Movement and physical activity is an inherent and important aspect within the design of the Montessori Method. "One of the greatest mistakes of our day is to think of movement by itself, as something apart from the higher functions... Mental development must be connected with movement and be dependent on it." (Montessori, 1967, p. 14).

Fine motor movement is a part of every work the student does from toddlerhood, through early childhood and into the elementary years. Gross motor movement is a major portion of toddler and early childhood years, as this is when the sensitive period for movement is greatest. In elementary and beyond, it becomes a secondary focus. Through observations, I saw students showing a great need for gross motor movement and physical activity. Many students met this need by running in the room, jumping over classmates, throwing items across the room, wrestling, etc. These behaviors caused disruptions and sometimes injuries to other students.

**Research Question**
What are the effects of student-selected gross motor movement activities on a Montessori lower elementary class?

**Methods**

**Phenomenological Action Research Study**
The study was based on humanistic learning theory and social constructivism. Consisting of seven student-selected movement activities (MA) available during the hours of instruction; chosen based on the students observed physical behaviors.

**Setting and Participants**
It took place in over 12 weeks in a Lower Elementary classroom in a private Montessori school. The class consisted of fifteen students, grades 1st, 2nd & 3rd.

**Data Collection**
- tracking daily usage of each movement activity
- parent surveys
- student interviews
- personal observations

**Data Analysis**
The analysis was based on Grounded Theory, due to the dynamic and multi-faceted nature of the class. This required that I utilize a wide field of vision and be open and flexible to all salient and emerging data, while maintaining the research question as the focus.

**Validity and Trustworthiness**
To ensure validity and demonstrate credibility of my action research, I relied on triangulation, a critical friend, a community of peers, prolonged engagement, rich, thick description, and researcher reflexivity.

After weeks of data analysis, I concluded that the movement intervention played a supporting role within the larger context of the class; and had a substantial effect on me, as I discovered previously unknown things about the students and myself. Gender and grade-level distribution were also major factors in the findings, since the class was 67% male, and 48% third graders. Three overarching themes emerged: unique class dynamics, student developmental needs, and impact on practice.

**Unique Class Dynamics**
As I started the study, it became clear to us that this group was unique; the struggles observed were stronger and more frequent than usual. Even my very experienced co-teachers had not had a group of students as challenging as this. Their struggles made it difficult for them to engage in meaningful academic work. LOW ENROLLMENT and LACK OF COHESIVENESS led to:

- Increased teacher dependence
- Less peers with whom to make connections and form friendships
- Clashing personality traits

**Student Developmental Needs**

**SB for Socialization**
...and meet their need for social connection, recreation, and gross motor movement; an extension of recess.

"Without recess you'll die, and you will not be a friendly person!"

**TO Self-Regulate**
...and meet their need to calm their emotions, increase focus, and expend energy.

"[Movement activities] help you cool down if you're really overwhelmed, and so it's like a new beginning of the day."

**Findings cont.**

**Impact on Practice**

The students spent the same amount of time on independent and social gross motor movement. Total time spent time working individually was the same as the time spent socializing. Time taking independent breaks resulted was the same as for working socially.

**Implications**
Incorporation of similar movement activities into other Montessori classes could be simple. Most of the MA in the study did not take up a lot of room on the shelves and were mostly used unobtrusively, easily blending into the fabric of the class. I strongly suggest that teachers be willing to objectively evaluate the effects of any movement intervention on their students and class. It’s important to remain open and flexible to class dynamics and individual student needs, and become aware of how students spend time outside of school. This was important to my understanding of their needs at school, since one setting usually informed the other.

**References**


