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## Perceptions of an Active Classroom: Exploration of Movement and Collaboration With Fourth Grade Students

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### Abstract

After teaching and substitute teaching in various classrooms, I was determined to have a classroom full of movement and energy. In order to create an active classroom, I implemented several strategies that would help students work together, have opportunities for transitions and movement, and provide a reduced-stress environment. In order to study the influence of activity in the classroom, I did an action research study. I collected data, observation notes, and journal entries from the students during classroom activities. These journal entries the students included surveys that were completed at the beginning and end of the study. Collecting articles from journals and books was also part of my study. After much data collection I began to organize my information into themes around patterns that became evident during my observations. The themes that were evident included: movement affected classroom management, students were eager to move, movement impacted learning, the physical location of seatwork affected learning, movement impacted alertness and attention, and movement impacted nerves and well-being of the students. This study found that exercise in the classroom helped students to reach their potential. It also reduced stress for the students. Exercise has a valuable place in the classroom.

I taught four years in an elementary classroom and then stayed home to raise my children. In order to stay involved in education, I became a substitute teacher. As I moved from classroom to classroom each day, I noticed many inactive children. In these classrooms, the students were all sitting neatly in their desks and there was no talking. Each child worked on a worksheet or completing an assignment from their textbook. The students looked as if they had been sitting all day and had continued to work on one assignment after another silently, with no movement other than their wrists holding their pencils. The minute I walked in, these classrooms made me bored and tired. There didn't seem to be any enthusiasm. These classrooms had no personality and the students reminded me of zombies. What kind of learning could possibly occur in these classrooms? This

study focused on my journey to incorporate movement and collaboration to improve classroom climate as well as students' attitudes and learning.

In 2009, I returned to the classroom as a fourth grade teacher and knew I needed ensure my students were active. The classroom I envisioned would feature students working on projects in small groups stationed around the room. Children would participate in their own education. This active classroom would be a classroom where physical exercise was important. According to Jenkins, Mulrine, and Prater (2008):

Sitting quietly in a chair and staying focused requires effort for all students. Conventional wisdom tells us that students need breaks from learning and can focus better when provided breaks throughout the day. Incorporating movement into the classroom life can be

accomplished by creating a classroom environment that encourages beneficial movement throughout the school day, during subject transition times and content lessons, as well as structured movement games for recess and gym. (p. 18)

Students are not actively involved when there is no movement in classrooms and teachers constantly lecture. Brooks and Brooks (1999) note that:

When a teacher arranges classroom dynamics so that she is the sole determiner of what is 'right' in the classroom, most students learn to conform to expectations without critique, to refrain from questioning teacher directives, to seek permission for judgmental and evaluative feedback. The rest disengage. (p. 102)

This statement explains why movement in classrooms is essential.

There are several methods for creating active classrooms. Marzano (2001) suggests that in active classrooms children work together. When students are working in groups they model behavior exhibited by their current and previous teachers. "In general, then, organizing students in cooperative learning groups has a powerful effect on learning regardless of whether groups compete with one another" (Marzano, 2001, p. 87). When working in groups, students can use a think, pair, share technique. McKinney (2010) suggests that teachers give students a task, such as a question or a problem to solve and have them work individually on this task two to five minutes. Then they discuss their ideas for three to five minutes with a student sitting nearby. Finally, ask or choose student pairs to share their ideas with the class. This "think-pair-share" approach invites children to work together to solve challenging problems. According to Eric Jensen, "other learners can be the greatest asset in the learning environment" (1998, p. 33).

Another requirement for an active classroom is for children to transition across various activities during the school day. "A change in location is one of the easiest ways to get attention" (Jensen, 1998, p. 50). Changing location can benefit teachers as well as children. Jensen (1998) maintain that entering the classroom each day is a particularly significant transition:

You have little control on the outside environment, so be sure to establish a start of

class transition time for students. It allows them to shift gears from the possibly dangerous outside world (a bully in the hallway, fights on the way to school, threats on the way to class). The transition time might include something physical: stretching, dance, manipulative, a game, or a walk. It could be interpersonal, such as discussion with a small or large group or a neighbor. Transitions might include something more personal such as journal writing, reflection, or creative writing. (Jensen, 1998, pp. 59-60)

These frequent breaks can enhance learning. Jensen asks "What happens in schools where frequent breaks from seatwork are instituted? Not surprisingly, academic achievement increases" (2000, p. 66).

Children in active classrooms are also moving. There is much literature that supports the ideas that exercise is important. Children engaged in daily physical education show superior motor fitness, academic performance, and attitudes toward school when compared to their counterparts who do not participate in daily physical education. (Pollatschek & O'Hagen, 1989). There is research that indicates that implementing exercise activities throughout the day can help improve academic performance and reduce disruptive classroom and problem behaviors (Barkley, 2004; Majorek, Tuchelmann & Heusser, 2004; Jenkins, Mulrine, & Prater, 2008). Having the students sit all morning or afternoon is not helpful, and does not provide quality academic learning. "Sitting in chairs for more than brief ten-minute intervals reduces our awareness of physical and emotional sensations and increases fatigue" (Cranz, 1998, p. 69). These problems can reduce concentration and attention, and ultimately result in discipline problems (Jensen, 2000). There is evidence that providing students with ADHD with exercise may actually solve some classroom-related problems (Holtkamp et al., 2004).

Research supports the idea that exercise is important for girls as well as for boys. According to former Surgeon General Dr. Joycelyn Elders, "Girls who get involved in school sports are 92% less likely to use drugs; they are 80% less likely to have an unwanted pregnancy; and their high-school graduation rate is triple that of non-athletes. The importance of school sports is underscored when

you consider the fact that girls who do not participate by age ten have only a 10% chance of actively participating in a sport by age twenty-five” (Jensen, 2000, p. 68).

Stress in the classroom makes it difficult for students to grasp the concepts being taught. “Stress, threat, and induced learner helplessness must be removed from the environment to achieve maximum learning” (Jensen, 1998, p. 57). Research identified the effects of stress on the brain. While the mind works well under stress, it functions much better without stress. “Positive environments can actually produce physical changes in the developing brain” (Kotulak, 1996, p. 50). Creating an active classroom may help to reduce stress and increase learning. As Brooks and Brooks report, “Every day, millions of students enter school wanting to learn, hoping to be stimulated, engaged, and treated well, and hoping to find meaning in what they do” (1999 p. 120).

### **Procedures**

In order to create an active classroom, I implemented several strategies to support student collaboration, provide opportunities for movement, and allow adequate time for transitions. In order to implement movement and transitions into the classroom, we first had to establish several guidelines for behavior. I could not merely plunge students into an active classroom without addressing classroom management issues. As a class, we discussed the importance of respecting other students’ learning. The students and I also established guidelines for having water available to students. We came to the conclusion that filling water bottles could occur at the beginning of the day or at a scheduled restroom/drink break. As a class, we decided that it would not be fair to distract other students. There were many times throughout the day that there was noise in the classroom. The noise, however, had purpose and we came up with a system so that all students would know when the noise had become too loud. Using a code word or turning off one light became the signal that students needed to quiet their voices.

Students in my classroom were stationed around the room working on individual or group projects in areas across the curriculum. I offered my students opportunities to perform various activities in our

classroom. During reading projects, the students were guided by rubrics with specific guidelines. Each student had the opportunity to choose which set of guidelines he/she chose to follow. In some of these cases students were able to work with a partner; at other times they were encouraged to perform individually. These projects could be performed anywhere in the classroom or in the hallway outside our classroom.

In order to get my students active in the classroom I implemented several strategies that included physical movement including several energizers developed by East Carolina University College of Health and Human Performance (2006). These energizers involved simple activities that provided students with three to five minutes of exercise. They included thirty-second intervals of jumping, twisting, jogging, hopping, knee lifts, playing air guitar, and/or doing jumping jacks. The students were actively involved in these exercises and looked forward to doing them each day. Students were up out of their seats getting their hearts going. In the classroom I also used basic stretches throughout class time in order to increase the students’ blood and oxygen flow. I incorporated frequent drink and restroom breaks to allow for smooth transitions as well as breaks for the brain.

We began the year with one daily scheduled restroom and drink break. That was increased to three breaks during the school day. According to Jensen (2000), these transitional breaks increase academic achievement. I also used the energizers with the students to create smooth transitions between subjects.

I provided a stress-reduced environment by encouraging the students to perform deep-breathing exercises. The students sat at their seats and together we practiced taking several deep breaths. To eliminate and/or reduce stress during assignments, I encouraged the students to write at the top of their papers, “This is easy.” According to Swanson (2008), just writing this could reduce anxiety related to assignments and tests.

### **Methodology**

In order to study the impact of activity on the students, I conducted an action research study. Nineteen fourth grade students (eleven boys and

eight girls) participated in the study. The students ranged in age from nine to ten years old. Our school is located in a rural Midwestern community in eastern Nebraska. The students came from working and middle class homes in a rural community.

In order to collect data, I recorded observational notes during classroom activities. I also collected student journal entries. These journal entries included surveys that students completed at the beginning and end of the study. I began to organize my observational notes and the student journal entries according to patterns identified in data. I took advice from Falk and Blumenreich (2005):

Once you have finished collecting your data, you begin a different stage of data analysis—organizing your evidence into themes or categories that will help you make sense of it so that you will eventually come up with a set of findings. (p. 116)

In order to identify themes, I cut apart the data and organized it into piles based on similar themes present in the data. I did this three times. I then used a number system to organize the themes into categories. For each theme, I drew upon student journals and my classroom observations.

## Findings

After analyzing the data, six themes emerged. These themes revealed that movement affected classroom management, students were eager to move, movement impacted learning, the physical location of seatwork affected learning, movement impacted alertness and attention, and movement impacted student anxiety and wellbeing.

### **Movement      Affected      Classroom Management**

Student movement affected classroom management by helping students to remain attentive to instruction. By having students work at alternate locations – classroom, hallway, and locations they chose for themselves - the students were quieter and their attention was more focused. Two students noted in their journals that they believed that being able to move around the room helped them to work quietly. In my observational notes, I wrote “Sam, is able to focus when he reads his reading story and practices his multiplication facts under a desk rather

than at his seat.” Josh, who had been previously diagnosed with ADHD, performed much better after taking a two-minute exercise break. This student was often off-task and very disruptive; however, after an exercise break he was able to participate appropriately. However, my notes also indicate that Josh sometimes got so excited during exercise breaks that he would need to sit down, calm down, and then rejoin the group.

### **Students Were Eager to Move**

In my notes I also observed that Josh, finished his work incredibly quick. However, he was not producing quality work. Josh finished quickly because he was eager to move around the room to look at things or to talk TO other students. I also observed that many of the students asked to do the energizers I had introduced to them. They were excited to perform these simple movements. After performing an energizer with the students, I generally saw smiles and heard laughter. Comments included: “Did you see me do that?”, “Watch how high I can jump!”, and “Oh man, look at how fast his feet move!” You could hear the excitement in these statements. One of the students, who tended to be quiet and introverted, asked if the class could do some stretches because she felt that they really needed them! This was a notable act of responsibility for this nine-year-old.

### **Movement      Impacted      Students’ Perception of Learning**

When I observed the students at work and read through their journal entries, I noticed that I had written in my observational notes that Josh produced higher quality work when he was out of his seat and working at alternate locations. This quality work included a reading project that included putting on a puppet show with one of the other students. Other students stated that moving around the room was good for their brains and attributed higher grades to the changes in our classroom. Sara said, “Moving made my grades go higher.” Brad reported that he “knew” his grades had improved. I had not spoken with either Sara or Brad about their grade averages but they believed that their grades had improved due to the opportunity for movement in class. During a math lesson, peer helpers were established in locations around the room. Students who needed help were

able to move around the room to get assistance from their peers.

### **Some Students Did Not Work at Their Desks**

Based on student journal entries it appeared that group work was effective and had a positive impact on students. I noted that when allowed choices students became more actively engaged in learning. They read silently, discussed novels with their partners, and stayed on task. When the students were called back to their seats after completing an assigned reading, they generally answered comprehension questions correctly and completely. I observed some students out of their seats discussing projects with another students yet remaining focused and engaged. Other students were out of their seats planning skits or preparing scenery.

### **Movement Impacted Students' Attentiveness**

Movement also appeared to impact the students' alertness and attention. When Greg and Jeff were able to move and wiggle in their seats or fiddle with objects at their desks, they were better able to focus on the teacher. I observed that when these two boys were sitting unconventionally or tipping backwards in their chairs they appeared more focused. Sara and Stephen wrote in their journals that exercise helped them concentrate and kept their attention focused on their schoolwork.

There were a handful of students who may not have needed the active environment I provided. Ann, one of those students, was a very bright, self-confident child. She was always eager to get started on her assignments and did not have trouble engaging in activities. Although students like Ann didn't need the movement to improve attentiveness, their engaged attitudes and smiles provided evidence that they enjoyed being in an active classroom.

### **Movement Affected Students' Anxiety**

Movement also appeared to impact the student anxiety and general wellbeing. I often used energizers when the students appeared nervous or exhibited glazed-over expressions. Sara reported in her journal "exercise keeps me from worrying."

Jim noted, "I don't feel tired after doing an energizer."

## **Conclusions**

As a substitute teacher, I knew that I did not want a sedentary classroom. My goal was to provide my students with opportunities to move around the classroom. I believe that exercise and physical movement in the classroom helped my students to focus. Both Cranz (1998) and Jensen (2000) documented how sitting for long periods of time affected students' focus and concentration. While, I also realize that not every student needs the same thing (Williams, 2008), opportunities for movement are helpful to many student and enjoyable for others. Based on the work of Jenkins, Mulrine, and Prater (2008), Pollatschek and O'Hagen (1989), and my own research, I will continue to incorporate movement in order to get the most from my students. As Jensen (2000) stressed, exercise can help students to better access their brains to improve their learning.

I believe that exercise and physical movement in the classroom helped my students perform with less stress. Drawing on the work of Swanson (2008), I will continue to provide my students with frequent breaks and frequent opportunities to drink water. Exercise, group work and movement can help many students. When working with partners throughout the room, many students feel more at ease and are less hindered by stress (Marzano et.al., 2001).

Active classrooms are effective. Teachers wary of trying movement should be brave. With good classroom management strategies in place, active classrooms are possible. As I move forward, I know that I will need to continue to encourage students to act appropriately and follow the rules we have established. When a student gets off task and displays inappropriate behavior during an activity it is important to stop, correct the behavior, and have them sit quietly while the rest of the class continues the activity.

## **Limitations**

There were several limitations to this study. I found that four months of research was not enough time to gather all the data that is needed. Collecting data over a longer period of time would have enriched the study both in the amount of data collected, but also in types of data collected. For example I might

have been able to collect seasonal data or followed specific children longer. A second limitation was being both the researcher and teacher. Performing both roles is very difficult because teaching an active classroom rarely allows time to document classroom happenings. I may have missed data merely because I was engaged with students. The third limitation was that the research itself was done with only one class of students. Each class of students has different needs for activity and movement. For example, some groups of students may have needed more activity and some less. In addition, larger classes may make it more difficult to implement active strategies.

Although this account of my classroom may be helpful to others, teachers must make active classrooms their own (Williams, 2008). Different kids need different strategies - as do different teachers. This study shows how movement, collaboration, and transition strategies can help children. However, further classroom studies need to be done to confirm and extend these conclusions. While there are clinical studies on brain based strategies and movement (Jensen, 2000), it is important that studies are completed in real classrooms. Teachers' voices and the challenges they encounter will be important contributions to further research.

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