breaks” for these students. A study was done over a three month period during which careful observations were made and data was collected of the students’ use of a movement shelf that was added to a Montessori classroom. Data collection was completed by careful observation using a checklist and by having the participants write their names on slips of paper and place the names into a cup or jar every time they did a particular movement lesson. The checklist allowed for notation of how often participants were off task and therefore not focused on their work. Students were able to choose work from the movement shelf anytime they desired throughout the morning work period. Lessons from the movement shelf were selected more frequently as the study went on. The concentration levels of the participants increased as more and more movement lessons were completed. Having the opportunity to take a “movement break” while working on a lesson seemed to result in students focusing for longer periods of time. The researcher conducted interviews with the students to find out what movement lessons they enjoyed the most and why they liked them.*

### **Introduction**

At the beginning of my second year of teaching in a Children’s House classroom at a Midwestern public Montessori school, I used both individual and whole class observation of my students to help guide my lessons and determine the effectiveness of certain areas of focus. One thing I observed in the beginning of the year was how the students *need to move*. I hypothesized that if I incorporated opportunities for purposeful movement into my classroom, then distracting

## Benefits of Movement

movement would decrease and work focus time increase. I began doing research on purposeful movement and came across the idea of a movement shelf.



As in any other area in a Montessori classroom, there are beautiful wooden shelves filled with prepared lessons for children to manipulate. During a Montessori work period, students have the freedom to choose the lesson they want to work on. I felt a movement shelf could be utilized just as any other area in the classroom. The shelf would provide prepared movement lessons that students would have the chance to utilize anytime during a work period. I began investigating other movement shelves teachers have made in the past, which provided me with a list of movement lessons to start with. As the year progressed, I began creating my own movement lessons using materials I already had in the classroom. Materials included a movement dice, sight word moves, and yoga cards. My goal for this movement shelf was to have my students become more *normalized* within the classroom environment.

*Normalization* is a common term used within a Montessori environment. “The greatest sign of success for a teacher is to be able to say the children are now working as if I did not exist”

## Benefits of Movement

(Montessori 1936) Every Montessori teachers' goal is to create a *normalized* classroom. When the children continue working without the teacher's guidance and show a love for work, concentration, self-discipline and sociability, they are *normalized*. (Dahlmeier, 2013). The two characteristics I focused on using my movement shelf were *concentration* and *self-discipline*. My goal was for students to concentrate more deeply on their work and to maintain focus for longer periods of time. When a child is concentrating, s/he will have self-discipline and strive to get work done because s/he wants to. A child is normalized when s/he is intrinsically motivated to complete a specific task, such as a work or a lesson.

From my observations and decision to implement a movement shelf into my classroom, I hoped the following leading questions would be answered throughout my study.

- 1) Does yoga in the classroom help form a calm and peaceful learning environment?
- 2) Does a child benefit from movement throughout lessons or does it distract them?
- 3) How much movement is appropriate in the classroom so it is not too distracting?
- 4) How can movement be incorporated into each lesson?
- 5) How do different movement activities and songs affect the way a child concentrates and learns?
- 6) How can we promote children to begin using more movement activities on their own?
- 7) By integrating movement into the classroom, do students appear more normalized?
- 8) Do children with specific learning styles benefit more from having movement in the classroom?

### **Literature Review**

Providing ways for children to become more engaged while working in the classroom helps establish an environment filled with students who not only want to learn, but also love to learn. There are several ways to entice children to become more engaged while working in the classroom, such as providing them with lessons they are interested in, using real-life objects to provide a more meaningful lesson, or using hands-on materials that enable the child to experience concepts tactilely. However, one way that provides many benefits is implementing a variety of prepared movement activities within the classroom. These movement activities provide students with brain breaks and ways to become more focused on their lessons.

Movement is found all around within a Montessori classroom. Ways for students to move are embedded in almost every Montessori lesson. One example is a lesson that includes having a student place some sandpaper letters across the room on a table; the teacher will ask that student to bring her specific letter sounds. This activity provides the student the chance to move back and forth across the room for each letter. Another example is how movement might also be included when teaching students the continent puzzle map. The various continents are placed around the room and students are asked to find each one and bring it to the teacher. Some Montessori teachers also have implemented a movement shelf in the classroom that includes a variety of prepared movement lessons such as yoga cards, hopping lesson, and jumping rope for students to utilize during the work period. I believe that by providing these simple opportunities to get students moving within a lesson will help them be more focused and able to learn the material.

### **Benefits of Movement in the Classroom**

Movement is a positive addition to the classroom. It provides students with the opportunity to move while learning at the same time. In an article entitled, *Boosting Brain Power, Fighting Obesity*, the authors suggest that students often misbehave due to periods of sitting too long.

Physical activity is said to help a child's brain cells and engages the child to want to learn.

Movement not only affects the children, but it also affects the teachers since it gives teachers time to plan what will happen next while the child is involved in a movement break. "Movement provides for a nice brain break. Every 15-20 minutes, a child should be up and moving to see the best results in learning. For their brains to function optimally and to do their best academically, children generally need regular activity periods, in addition to physical education class and recess" (Reilly, Buskist & Gross, 2012, p. 63).

In an article entitled, *Fit Kids: Time in Target Heart Zone and Cognitive Performance*, (Casteli, Hillman, Hirsch, Hirsch and Drollette, 2011) researchers conducted a study using 59 participants and a variety of cognitive tests which included the WRAT, Comprehensive Trail Making Test, and the Stroop Color Word Test. The participants were involved in a program known as FIT, which stands for "Fitness Improves Thinking." Researchers found that physical activity has many known benefits for children including improved physical fitness and reduced risk of disease. Unfortunately, 1/3 of children do not get the amount of physical activity needed on a day-to-day basis. School is one of the best places children can get the physical activity needed, especially because 98% of children spend at least six hours a day at school, which is most of

## Benefits of Movement

their day. According to this study, physical activity and physical fitness are associated with success in schools through better attendance, increased attention and academic achievement. Past studies have shown physically active humans respond faster to simple cognitive tasks than healthy but inactive humans.

Movement benefits students physically, but also academically. A study of 144 7-12 year old children with learning disabilities was completed using a test of Gross Motor Development. The study examined if students with learning disabilities scored lower on certain movement tests than students without learning disabilities. (Research in Developmental Disabilities 32 ,2011, pp.2773-2779). The study established that students with learning disabilities score lower on movement tests than students without learning disabilities, and, therefore, motor ability and cognition have a connection. Students' scores would most likely improve if they are able to practice various types of movements in their classrooms. Having movement offered in a variety of ways is a positive asset for any age classroom.

Another article titled *Fundamental Movement Skills in Children and Adolescents: Review of Associated Health Benefits*, discusses the positive effects fundamental movement skills have on children while in the classroom. Fundamental movement skills include movements such as running, hopping and object control. A systematic study review was done to examine the relationship between fundamental movement skills competency and potential health benefits in children. The study concluded that health benefits included physiological behavioral outcomes as well as improvements in various gross motor abilities. "Fundamental movement skills are considered to be the building blocks that lead to specialized movement sequences required for

## Benefits of Movement

adequate participation in many organized and non-organized physical activities for children, adolescents and adults” (Lubans, Morgan, Cliff, Barnett, & Okely, 2010, p. 1020).

## Ways to Incorporate Movement in the Classroom

### **Movement during Lessons.**

The article titled, *4 Simple Ways to Add Movement to the Classroom*, discusses four main ways movement can be added to the classroom. The first way is adding vocabulary words and notes throughout the classroom. The second is posting the task assignments throughout the classroom instead of a child sitting at a desk to complete an assignment. Therefore, they are constantly moving in order to complete it. Third, instead of having a discussion sitting in a circle or at desks, all students stand up when they participate or add to the discussion, and sit down when they are done. Fourth, a teacher places four different items/answers in each corner of the classroom. For example, the items could be different shapes, and the teacher says, “Go to the corner with the trapezoid,” and the students must go to that corner. The four corners could work with a variety of assessments. “Adding movement to classroom activities, not only engages students, but also may improve the classroom climate and reduce disruptions” (Helgeson, 2011, p. 80).

In a similar article titled, *Art & Science of Teaching: A Moving Proposal*, by Robert J. Marzano (2012), teachers shared five ways to add movement to any lesson in the classroom. The first way was called “give one get one.” Students share their answers from a discussion with a partner and then get an idea from the partner. The second way included voting with your feet. Each of

## Benefits of Movement

the four corners of the classroom has a different choice for answering questions. The teacher asks a question, and students move to whichever corner they think has the correct answer. There were other corner activities in which a question was located at each corner and students answer questions on a large piece of paper within their group. Fourth, teachers used drama, similar to playing charades, to teach various lessons. Last, bodily representations were used to review things such as shapes, letters, and numbers. Each of these five things incorporated movement into the content the teacher was trying to explain.

The movement added to lessons or activities must, however, be purposeful movement. Purposeful movement is movement that is added to a lesson to help keep a student's interests. In the article, *Moving Through The Curriculum: The Effect of Movement on Student Learning, Behavior, and Attitude* (n.d.), Wells discussed the success of a movement study done over a five week period on how implementing movement into lessons benefited students. Teachers found that by adding purposeful movement to each lesson there were decreases in behavioral problems, increases in academic achievement, and improvements in the attitude of students

As easy as it might be to add movement to lessons within the everyday curriculum, the issue teachers struggle with is the lack of space. Movements do not always need to take up a large amount of space. However, for certain lessons/activities, a large amount of room is necessary and beneficial. Within the article, *Preschool Movement in Education in Turkey: Perceptions of Preschool Administrators and Parents* (2011), administrators and parents were interviewed to test their knowledge about movement education. Many were not familiar with it but wanted to learn. In order for them to learn about and support movement education, there needed to be adequate space for the movement education to take place. "The preschool years support young children development in cognitive, social-emotional, and physical domains. According to

## Benefits of Movement

Gabbard, (2000), these early years have been recognized as the critical time in which building blocks for which all future development are shaped. Thus it is necessary to support children's development in all domains.” (Celik, Kirazci, & Ince, 2011,p. 323).

### **Yoga in the Classroom.**

One way teachers have found to include movement in the classroom is through yoga. It is a simple way for students to take a break from their lessons and relax their brains while stretching their bodies. Yoga strongly benefits students who struggle from ADHD. Yoga lessens attention problems in the classroom, but also helps students who might have social, emotional, behavioral or academic needs. In a study using Yoga in a classroom, researchers (Brosnan, 1982; Laivani. 1999), found that children who participated in yoga had improved peer relationships and healthier sleep patterns, along with longer periods of concentration on lessons. The article, *Yoga for Kids*, discusses simple benefits of yoga. When babies are born, yoga is already embedded in them. For example, they have perfect abdominal breathing and are flexible and able to practice various stretching exercises. Once they grow up, students have a harder time with breathing, stretches and daily exercises because of all the extra-curricular activities imposed on them. By age four, children are ready to begin yoga. Their bodies are then ready for stretching and their minds have developed enough to follow directions for the various yoga moves. Studies also show that children, who practice yoga, are found to be calmer, more energetic and better equipped to deal with everyday stress and negative emotions. “The coordination of body movements and stretching in combination with deep breathing improves the body's overall circulation. This results in a release of tension as well as increasing levels of blood and oxygen throughout the entire body that in turn affect the central and autonomic nervous systems.” (Peck, 2005, 416).

## Benefits of Movement

### **Brain Gym.**

Brain Gym is yet another great resource to get students moving in the classroom. Brain Gym is a program involving a sequence of activities that are believed to improve academic performance. Activities aid in eye teaming, spatial and listening skills, hand-eye coordination, and whole-body flexibility. Brain Gym is believed to be effective because it stimulates the brain to work on both sides and gets the *whole* brain ready for learning. Brain Gym is also known as a form of educational kinesiology. It provides an opportunity for the body to move, while encouraging learning at the same time. These particular movements activate the brain, promote neurological re-patterning, and facilitate whole brain learning. When a child is having a difficult time, it means a part of his/her brain is not working correctly. Brain Gym helps both hemispheres of a child's brain function appropriately. (Hyatt, 2007, p. 118).

### **Music and Movement.**

There are numerous ways to get children moving but music is a way to make the movements more engaging. In the article, *Use Music in the Classroom*, by Marlyn Rothman Press (2006), the author discusses the ways music can be incorporated into the classroom and movement.

Whenever teaching students a new song, Lock suggests teaching actions or movements to go with the song, similar to finger plays. This helps the children remember the song lyrics better as well as making it more engaging for the child. Music can be incorporated into movement using walking the line activities. Songs can be sung while walking a line or while ringing a bell. Music and movement can easily be intertwined and work well together.

## Benefits of Movement

Overall, movement is a successful tool used to help students become more engaged in their work and lessons during their school days. Three ways that students can move are through yoga, brain gym and adding movement to music. Several article studies have shown that having movement in a classroom can have a positive impact on students' behavior. It enables them to stay more focused and engaged, contributes to lessening negative behaviors and promotes a sense of calmness over the entire classroom. Giving students the option to move, will give both the student and teacher a more successful learning experience. Very little research was found which examines the impact of movement on the students' abilities to focus, but I would like to conduct experiments that address whether movement enhances focus in my own classroom.

### **Research Questions**

- 1) Does yoga in the classroom produce a calm and peaceful learning environment?
- 2) Does a child benefit from movement throughout lessons or does it distract them?
- 3) How much movement is appropriate in the classroom so it is not too distracting?
- 4) How can movement be incorporated into every lesson?
- 5) How do different movement activities and songs affect the way a child concentrates and learns?
- 6) How can we promote children to start using more movement activities on their own?
- 7) Do students seem more normalized by integrating movement into the classroom?
- 8) Do children with certain learning styles, such as the visual, kinesthetic, and tactile learners, benefit more from having movement in the classroom?

## **Research Design and Methodology**

The purpose of my Action Research topic was to see if students would become normalized by adding more movement into my classroom. My hope was that the amount of self-discipline and the period of time students were focused and concentrating on a lesson would increase. For my intervention, I first implemented a movement shelf in my classroom where students could take lessons off the shelf at any time during the normal work period. Each week during the study, a new lesson was added, changed, or removed from the movement shelf.

### **Participants and Setting**

The participants in this study included nineteen (19) students varying in ages from four to six years old. Eighteen (18) of my participants were Caucasian and one was Asian. The setting was a Children's House classroom in a Montessori public school located in a small Midwestern town. During the 2013-2014 school year, data was collected between the months of October and February although the program continued for the entire year. The school has a population of approximately 150 students in 4K/5K or Children's House, Lower Elementary (1<sup>st</sup>-3<sup>rd</sup> grade) and Upper Elementary (4<sup>th</sup>-6<sup>th</sup> grade). The students in this Children's House all participated by choosing movement lessons from the movement shelf when they felt they needed it during the work period. I also chose three different students with three different learning styles whom I used as case studies to see how the movement shelf affected them. I carefully selected the three students I wanted to use for my case study. I wanted to use three students who had different learning styles and work ethics in the classroom. The first student I chose to use as a case study was one who was already normalized in the classroom. The second student was one who wandered often and had a hard time choosing a lesson to do. The third student is the child whom

## Benefits of Movement

I hoped would benefit most by the using the movement shelf because he has a very short attention span and goes from lesson to lesson rather quickly. I was inspired to implement and research a movement shelf because of the varied needs in the classroom. I believe students need to have the freedom and the ability to move whenever they need.

## Materials



Above is a picture of my movement shelf and the different lessons included. The middle shelf is where I began providing movement activities. The top shelf included a few silence activities and the bottom shelf included some music options. Eventually, my movement lessons took over and filled all three shelves. On the top shelf remains one silence activity, and three movement activities. The first movement activity is a jar filled with cards that have sight words and various commands telling the child what movement to do. For example, "Take a walk around the classroom." *Take* is the sight word, followed by the command. Next to the jar is a book filled with various yoga poses the children can practice and read about. The last movement activity on

## Benefits of Movement

the top shelf is a basket filled with socks and movement cards. Two mats are placed on the floor with space between them. One sock from each pair is placed on each rug, and the child needs to perform the specific movement from the movement card while he or she goes to the other mat to find the matching sock.

On the second shelf are primarily walking the line activities. Children have the option of choosing to carry a spoonful of objects, a bell, or a pitcher of water. The child's goal is not to drop the objects, ring the bell, or spill the water. Last on this shelf, is a tray with more movement cards (which were donated by a student). These cards include a picture and an action showing the student what to do. The cards include clapping, spinning in a circle and hopping in place.

The bottom shelf includes objects for making music, which we use for various movement activities such as walking the line (the class favorite), movement dice, and kid's yoga cards.

With the movement dice, each number has a special code on a piece of paper. The child has to observe the number on the piece of paper and do the action or movement shown. (Appendix C shows an example of the movement dice directions). A picture is also shown below.



## Benefits of Movement

Other lessons that were a part of my movement research, but were not able to be on the shelves, include two floor squares to hop to and from and walking the numbers around my classroom. I started out using numbers one through ten, and then changed to counting by tens from ten through one hundred.

## Procedure

Each week during my study, a new movement lesson was added or changed in some way. Below

Week 1	Walking the line while balancing a spoonful of varied objects or while holding a bell
Week 2	Add a pitcher of water to movement shelf for walking the line
Week 3	Numbers made out of tape on the floor for students to walk on
Week 4	Basket with two circles and a string to jump over
Week 5	Yoga cards on shelf Removed basket with two circles to jump over
Week 6	Hopping squares made of tape on floor Removed numbers made of tape on floor
Week 7	Movement dice with variety of movements Started using numbers on the dice, then add sight words to each number to make it more challenging
Week 8	Brain gym activity cards on popsicle sticks Group Yoga added before work period
Week 9	Sight word movement command cards
Week 10	Movement commands matching sock activity

is an overview of the different movement lessons I added each week. The overview also includes lessons I removed due to lack of interest in the materials.

## Benefits of Movement

My primary goal for implementing my movement shelf into my Montessori classroom was for children to become normalized and gain an increased ability to focus on a lesson for longer periods of time. In order to collect data and see results, I had to come up with an efficient way to keep track of how many times students were choosing the movement lessons and how often disruptive behavior was occurring during work period. With my main goal being normalization in the classroom, I hoped to see a decrease in the amount of disruptive behavior I observed each week, and an increase in the choice of movement lessons. Before the process began, I sent home permission letters to the students' parents to get the approval for the child to take part in my Action Research Study. (See Appendix A.) Once all permission letters were signed and returned, I began observing and collecting the necessary data needed to create a profile of classroom behavior and movement choice for a ten week period.

My paraprofessional and I started with a system (System A) that included a chart with specific disruptive behaviors listed on it. We did not record our observations each day, but took a weekly average instead. Whenever we observed disruptive behaviors, we would simply mark a tally. At the same time, we tried a system in which we would mark on a separate chart how often students were going to the movement shelf and what specific lessons they would choose. However, due to daily teacher commitments, this plan proved to be too challenging to track the data. The second system we tried, (System B) included the same chart for my paraprofessional and me to record specific types of disruptive behavior. However, instead of keeping track of how often students went to the movement shelf and what lessons they chose, I made the data collecting part the students' responsibility. Whenever they completed a lesson from the movement shelf, their task was to write their names on a piece of paper and place the names into a cup behind the prepared movement lesson spot or tray. At the end of each week, I would collect all the students' names

## Benefits of Movement

and tally how many were in each jar. Not only did this help me accurately keep track of how often students were choosing movement lessons, but it also gave the students extra practice writing their names.

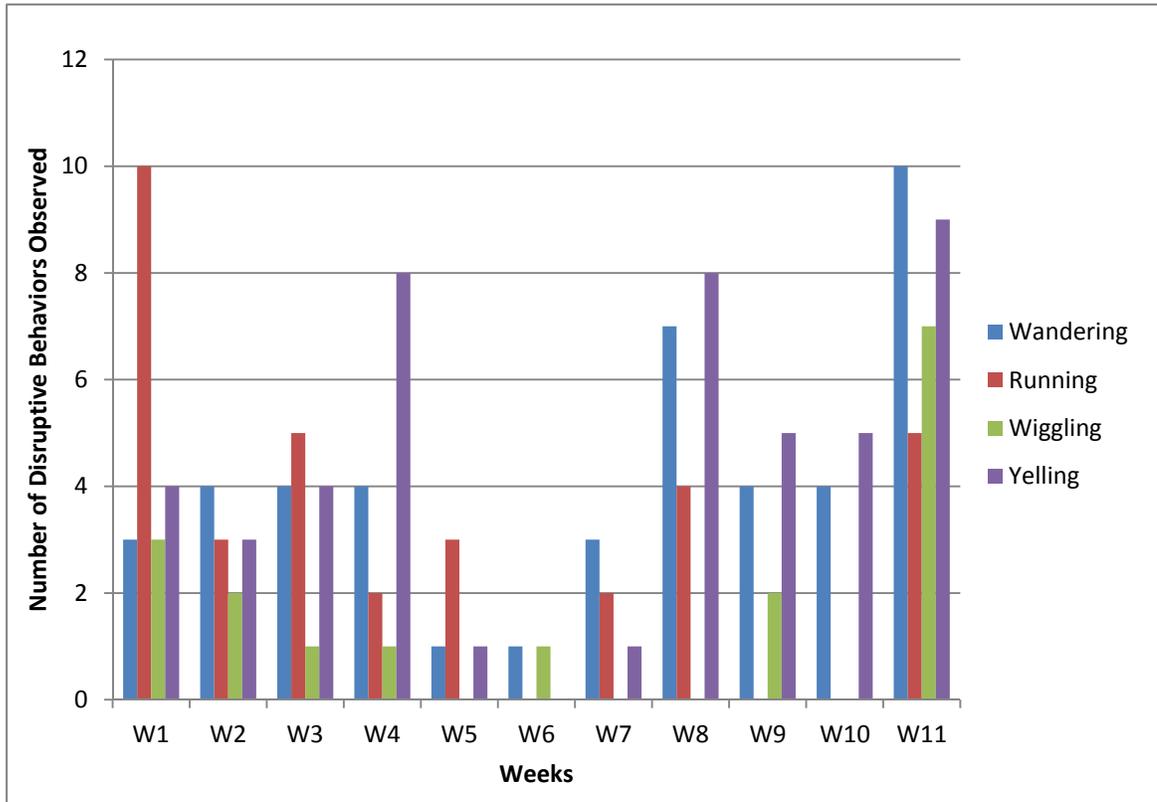
Besides collecting data to find out how often the movement shelf was being utilized and the amount of existing disruptive behavior, I also conducted a case study using three different participants. Each participant had a different learning style: one was very calm; one was calm but also tended to wander a lot; and the third had a hard time focusing and was barely able to make it through a complete lesson. I collected data on how many times each of these three students went to the movement shelf by counting their names in each of the movement cups.

The last part of my procedure included interviews with my nineteen students. I asked them what their favorite movement lesson was and why they liked it. Their responses were video recorded. As a wrap up of my movement study, I had the students write down their responses, which included a drawing a picture of their favorite movement lesson and writing the name and the reason why it was their favorite. The students' work was bound to make a class movement book for students to look at.

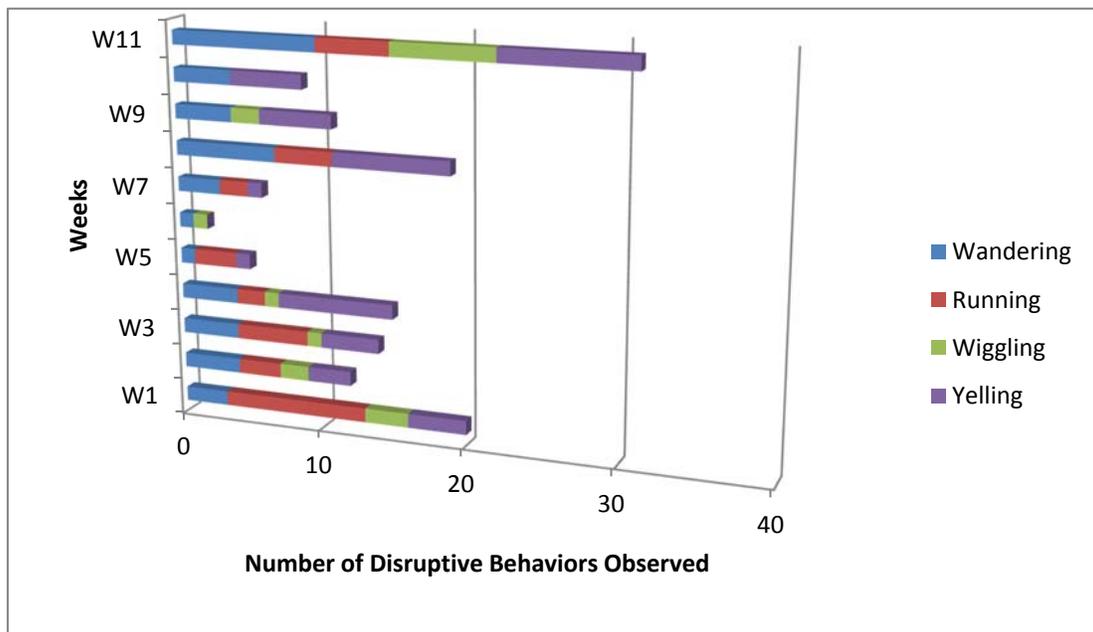
## **Data Analysis/Results**

My overall goal for implementing my movement shelf was that students would become more normalized in the classroom. After collecting and analyzing my data, I found that students rarely would go a day without choosing a lesson off the movement shelf. They used it as a brain break when they were not sure of a lesson to do. With the data I collected, my hope was that the disruptive behavior would decrease as more movement lessons were chosen.

# Benefits of Movement



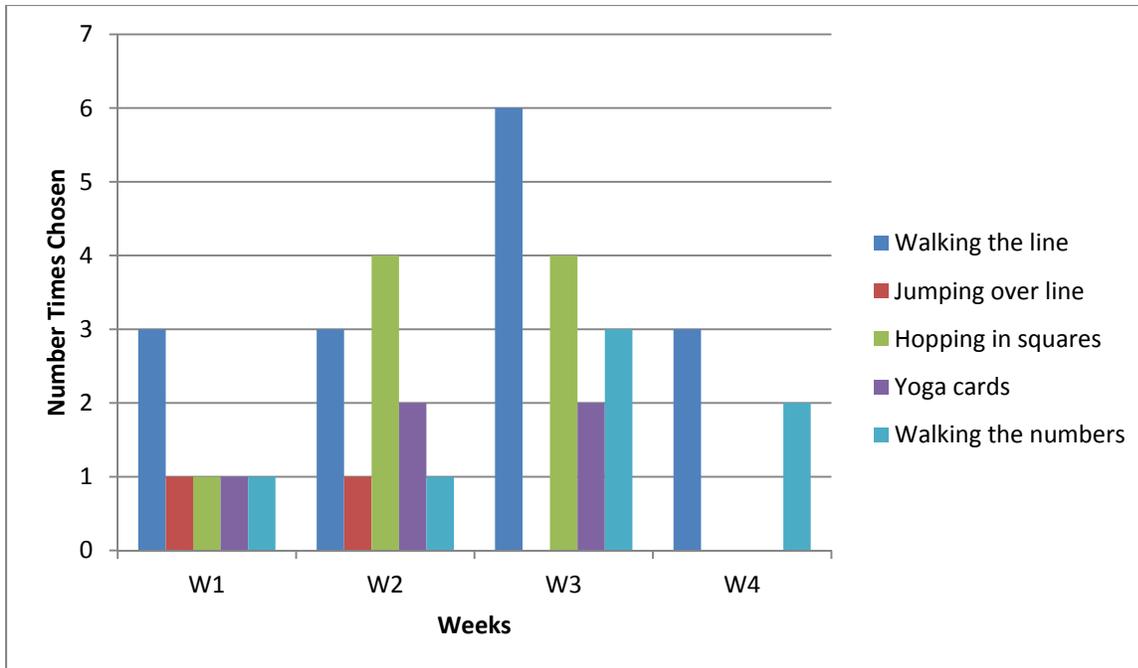
**Figure 1: Disruptive Behaviors Observed**



**Figure 2: Disruptive Behaviors Observed**

The graphs above show the amount of times my paraprofessional or I observed students either wandering around the classroom, running throughout the classroom, wiggling in place, or yelling across the classroom each week. Our goal over time was to see disruptive behaviors decrease as more movement lessons were introduced. Numbers generally varied from week to week, depending on the extra things that were happening, such as snow days, fire drills, additional adults in the classroom, etc. As you can see looking at Figure 1, students wandering and yelling increased immensely during weeks 8 and 11. During both of these weeks, there were snow days that occurred, which affected the students and seemingly caused them to be more active when they returned to school. The graph makes it clear that aside from this anomaly, inappropriate behaviors were greatly reduced with the addition of movement choice activities.

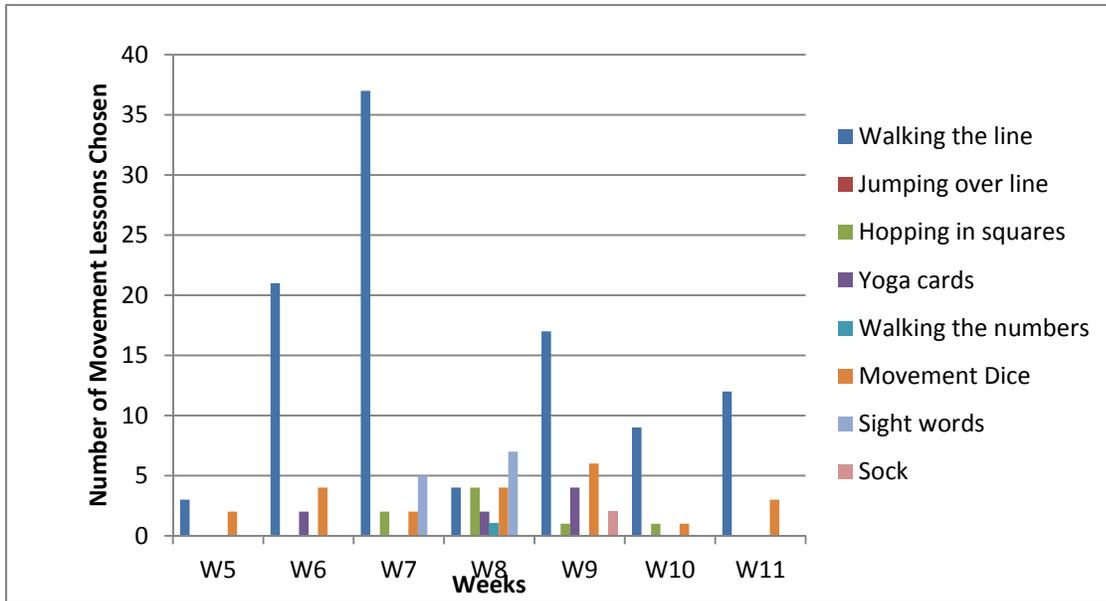
## Benefits of Movement



**Figure 3: Movement Lessons Chosen (System A)**

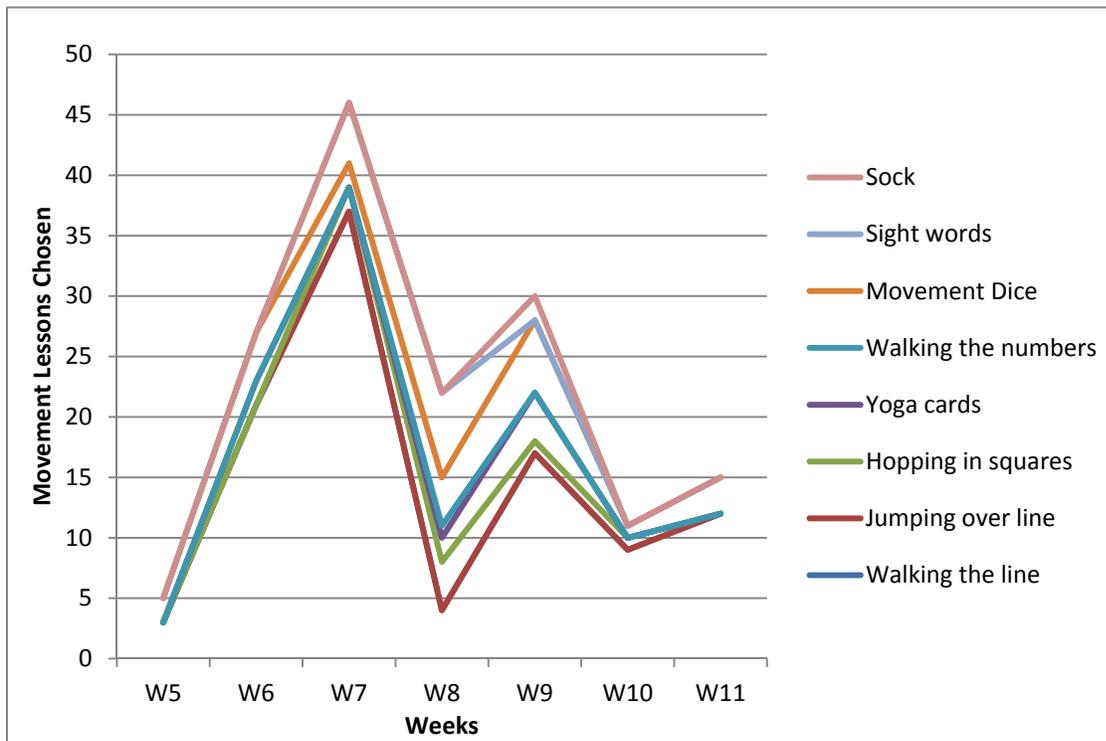
The graph above displays how often movement lessons were chosen each week, with data collected using the original system, (system A) teacher observation. This method was a challenge due to regular daily tasks of a teacher, i.e., it was difficult to ensure I observed every time a student chose a lesson off the movement shelf. Therefore, a new system, that made students accountable, was developed and is shown below. The data collected with system A, shows the most common movement lesson chosen was walking the line.

Benefits of Movement



**Figure 4:**

**Movement Lessons Chosen (System B)**

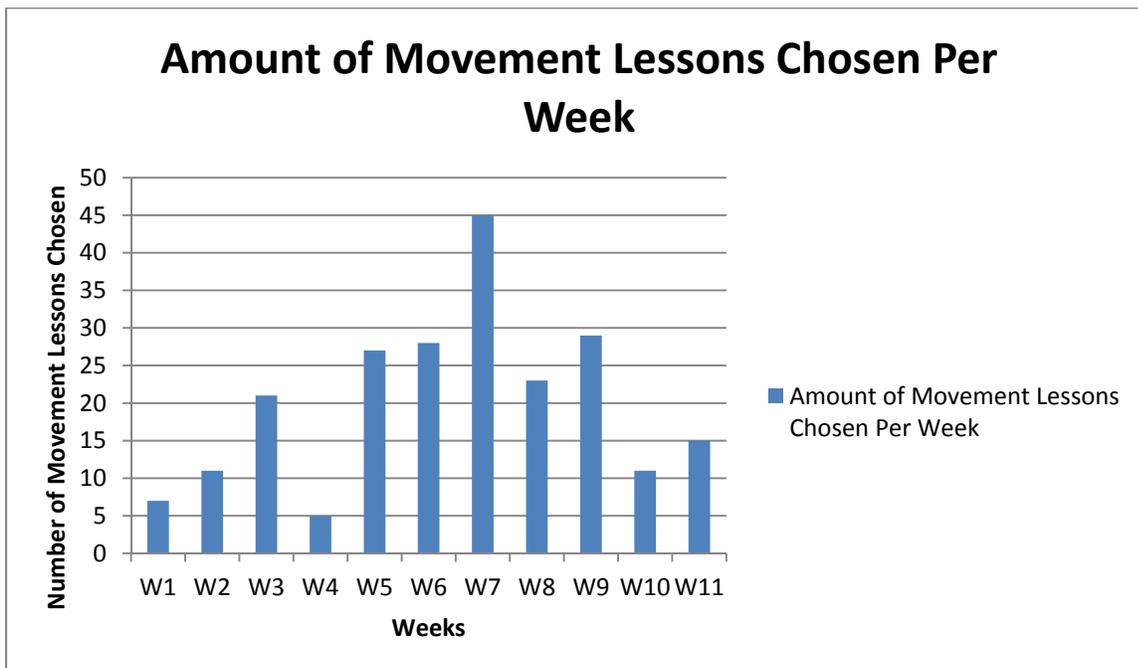


**Figure 5: Movement Lessons Chosen (System B)**

Both Figures 4 and 5 display how often each individual movement lesson was chosen using system B each week. During this data collection, students were held accountable to keep track of

## Benefits of Movement

when they proceeded to the movement shelf and what lesson they did. The most popular remains the same as when system A was used, which was walking the line using various objects such as a pitcher of water, a spoonful of objects and a bell that was not to ring. The movement dice lesson was also chosen frequently.

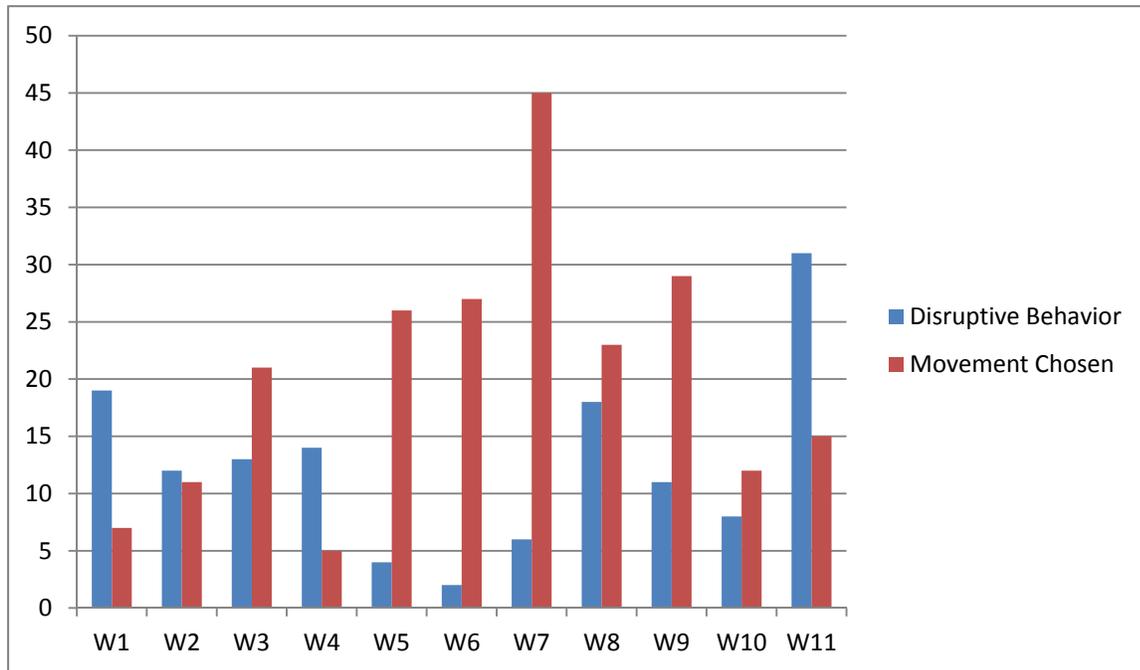


**Figure 6: Amount of Movement Lessons Chosen Per Week**

The graph shown above is an overview of how often a movement lesson was chosen each week. Week 7 reveals the most movement taking place. During the first few weeks, students were still getting to know the lessons on the movement shelf and were not quite comfortable with using them. The amount of movement lessons chosen increases from week 1 to week 3, decreases week 4, and stays fairly consistent throughout the remaining weeks. During week 4, I added a new movement lesson that consisted of a string with a circle on either side of it for students to

## Benefits of Movement

jump from, over the line. I did not observe many students choosing this lesson, which therefore reduced the number of times a movement lesson was chosen. .

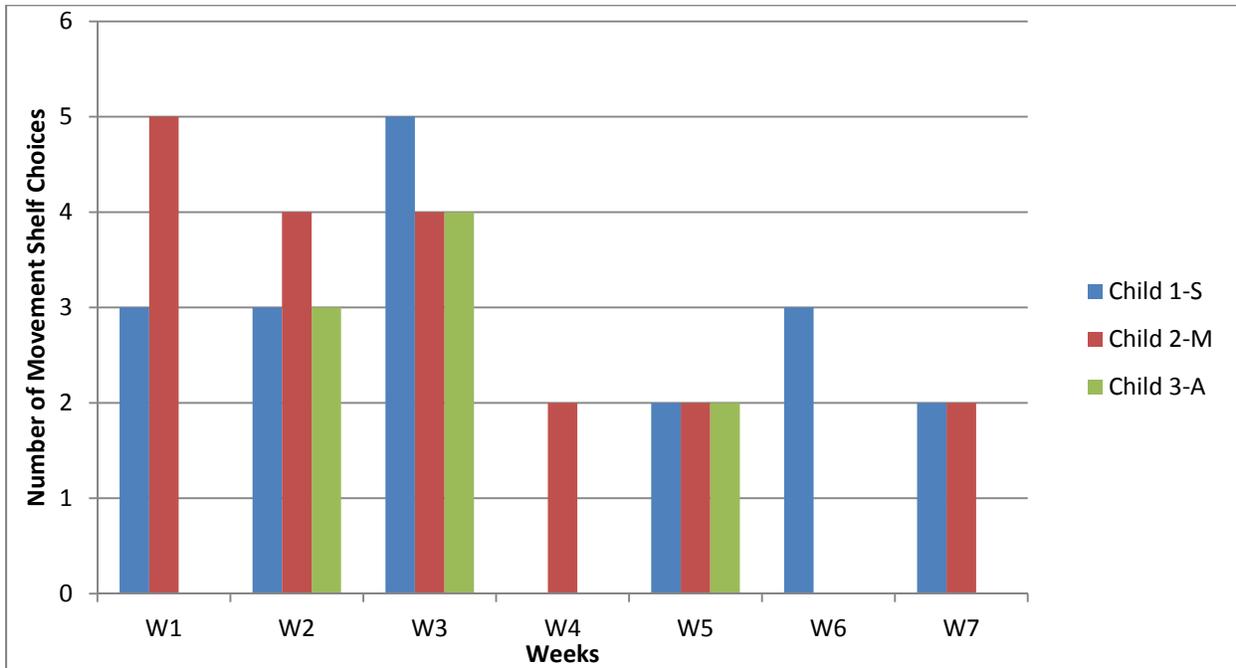


**Figure 7: Movement Lessons Chosen vs. Disruptive Behavior**

When viewing this graph, one can notice how the blue represents the number of times a disruptive behavior was observed. The red represents the number of times a movement lesson was chosen. Each week, the two colors show that when the disruptive behavior was higher, there were not as many movement lessons chosen, and when the disruptive behaviors were lower, the movement lessons chosen increased. When looking at Week 7, you can see that the disruptive behavior was at a six and the movement lessons chosen was at 45, which leads to the conclusion that there were many fewer disruptive behaviors that occurred in the classroom that week which correlated with the number of movement lessons chosen. When looking at Week 11, one can see that the disruptive behaviors that occurred was at 32 and the movement lessons chosen was only

## Benefits of Movement

at 15, which indicates that there were more disruptive behaviors that occurred when fewer movement lessons were chosen that week.



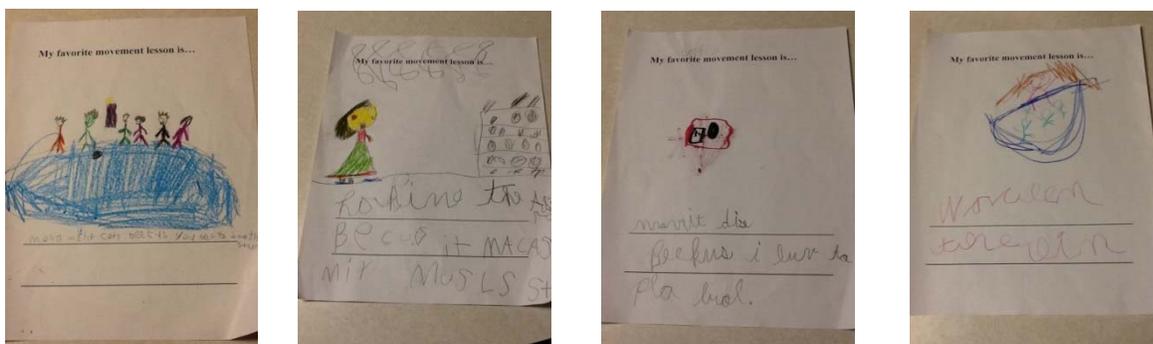
**Figure 8: Case Study Students Behavior and Movement Choices**

During the study of my movement shelf, I decided to do a mini case study utilizing three individual children. I chose the children based on their personalities and how they behaved in the classroom. From the data that I collected, I was a bit surprised in the results. I was hoping that the child who has a harder time finding lessons and staying on task would have chosen the most movement lessons, but instead I found that he chose movement lessons the least out of my three case studies. I was happy to see that my wanderer, child 2, chose the movement lessons quite frequently. When looking at child 1, my normalized child, she chose movement lessons almost

## Benefits of Movement

daily, except for weeks 4, 5 and 7. Sometimes, she would be too busy with finding other lessons within the different areas of the classroom, that she would not choose any from the movement shelf. When she did, it seemed as if it was a break from all of the other lessons she had been doing. When looking at data from child 2, he started off choosing lessons daily, and then seemed to have stopped as he received more and more lessons from other areas of the classroom. Finally, when looking at data collected from child 3, he did not use the movement shelf as much as I would have liked him to. He chose lessons fairly quickly, and completed them quickly as well. He liked to rush through his work to get on to the next, so when he would choose a movement lesson, it would be done fast and then he would select another. However, after he chose a lesson from the movement shelf, I did observe him being more focused on his next lesson and able to do it for longer periods of time.

The figure below shows examples of students' work that was incorporated into our class movement book. These work samples were a part of the interview I conducted with students, asking them what their favorite movement lessons were.



**Figure 9: Student Work Examples**

Picture 1: "My favorite movement lesson is movement cards because you get to do the stuff."

## Benefits of Movement

Picture 2: “My favorite movement lesson is hopping the squares because it makes my muscles strong.”

Picture 3: “My favorite movement lesson is movement dice because I love to play ball.”

Picture 4: “My favorite movement lesson is walking the line.”

When conducting the interviews with my students, each appeared to have already chosen a favorite movement lesson because they hardly had to think about which movement lessons were their favorites. I was able to incorporate some of their interests and did my best to meet the needs of each individual student. Along with asking them what their favorite movement lessons were, I asked them why they thought movement was important. Some of their responses included, *“movement is important because it makes you sweat,” “movement is important because it teaches you to learn,” “movement is important because it helps us stay peaceful and quiet.”* Overall, through the answers I gathered from my students after interviewing them about the movement shelf, they truly seem to enjoy it and are learning various things from it.

## Limitations

One of the limitations was the difficulty in determining ‘focus’. For this study, the measure of focus and normalization was the lack of disruptive behaviors. However, it would be helpful if it was possible to record students work choices and time spent on choices as well. The one method I did try for measuring focus was observing the students involved with my case studies. In the beginning of the study, I would try to note each time one of my case studies selected a lesson from any area of the classroom other than the movement shelf. Then, I would try to document how long they were doing the lesson. Once they were done, I would observe if and when they would go to the movement shelf, how long they would engage in a movement lesson, and finally

## Benefits of Movement

I would observe to see what lesson they chose after the movement shelf and how long they stayed there. My hope was that after students completed a lesson on the movement shelf, they would be more focused on their next lesson than on the one they did previous to the movement shelf lesson. Unfortunately, it was not possible to gather this data for this study. Another limitation was difficulty of noting all the choices, although half way through the study I implemented System B, which seemed to be more effective.

## **Future Action Plan**

I observed many benefits and positive changes in my students and in our classroom environment by implementing a movement shelf and, therefore, I am going to continue incorporating a movement shelf into my classroom. My 5-year-old kindergarten students all create work plans at the end the year to get them ready for first grade next year. As part of their work plans, they will have to choose a movement lesson each day. Along with continuing my movement shelf, I will conduct a learning styles inventory to see exactly what learning styles choose the movement lessons most often. I am also interested in investigating the role of music in conjunction with movement activities.

Throughout the months that I had my movement shelf, I would often get questions from coworkers, wondering about what movement lessons might help in their classroom with their students. One goal I have for next year is to form a movement committee within the school district with teachers from other schools as part of this committee. The committee will be a team that will brainstorm ways to help add more movement within the classroom and then present those ideas at various meetings including early release days, and various teacher in-service days.

## Benefits of Movement

I am excited to share all of the benefits I have found by adding a movement shelf as part of my classroom curriculum

### **Discussion/Conclusion**

Research has shown that when adding movement to a classroom, students are impacted in a positive way. Movement in the classroom helps students have the ability to focus for longer periods of time, have fewer behavior problems and improve physically, socially and cognitively. Implementing the movement shelf in my classroom made a huge difference on my overall classroom environment.

Prior to adding my movement shelf, I often noticed students wandering around the room seemingly unsure of what lessons to do. When I added my movement shelf, it acted as a brain break in the sense that when students did not know which lesson to do, they had the choice of going to the movement shelf and selecting a movement lesson to help them think of what lesson they wanted to do next. Once their movement lesson was completed, it was almost as if a light bulb went off and they thought of another lesson to do from another area of the classroom.

Students generally seemed calmer after the movement shelf was added. The disruptive behaviors would decrease for a while, and then begin becoming more noticeable after students were getting tired of the same movement lessons, which helped me, know when to change, add or take out a movement lesson.

From looking at the graphs with the data I collected over three months, I was able to compare how often a movement lesson was chosen to the frequency of disruptive behaviors occurring. I observed that the disruptive behaviors would decrease when there were more movement lessons

## Benefits of Movement

involved, which was my ultimate goal of this action research. The data I collected showed me that after incorporating the movement shelf into my classroom, students chose it often during work period. The movement shelf continues to be a choice of work offered in my classroom.

## References:

Fuchs, A. Melani; Craft, H. Diane (2012). *Movement Matters-A Movement Album for Montessori Early Childhood Programs*

Brosnan, B. (1982) *Yoga for Handicapped People*: London Souvenir Press

Castelli, Darla M., Hillman, Charles H., Hirsch, Jennifer, Hirsch, Alayna, Drollette, Eric. (2011). Fit Kids: Time in Target Heart Zone and Cognitive Performance. *Preventive Medicine* Vol. 52, Supplement, 1 June 2011, Pages S55–S59

Dahlmeier, Crystal. (October 10<sup>th</sup>, 2013) From Sensation to Abstraction: “The Role of the Sensorial Materials in the EC Elementary Classrooms.” *Montessori Professional Development Workshop, River Falls, WI.*

Helgeson, John (2011). 4 Simple Ways to Add Movement in Daily Lessons Delta Phil Record, winter.

Hyatt, Keith, J. (2007). Brain Gym; Building Stronger Brains or Wishful Thinking? Research in Developmental Disabilities: The relationship between gross motor skills and academic achievement in children with learning disabilities. *Remedial and Special Education*, Vol. 28 (2), March/April.

Lalvani, V. (1999) *Classic Yoga for Stress Relief*. New York: Sterling Publishing Company Inc.

Lubans, David R., Philip, Morgan J., Cliff, Dylan P., Lisa, Barnett M., & Okely, Anthony D. (2010). Fundamental Movement Skills in Children and Adolescents: Review of Associated Health Benefits. *Sports Med.* 2010 40 (12) 1019-1035

Marzano, R. J. (2012) Art & Science of Teaching, A Moving Proposal. *Educational Leadership*, April.

## Benefits of Movement

- Peck, Heather L. (2005). *Yoga as an Intervention for Children with Attention Problems*. *School Psychology Review*, 2005, Volume 34, No. 3, pp. 41 5-424
- Press, Marlyn R (2006). 20 Ways to Use Music in the Classroom. *Intervention in School and Clinic* Vol.. 41, NO. 5, MAY 2006 (PP. 307–309)
- Reilly, Erin; Buskist, Connie. (2012). Movement in the Classroom: Boosting Brain Power, Fighting Obesity. *Kappa Delta Pi Record*, 48: 62-66, 2012
- Sevimili-Celik, Serap, Kirazci, Sadettin & Mustafa Levent Ince. (2011). Preschool Movement Education in Turkey: Perceptions of Preschool Administrators and Parents. *Early Childhood Educ Journal* , Vol. 39:323–333.
- Wells, L. Stefanie.(n.d.) *Moving Through the Curriculum: The Effect of Movement on Student Learning, Behavior, and Attitude*, St. Mary's College of Maryland
- Westendorp, Marieke, Hartman, Esther, Houwen, Suzanne, Smith, Joanne & Visscher, Chris. (2011). The Relationship Between Gross Motor Skills and Academic Achievement in Children with Learning Disabilities. *Research in Developmental Disabilities*. Volume 32, Issue 6, November–December Pages 2773–2779
- Yoga for Kids*. (n.d.) Syndications Today (Division of Living Media India Ltd.)

**Appendix A- Permission Letter**

Permission Letter Example

**River Falls Public Montessori**

**211 N. Fremont St.**

**River Falls, WI 54022**

**Dear Families,**

As part of my professional growth in getting my Master's in Education, I am doing action research in my classroom. The Action Research that I chose to incorporate into my classroom is adding more movement to my classroom and seeing the results. In every content area, I will add some type of movement, along with a specific movement shelf with movement activities that children can get out during our work periods. My overall goal is that by adding various movement activities to student's work, children will be able to focus for longer periods of time, and be more calm in their work because movement is involved throughout their day.

In order for this to happen, I need your permission to allow me to use your child's results from adding movement to their work. I will use a pseudonym and not your child's real name for my research. Please sign your name, and have your child sign their name, giving me permission by October 18<sup>th</sup>.

**Parent signature**\_\_\_\_\_

**Child signature**\_\_\_\_\_

If you have any questions or concerns, please feel free to call or e-mail me.

[Abby.flynn@rfsd.k12.wi.us](mailto:Abby.flynn@rfsd.k12.wi.us)

715-425-2230

Benefits of Movement

Thank you!

Sincerely,

<b>Whole Class Weekly Tally Chart (Average)</b>	<b>Yelling</b>	<b>Running</b>	<b>Wiggling in place</b>	<b>Wandering</b>
<b>Monday</b>				
<b>Tuesday</b>				
<b>Wednesday</b>				
<b>Thursday</b>				
<b>Friday</b>				

Abby Flynn Akkerman - Children's House Montessori Teacher

**Appendix B- Disruptive Behavior Chart Data Collection**

**Appendix C- Case Studies Data Collection**

<b>Child</b>	<b>How many times they go to the movement shelf a week</b>
<b>Child 1</b>	
<b>Child 2</b>	
<b>Child 3</b>	

**Appendix D. Movement Dice Key**

## Benefits of Movement

### Movement Dice Key

1)



5)



2)



6)



3)



4)

