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Public Montessori schools have grown in number significantly in the United States. This case study chronicles the journey of teachers as they navigate the tension of balancing the Montessori approach with an accountability Standards model. Although Montessori may be in demand among parents in the nation, exhibited by the increase in public Montessori schools, this approach remains in the niche, or boutique, versus the big box of standards education. In this case study, teachers from a large standards-based school in transition to becoming a public Montessori school answered self-reflective survey questions and were observed in their classrooms to verify their responses. Using this approach, the teachers' practice and reflections were compared and contrasted against the teachers' proclaimed continuum for balancing the dual curriculums of Montessori and Standards-based instruction. Twelve teachers were then interviewed and observed to examine their ability to change. The descriptive feedback from these teachers gave insight into the challenges and successes of implementing complex instructional change. Among significant findings was that some teachers in a short time were able to successfully balance the two curriculum mandates. This study's results revealed that given a complex criteria of support, motivated and experienced teachers could implement this change. This study opens the possibility that under certain circumstances, Montessori boutique education could be replicated in a public Big Box way.

FROM BOUTIQUE TO BIG BOX: A CASE STUDY CONCERNING

TEACHER CHANGE TRANSITIONING TO A PUBLIC

MONTESSORI ELEMENTARY SCHOOL

by

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Approved by

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I dedicate my dissertation to the teachers and leaders of this case study who implemented this change. The everyday care and concern that they demonstrated as they spent time learning a new pedagogy to increase the student engagement was inspirational. It was a joy to tell their story!

This dissertation written by Teresa A. Van Acker has been approved by the following committee of the Faculty of The Graduate School at the University of North Carolina at Greensboro.

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To my mom, who rolled the family car down the hill to start it in order to get me to church, and who inspired the meaning of hard work and dedication. To my dad, who would love to know if I now have enough *degrees for my thermometer,* and who is looking down from above, joined by my grandmother who took me to the library as a small child, which is where my love of reading and learning began.

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CHAPTER I

INTRODUCTION

> In a time of drastic change, it is the learners who inherit the future.
> The learned find themselves equipped to live in a world that no longer exists.
> – Eric Hoffer, writer and philosopher

The Need for Innovation

As we race to the top to achieve equitable and responsive education for students, is there innovation that will make a significant difference in the lives of students? Or, are we simply recycling the same old ideas and slapping a different label on them? Can innovation address the needs of students and overcome the obstacles to learning? Arne Duncan states (2010) that today we must "discuss the neglected link between standards and innovation. Even the very words *standards* and *innovation* seem at odds with each other." The need to improve on the national system of No Child Left Behind (NCLB) has now resulted in the Race to the Top (RttT). This reform has a very prescriptive definition of *new* that includes the following: great teachers and principals, data driven instruction, a cloud of data that uses technology to assess and improve low performing schools. This type reform seems to be more like a funded suggestion box and less like a reform. Moreover, many educators and politicians agree that today's education needs to be improved, but there are many conflicting ideas and proposals for reform.

The documentary, *Waiting for Superman* narrates the lives of four students as they struggle to get an equitable education in America. According to institutes such as the Fordham Institute, these leaders do not think that the current educational system serves all students, and it also does not place America in good standing globally (Duncan, 2010). President Obama says, "The country that out-educates us today will out-compete us tomorrow" (2010). Secretary Duncan maintains that NCLB began with the idea of accountability and testing, but the teaching that responded to this testing was inferior and has resulted in our nation being clearly inferior to other countries in areas such as math and science. He stressed that innovation in assessing and teaching tied to common core standards will address the need to become viable in a world market. He believes the grant competition format is a way to get stimulus money in the right hands and thereby improve the current system. When necessary, he even encourages inventive charter schools to take over the public system to restore effective schooling. Could this work, and if it did what would it look like?

According to Duncan, when NCLB took center stage in American education, many states lowered their standards so that the state would not look bad as student and schools' scores were reported. The assumption that drives today's innovation is that we can raise standards, construct a better assessment system than NCLB, and prepare our students who graduate from the public system with an education that will leave them in good standing as they enter college. Moreover, having more college graduates will position America to better compete in the STEM areas (Science, Technology, Engineering and Math). These assumptions are noble ideas, but there is still the matter of

how to accomplish these goals. The execution of these ideas is to be defined by states and districts as they meet changes mandated by the Race to the Top competitive grant process. How will this grant process get us there? No one yet knows. However, among the suggestions to improve education is the use of the Montessori approach in public schools.

Commencement Challenge

I became interested in the role that Montessori might play in public school innovation in part because of the outcome of the Race to the Top Commencement Challenge search for the best-practice schools in America. In the Commencement Challenge, President Obama encouraged public high schools to respond concerning the uniqueness of their school through essay questions and statistical information that would illustrate the success of the school in preparing students for college (Education Government, 2011). Clark Public Montessori High school was chosen as one of the six finalists out of 1000 entries because of their unique approach to thematic education and their emphasis on community service. Obama cited this school as an effective example of education in this country and as a possible direction for the future of education in America. This school is unique in their own words, because "student-led education unites parents, students, and teachers into an extraordinary support system. We learn achieve, and thrive together" (Spinelli, 2010). Moreover, Clark Public Montessori Middle and High School have an open enrollment policy and yet all students take 4 years of English, math, science, and social studies that are all taught at the honors level. In addition, the population is considered diverse with an enrollment of 259 junior high students and 400

high school students which includes 48% African American students, 42% white and 9%

Asian, Hispanic, American Indian and multi-racial. In the past eight years the school

boasts a 99.5% graduation rate and 96% of the students have gone to college (Clark,

2010).

Clark Public Middle/High School is unique in that it follows the developmental

needs of young adolescence. At this stage of development, an adolescent needs to seek

their place in the world and approach that place through meaningful work (Zander, 2006).

At this stage intellectually, the adolescent is looking at life in a global way. Therefore,

according to Marta Donahue (personal communication, 2009), Clark Public Montessori

structures their education around four themes a year for each grade level, and they align

the standards to that theme. During the continuum of the middle school/high school

experience all standards are taught in this holistic and comprehensive way. For example,

each quarter a theme is chosen, such as one quarter they chose Movement. The teachers

worked together to develop an alignment of standards in their respective subjects to

address movements in math(such as operations), science (such as physical movement)

history(such as conceptual frameworks), and language arts (such as philosophical

positions), in an integrated way to promote a comprehensive study of subjects and the

theme. An example of a particular activity would be the historical perspective of

movement in art. The eighth graders wrote an art gallery tour based on their

understanding of the historical themes at play. They recorded the museum talk for the

seventh and sixth graders to use as a museum field trip narrated by them. At the end of

each quarter, they have a celebration of the theme. With the movement theme, they have

a flying trapeze group demonstrate at school, and the students get a chance to take a turn at flying on a trapeze. This interdisciplinary, integrated and global way of looking at student learning may paint a better picture of how Montessori definitions, maxims and philosophy play out in education as well as underscore why President Obama cited this school as an example of innovation in American education. Therefore, Montessori education is one possible reform.

Although historically Montessori education has focused on the education of young children in small private settings, Clark shows that successful implementation at the public whole-school level can occur. However, when one notes the success at Clark Public Montessori Middle/High School, it might be natural to assume that all Montessori schools are this successful. According to Olaf, there are at least 4,000 certified Montessori schools in the United States and about 7,000 worldwide. The Montessori practice and curriculum has been replicated across the country (Olaf, 2011). However, not all the schools that transition to Montessori are successful. Some do not even make it past the public relations of being named a Montessori school. One such school is Cobb Elementary. This school in the San Francisco, California school district was made available in an area that was under enrolled and in a neighborhood considered at-risk. Enrollment was to start at the Pre-K level and was to move through the grade levels one grade at a time until it became a full Montessori program. At Cobb, the demand outside this neighborhood was great for Montessori. An example of this is 133 people outside of the neighborhood applied for the initial four slots, but there was a difficulty with communication and the surrounding neighbors did not understand a school that was

different from other schools they had seen before. In addition, the Montessori teachers

had difficulty communicating their vision and the teachers also had a difficult time

understanding how to incorporate the testing within an individualized schooling

approach. The parents in the community saw Montessori as an elitist approach to

education, and therefore they supported a general education program for the school

instead of Montessori. Although Montessori may be in demand by some parents across

the nation "the controversy at Cobb Montessori occurred because Montessorians are still

that 10% (in education), and the other 90% have little or no idea what Montessorians are

saying or why it works" (Benham, 2010, p. 32).

Purpose Statement: Teacher Change

The purpose of this study was to examine what can be learned about teachers'

ability to change when implementing Montessori education in a school. The case study

provided an opportunity to examine insights into the change process and to view what is

successful and unsuccessful. The study looked at the teachers collectively as they

struggled with implementing instructional change and individually as the responses and

dispositions were compared in this transformation of a traditional school to a public

Montessori school. In this transition, teachers must navigate possible conflict as they

balance the Montessori approach with the No Child Left Behind (NCLB) testing-based

environment, which is required by all states as they learn to incorporate a new way to

teach. As a by-product teachers provided insights as to how principals should lead as they

must support the demands of the district and state mandates balanced against the need to

serve students and monitor this change. Moreover, how do both groups educate parents

and the community as they confront potential conflict inherent in a dual philosophy approach and wholesale school curriculum change? This study sought to uncover the opinions, reflections, and classroom instructional shifts as the teachers made this change. Moreover, there are possible implications from this study as the American educational system confronts bigger questions in light of our transitioning educational response to the economic and global shifts.

In tracking the changes that are involved in this process, my research questions are three-fold:

- What teacher change has taken place at a particular school toward the Montessori approach?
- How has this teacher change occurred?
- How do teachers navigate the tensions between two mandates: Montessori and standards-based?

Problem Statement: The Tension between Standards and Montessori

The tension between standards and Montessori education may be summed up by Secretary Duncan as he describes the seemingly at-odds approach between standards and innovation. The standards movement is relatively new with a history spanning 20-25 years, whereas Montessori education, which could be considered innovative, is at the same time very old. Maria Montessori began her search for an education approach more than a hundred years. So what makes Montessori innovative and how is a standards-based approach seemingly at odds with Montessori?

Odds come from:

- Where the instructional base begins--political observation and response versus personal observation and response? Does instruction start from the top (political) or the bottom (personal)?
- With whom the teaching begins--child centered versus standard centered.
- How the role of the teacher is played out?
- Standards as a widely accepted base (known) versus Montessori (unknown), with only a very niche-based acceptance.

Montessori education, a progressive methodology developed by Dr. Maria Montessori, began as she taught mentally disabled students from the streets of Italy (Lillard, 2006). From her trial and error approach of observing children, she gained insights into the way they learn. As the first female physician in Italy, she was charged with the welfare of *street children*. This welfare included the education of these children. Using observation as applied to education, she first hired a teacher to teach these students while she tested and recorded how they learned best. Influenced by Sequin's work with mentally retarded children, she tried an approach which included a sequence of materials that seemed to allow a student to approach learning through the senses and to become independent while discovering the objectives embedded in the materials. Moreover, as she continued reflecting and expanding her observations with special education students, Montessori discovered that her evolving method of teaching students was effective with children who did not have disabilities (Standing, 1957).

However, even from the beginning Montessori's approach to education seemed controversial in America. It was at conflict with even progressive American educators, such as William Heard Kilpatrick (1914), renowned professor of Columbia and a contemporary of Dewey, who remarked that this method may work in European countries, but that it was not suitable for the current American public education. He praised this educational pedagogy, because of its success with special education students or as they were called "idiots" in those days. However, when Montessori began to assert that this approach would work with normal children, she encountered opposition. In her words,

> The boys from the asylums had been able to compete with the normal children only because they had been taught in a different way…While everyone was admiring the progress of my idiots, I was searching for the reasons which could keep the happy healthy children of the common schools on so low a plane that they could be equaled in tests of intelligence by my unfortunate pupils (Standing, 1962, p. 34).

Kirkpatrick predicted that the results that Montessori had achieved with her educational approach for special education students could not "be reproduced under the conditions of American life" (Kirkpatrick, 1914, pp. ix). Ultimately, Kirkpatrick concluded that Montessori was 50 years behind her time and that this pedagogy was not a fit for American education (Kirkpatrick, 1914, p. 63).

Montessori could not have conceived of what it would take to systematically transform American education. Her celebrity status and her ideas were not sufficient by themselves to overcome the entrenched educational model in place, nor could she provide the organization and people needed to replicate her methods. It would be almost a half-

century later before another innovator--Nancy McCormick Rambusch--would come along and reinvigorate the Montessori model (Shortage, 2007).

Even though Kilpatrick was intrigued by the coupling of science and education, he missed the contribution made by Montessori through seeing the role of teaching and learning differently. He ultimately did not understand how a "curriculum devised for a certain class (low income students) in Rome would serve unmodified in America" (Kirkpatrick, 1914, p, 41). However, Maria Montessori continued searching for the answer as to why her method seemed to be effective with special needs students and how these concepts could benefit all students. She believed that education should be viewed from the perspective of the learner and that this learning could be coupled with practice time of precise didactic materials. Although this is the past, two different approaches exist today, and they include: an American public standards-based education and a Montessori child-centered education. American public standards-based education is sometimes called a traditional education. Part of the problem in this study is clearly contrasting the two approaches and defining them both. Montessori is difficult to define, because it is unfamiliar to most people, and therefore, boutique in nature. Standards-based education or traditional education is difficult to define, because it is the Big Box or Wal-Mart of the American educational system or the accepted norm. Therefore, defining what is the norm is sometimes difficult because it is more assumed than defined. So what is the difference between a traditional education and a Montessori education?

Principles of Montessori Education

According to Lillard (2006) There are eight guiding principles of Montessori education: 1) movement and cognition are related, 2) ownership of learning gives students a sense of empowerment, 3) interest-based learning increases the desire to learn, 4) intrinsic motivation to work is its own reward, 5) collaborative learning, 6) authentic meaningful learning, 7) scaffolded adult interaction, and 8) the benefit of an ordered environment on student learning.

First, in her observation of children, Montessori began to see that *movement and cognition are related*. She states "movement has great importance in mental development itself, provided that the action which occurs is connected with the mental activity" (Montessori, 1966, p. 142). The use of movement manifests itself in many ways: as the inclusion of what Montessori titled practical life exercises, as the incorporation of sensorial graded objects, and language and math materials that are sorted and manipulated to reinforce content objectives. Montessori (1966) describes Practical Life exercises as activities that bridge the home life to the school life. They have four goals: 1) to situation students' movement toward purpose, 2) to develop concentration, 3) to learn to order steps in a sequence and 4) to help the student care for self or the environment. These skills are considered crucial for the Primary aged child, ages 3-6, but are considered building blocks to the Elementary student since the ability to concentrate for long work periods is seen as a foundational skill. Montessori saw cognitive thought as aligned with the body's movement, especially what she called movement with purpose. There are some research studies that support thinking and movement together to aid

understanding such as the study done by Stigler (1984) which found that students who used an abacus to solve math problems were found to solve math problems easier even when they did not have an abacus. The students were found to solve problems better, because they had moved the beads with their hands. Moreover, even after the movement they could imagine the results. Schwartz and Black (1999) documented that students could recall the angle of water pouring from a glass better when they moved a glass even with no water in it than when they recalled the actual water being poured from a glass with no movement of the glass.

The Montessori materials and environment were created with the idea that cognition and movement would be entwined. In contrast, traditional education classrooms are not necessarily designed to aid movement. Although there are teachers who are able to coordinate movement in the action of education with programs such as the energizer lesson plans where movement activities are combined with learning objects, this is not the norm of most traditional factory-modeled classrooms.

The second principle of Montessori's approach is *the inclusion of choice as a feature of engagement and empowerment that allows the learner to take ownership of his learning*. Montessori (1989) states that "life is based on choice, so they (students) must make their own decisions" (Montessori, 1989, p. 26). In a Primary Class aged 3-6, the students are allowed to choose what they do and the amount of time that they work with materials. When they are done, they are asked to return the material to a "ready position" for the next student's use. In the Elementary Classroom, choice is not as wide open, but it does exist. At this age group, there is a certain amount of work that is prescribed in a day,

but the student can choose when to do it and in what order. In the Iyengar and Lepper (1999) study, 7-9 year old students who were given a choice of anagrams to solve were able to solve twice as many. This study showed that free choice both addressed task performance as well as task persistence. Traditional education has historically not been a place of choice for children. With daily pacing guides, the teacher must enforce a certain amount of work per day to cover the learning objectives. This is not to say that there are no learning objectives in Montessori teaching. However, according to Montessori, the objectives are built into the purpose of the material, and the child chooses how long they need to work or practice with a material to learn an objective (Standing 1957).

The third principle is based upon Montessori's observation that *interest-driven learning increased the child's desire to learn*. "The secret of success (in education) is found to be in the right use of imagination in awakening interest, and the stimulation of the seeds of interest already sown" (Montessori, 1948, p. 1-2). One of the basic tenets of this philosophy is the teacher's role to facilitate the child's natural curiosity. She saw this manifested by the inclusion of beautiful things in the classroom and of materials that spoke to the child. In her observation of students, she noticed that they liked tiny objects and that through the inclusion of such objects she could teach more complex concepts. For example, she noticed that if she introduced a miniature farm set of toys, she could label nouns and teach grammar and sentence structure. She also noticed that when stories were attached to objects, they became symbols for students' memory and engagement. One such example of this idea is a pyramid, which is the symbol for a noun. She said that

pyramids represent nouns, because they are both old and have been around for a long time.

Interest-based researchers have found two basic ways to motivate students to learn: 1) topic interests that are universal and would include such things as Montessori's tiny objects and stories and 2) personal interests which are defined by each student. Montessori observed children and would encourage them to pursue both topical and personal interests. In contrast, students in a traditional classroom are not as likely to be encouraged to pursue their own interests and have these interests drive the understanding of story or paragraph structure. Usually the class is assigned a book or a topic and the learning comes from the imposed topic. Hiddi (1990) wrote "identifying and using individual interests to promote subject matter learning could prove to be a time and effort consuming task for teachers… few teachers have the time needed to individualize efficiently enough to profoundly affect learning" (p. 554).

However, the research that supports this type of approach exists. Anand and Ross (1987) researched what would happen if three different types of objects were given to students to learn fractions. The students were randomly assigned to a group. One group was given abstract fraction objects. One group was given concrete fraction manipulatives and one group was given personalized objects, and the students were told the personal connection of them as they were given the objects. When their understanding of fractions was revised, the personalized group performed the best. The concrete group was second. The abstract group lagged behind.

The fourth principle is that *extrinsic rewards are not as valuable to students as intrinsic rewards*. She saw sustained periods of deep concentration as one of the rewards for students who were extremely interested in their work. Montessori (1912) says that "the prize and the punishment are incentives towards unnatural or forced effort…we cannot speak of the natural development of the child in connection with them" (p. 21). Montessori assumed that a school set up for children would attract the interests of children, and therefore, would not need extra motivation except for children who did not get that school was designed for them. Kohn (1993) argued that although short term rewards may have some merit at the time, educators cannot ignore the sometimes negative long term results. Eccles and Wigfield (1993) report the average student in school shows a decline in intrinsic motivation every school year. Although there are many factors for this lack of motivation, among one of the factors listed in the study is the problem of extrinsic rewards. Traditional school practices such as grades, candy and gold stars ultimately reduce the motivation for students to learn for learning's sake or because they have a need to create or discover. We know that these rewards do work for the short term and maybe even the long term for a competitive student, but Montessori felt that the need to improve one's self was a greater determiner for children to succeed. Therefore, her materials contain what is called a *control of error* which was a type of answer key that allowed students to check their own work and thereby, feel good about their accomplishment.

The fifth principle is *collaborative learning*. By combining students in a three year age grouping, Montessori believed that she had the desired arrangement to maximize

collaborative learning. Montessori (1966) states "our schools show that children of different ages help one another" (p. 226). The younger students see and imitate what the older ones are doing and the older ones are able to teach lessons to the younger ones and in the process learn the objectives better. Having the freedom to move throughout the classroom and observe other students allows the student to learn from others and talk to them as well. Learning in the context of a social peer tutored or collaborative classroom environment has been shown to be beneficial from a number of studies (Azimitia & Crowley, 2001, P. A. Cohen, Kulik, & Kulik, 1982). In contrast, most traditional schools do not have multi-aged grouping and do not encourage students to work collaboratively.

The sixth principle is *authentic, meaningful learning*. Montessori (1966) maintained that "education as conceived today is something separated both from biological and social life. People are prepared for life by exclusion from it" (p. 10). Montessori saw traditional education as separated from students physically and conceptually. Montessori felt that context matters and that "going out" through internships and what we call field trips today were important to tie the two realms together. She also saw gardens and school stores as practical life extensions of learning especially for older students. The inclusion of what she deemed *practical life* exercises such as cooking, sewing or tending to animals or plants created the opportunity to practice fractions in cooking, measurement in sewing and the understanding of botany and zoology by caring for living things. Dewey (1916) asserts "from the standpoint of the child, the great waste in school comes from his inability to utilize the experience he gets outside while on the other hand he is unable to apply in daily life what he is learning in

school." According to Newmann and Wehlage (1995) authentic learning has three components: 1) student constructed knowledge, 2) inquiry and 3) value beyond the school. Montessori saw school as a practical life extension from home to school and from school to the world. In contrast, traditional schools often have a more compartmentalized view of authentic learning that seems more like contrived afterthought than an integral part of the learning environment.

The seventh principle asserted is *scaffolded adult interaction*. Montessori (1956) said "it is true that the child develops in his environment through activity itself, but his needs, materials means and an indispensable understanding. It is the adult who provides these necessities" (p. 154). She saw the adults in the room as the ultimate control of error, but she felt that the teacher's role should be as guide-on-the-side facilitating learning, rather than the central player. Adults prepare the environment and direct the student activity, but they should not interfere unless needed. Her description of teachers most closely parallels Baumrind's (1989) parenting styles of a warm but authoritative figure. She believed in freedom inside a carefully constructed framework of limits. In contrast, many traditional classroom models are teacher centered.

The eighth principle is *an environment that has order benefits students*. Montessori (1997) asserted that "it is the organization of the work which (leads to) the establishment of mental order" (p. 33). She saw students, especially young students because of their attention to detail, as having a remarkable sense of order as demonstrated by their need to have everything in its place. There are several different types of order. One type of order is temporal order which involves a schedule. At this point both

traditional schools and Montessori would agree that children need routine and schedules although they would interpret the schedule differently. Traditional schools would see time as segmented to fit in subject matter and daily flow such as recess and lunch. A Montessori class would start with a morning meeting and then move to a three hour uninterrupted work cycle and then lunch and recess and then another hour or two of a work cycle. Montessori saw task organization and physical organization as features of order, and again traditional schools would also provide these features as well with a slightly different spin. Traditional schools would segment task organization by phrases like "take out your textbook and turn to page." Montessori classrooms have materials that are on shelves and the student who has had a lesson takes out the material and practices the lesson and then returns the material to its place. Often in elementary classes there is a work plan that has the suggested work to be done listed and task completion is confirmed by presenting the work to the teacher and getting it checked off. This system offers order, choice, and adult confirmation. The adult does give direct-instruction lessons, but often in smaller groups that are more skill or concept grouped and this affords the adult with the opportunity to respond to understanding and misunderstandings more immediately.

Important Tenets of Montessori Education

In addition to the eight principles, in a Montessori classroom there are three important tenets: the prepared child, the prepared teacher and the prepared environment. This concept is often presented to parents as a three sided triangle. Understanding what Montessori meant by these three concepts helps one compare the change involved in this transition. The following section compares the view of the student, teacher, and

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environment, how these preceding eight principles are integrated into Montessori education, and how they compare to a traditional education through the interplay of the classroom. Granted, the descriptions are describing a picture by outlining the extremes as an example, because not every traditional school would fit this mold nor would every Montessori school clearly fit the image being presented. However, in order to understand the change from one model to the other, a comparing and a contrasting of what may be most typical of each model is helpful.

View of students. Traditional classrooms are based on a factory model of efficiency (Bennett and LeCompte, 1990). These factory schools also incorporate the *scientific management principles* described by Callahan (1962). Cubberly (1916) said that schools are "factories in which the raw products (children) are to be shaped and fashioned into products to meet the various demands of life" (p. 512). Moreover, the other more subtle view of students is that of a blank slate. This view was espoused by John Locke. His empty vessel view of students and students' learning still impacts traditional schools today. Such expressions as "we have to make sure we cover all the material" reinforce the idea of pouring in enough or the right content learning into ready vessels. Although there is a backlash against this approach using, instead, prior knowledge and cognitive connections, the factory view of turning out a product and filling up an empty vessel still linger in the fabric of the structure and the delivery of teaching today. In a traditional classroom, one may see single grade classrooms with students sitting in chairs and rows or, if the class is more progressive, students gathered

around tables in groups, but the teacher is often still at the front of the room delivering lecture-type content teaching to the whole class.

Montessori believed that children have an innate ability to learn. The role of the educators in school is to foster the independence and self-direction of the child. The repeated concept is that it is the normal thing for a child to want to learn. How does the teacher handle the non-normalized child? Montessori believed that freedom, even if it is not internalized, must then be earned with an eye of giving back freedom or independence as soon as possible. She believed that a job well done was its own reward and stickers and other tangible items are for the unmotivated student, but that the motivated student's real reward is work. She went so far as to say that work is salvation for children. By this she meant the opportunity to explore with hands-on materials.

Not only did Montessori believe that students could learn, she believed that they were the masters of their own learning as demonstrated by the Bill of Rights for the Montessori Elementary Classroom:

- To act by oneself and for oneself

- To act without unnecessary help or interruption

- To work and to concentrate

- To act within limits that are determined by the environment and the group

- To construct one's own potential by one's own efforts. (Lillard, 1996, p. 98)

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Visit a Montessori classroom and you may see students alone or in pairs working on a rug on the floor or crowded around a small table with didactic materials that are hands-on and with built-in teachable objectives and points of consciousness. Child development is a guiding factor in teacher-designed and implemented lessons. This is why a traditional Kindergarten class may look more like a Montessori Primary class. However since this attention to *planes of development* is carefully considered as a teacher plans and designs the classroom environment at the first grade through middle school level, the traditional school and the Montessori school may seem very different at this developmental stage. In a Montessori classroom, all aspects of the room and materials are thought out even to the need for child-size brooms and dust pans that fit child-size hands. Although one can see child-sized furniture and manipulatives in traditional classrooms, Montessori included these elements as tools to develop such concepts as a sense of order and a *pincer* grip or pencil grip. These are intentional aspects of a Montessori curriculum, and although there may be traditional classrooms that use manipulatives, the inclusion of these materials make up most of the curriculum in a Montessori class as they line the shelves and are pulled out and used by the students.

Moreover, the design behind these materials is global in that Montessori integrates curriculum in such a way that learning in the materials encompassed vertical as well as horizontal considerations. One such example is the coloring coding of place value. From the primary grade of pre-school through the upper grades, the place value color coding is consistent and builds and changes in such a way as to spiral student understanding and expand on the concept itself. Unlike the traditional education's

thematic units, Montessori saw integration in terms of building understanding throughout years and not just finite topical conversations.

In order to allow a student the time to explore and learn from the materials, Montessori classrooms include an uninterrupted time to work. Incorporated into the daily plan is what is known as an *uninterrupted work cycle.* Put simply, students have three hours in the morning to work and two hours in the afternoon. This work cycle involves a student choosing from a menu of works and doing them in an independent manner while a teacher teaches small groups and checks the work during breaks in teaching. Montessori established this type of routine after she observed a need for students to pursue a learning opportunity to its conclusion. Contrast this to the blocked scheduling of traditional schools of thirty to fifty minutes to present a science lesson and then thirty to fifty minutes to present a math lesson, and one sees a completely different kind of compartmentalized instruction.

Coupled with the work cycle, the thing that often seems unusual for first-time visitors to a Montessori school is the concept of multi-aged classrooms. The hidden curriculum in this multi-aged concept is that students learn cooperation as they learn in the social setting that allows older students to help younger ones. This approach has almost a family or sibling feel to it. Third graders are given the extra opportunity to lead as they guide first graders through peer tutoring. This seems very different from the traditional classroom where the students are all in the same grade. Although this can often be the thing that initially seems the hardest thing to accomplish because of the range of three grades, it actually is the thing that makes the block schedule effective,

because if a teacher does not have time to help a student with a particular child, an older

student can be called on to help. This aids the younger student by increasing

understanding and builds confidence in the older student as they help. In contrast, most

traditional schools are single grade, and if they do have multiple grades, they are usually

a two grade or what is called a looping class.

When visiting a Montessori classroom, one may notice right away that it is not

always a quiet place to learn. It is not that it is unruly, but most of these classrooms sound

like a *buzz* of activity. There are many traditional classrooms that might sound this way

as well, but many traditional classrooms can be observed with students in passive roles,

sitting in seats and paying attention to the teacher in the front of the room. Even the

Smartboard technology seems to only add the element of interaction to the same model.

Montessori students work everywhere. They unroll rugs and do bigger works on the

floor, and they have furniture that is flexible and grouped together to facilitate different

projects or peer student learning. There is freedom of choice and freedom of movement

within the confines of respect for others.

The underlying approach in most Montessori schools is that school should mold

to the student rather than the student always molding to the school. In that vein,

Montessori classrooms tend to have a mastery approach that focuses on the how or the

process of learning and not just the product or the outcome of learning. Being process-

focused, a teacher uses mastery checklists versus a product-focused grade on a report

card. This represents a big departure from the traditional focus of ABCD grades. In a

mastery approach a third grader's understanding of 75% of fractions is a start and

something a child can build on versus a "D" on a report card. This approach assumes all children can learn. They just might not take the same time schedule to get there.

View of teachers. What does the Prepared Teacher mean in a Montessori classroom versus a traditional classroom? There is a simple answer included in the everyday preparation of lesson plans and materials and then there is the more complex answer of what Maria Montessori called the teacher's preparation of the spirit. In reviewing the literature, this seemed to be a hard question to answer, because there seems to be an internal dialogue or an identity answer and from this an external manifestation of this concept. Thomas and Beauchamp (2009) refer to both the professional and personal life of the teacher as parts of the definition of what it means to be a teacher. They do this because when a teacher teaches they bring both their professional views and personal views to their teaching. This is true for traditional teachers as well as Montessori teachers.

Murray (2006) captures why Montessori teacher internal preparation is important. In a facilitated environment, teacher involvement may not be seen in the traditional teacher-centered way, but the planning that goes into the individualized and environmental driven approach is also wrapped in a coat of socialization. In this context, the teacher must model and create the class climate that reflects a caring learning community. According to Murray's study, Public Montessori teachers understand their role as enablers of a community and the architects of the child's learning ownership. Montessori called this ownership and the "'peace that students' achieved through this intense concentration" (Lillard, 2006, p. 50) normalization of the child. Normalization,

according to Montessori, means that children want to learn and develop and grow. If a child does not express this viewpoint they are outside the norm rather than the norm. This belief by Montessori was shaped by her observation of children. All children from birth seek information and are curious. Murray reflects that teachers are not the instrument that normalizes children but rather the people responsible for creating the environment that allows the child to use his natural curiosity to develop, learn and grow. Although traditional teachers and Montessori teachers both prepare lessons and classrooms, their approach is different. Montessori begins with the student and traditional education begins with the objective being taught.

According to Lillard (2006), the preparation of the spirit is a concept from Montessori where she saw the need of teachers to prepare themselves internally to rid themselves of prejudice and bias so that they will not let their pride or anger color their observation of children. She did not expect teachers to be perfect, but she expected them to acknowledge that as educational observers, they must examine their own motives. According to The National Council for Accreditation of Teacher Education (2006), for traditional teachers dispositions are values, commitments, and professional development. The dispositions that result in positive teacher identity also impact student learning in a positive way. Dispositions include beliefs about oneself as a teacher as well as beliefs concerning students such as a belief that all students can learn. Combs (1969) maintains that beliefs about self, other people, subject matter and the purpose of education determine the ability of a teacher to persevere and become an effective teacher. Both

traditional teachers and Montessori teachers see this as valuable but maybe for different reasons.

      View of the classroom. Montessori education is grounded in the observation and use of materials to teach particular concepts in language, math, science, geography, history, and the arts. The materials are specific "for each classroom level, carefully designed to confer specific understandings through repeated use and in the context of other materials, selected to avoid most redundancies, and quantified to allow mastery in about 3 years in a classroom" (Lillard, 2006, p. 6). According to Lillard, there are mainly three categories of materials: traditional, modified with category or subject purpose, and modified with exploratory purpose. Traditional materials are the original materials that were developed by Montessori. These comprise the bulk of the material taught in teacher training. The modified by subject materials are comprised of big concepts across big categories of curriculum such as what Montessori calls *practical life*. Practical life materials most closely resemble occupational therapy. An example of this is squeezing activities to increase the pincer hand grip for handwriting.

Fundamental Differences Between Standards and Montessori

      Montessori with its view of the prepared teacher, prepared environment, and prepared student, is a complex teaching approach which may take some time for teachers, parents, and administrators to absorb, much less implement. Although these comparisons are broad strokes, and they could be refuted on both sides by specific examples of Montessori classrooms that do not reflect this philosophy or traditional classrooms that may look more like Montessori classrooms, these are the fundamental differences cited

by the North American Montessori Teachers' Association (1999) and differences that could be inferred from the traditional educational viewpoint by the *more/less* list from Zemelman, Daniels and Hyde (1998, see p. 4-5). This book, *Best Practice New Standards for Teaching and Learning*, compares and contrasts a list of what American education could stand to use less or more of such as: *less* whole group instruction, *less* student passivity, *less* one-way teacher communication, *less* prizing and rewarding silence in classrooms, *less* time on textbooks and basal readers, *less* time on seat work and worksheets, *less* attempt to cover material, *less* rote memorization, *less* emphasis on grades, *more* hands-on activities, *more* active learning, *more* diverse roles of the teachers such as coaching, *more* responsibility transferred to students for their work, *more* choice for students, *more* attention to the needs of students, *more* collaborative learning, *more* heterogeneously grouped classrooms, *more* individual student needs met, and *more* reliance on teacher description including observations and anecdotal records, conferences and mastery assessments. Zemelman, Daniel and Hyde (1998), in defining best practices of American public education or traditional education as a list of *less and more* techniques give shape to traditional education in America by describing what it should not be and what it should contain. This list will be used in Chapter Five as a way to systematically describe the changes that the teachers experienced as they moved to different way of implementing instruction.

The following chart compares the two approaches according to the North American Montessori Teacher's Association. This comparison contrasts the attitudes, actions, and material differences between the two approaches.

Table 1. Traditional Classroom Compared to a Montessori Classroom

Traditional Classroom	Montessori Environment
Textbooks, pencil and paper, worksheets and dittos	Prepared kinesthetic materials with incorporated control of error, specially developed reference materials
Working and learning without emphasis on social development	Working and learning matched to the social development of the child
Narrow, unit-driven curriculum	Unified, internationally developed curriculum
Individual subjects	Integrated subjects and learning based on developmental psychology
Block time, period lessons	Uninterrupted work cycles
Single-graded classrooms	Multi-age classrooms
Students passive, quiet, in desks	Students active, talking, with periods of spontaneous quiet, freedom to move
Students fit mold of school	School meets needs of students
Students leave for special help	Special help comes to students
Product-focused report cards	Process-focused assessment, skills checklists, mastery benchmarks

Note. This table was included with permission from NAMTA. Copyright © 1996-2012. Website link http://www.montessori-namta.org/A-Paradigm-Shift

Although the traditional classroom generalities may not truly reflect all public classrooms, there is probably some truth in these broad strokes. My observation after thirteen years as a public school teacher is that teacher-driven product-oriented classrooms still exist especially in the current domain of a testing accountability model, and although much has changed in education such as technology and textbooks, more public school classrooms still resemble the teacher-centered historical classroom models than not. Therefore to teach in a classroom that has to combine the two ways of thinking in order to satisfy the standards of the one and remain true to the philosophy of the other seems to be difficult change to accomplish in a school.

Both of these approaches are easier to describe than to define in part because of the autonomy of the teachers that implement them. Some Montessori classrooms may have the flavor of a very teacher-centered approach while other traditional classrooms may have the flavor of a facilitated student centered learning approach. However, for the purposes of this study, the term *Montessori classroom* was considered to mean what might typically be seen in most Montessori schools and the term *Standards classroom* reflected a more teacher-centered approach. The educators in this study interchange the words traditional and standards-based education when referring to what they previously taught before the change. Universally, a traditional based education is defined as a school that establishes high standards that are aligned with instruction and materials that need verification usually through statewide testing programs. According to the RAND report (Hamilton, Stecher, &Yuan, 2008), although there is no universal definition of traditional education, the standards-based approach to teaching and learning involves high academic

expectations, alignment to instruction and a universal type assessment. Typically, a standards-based classroom is taught with a teacher in the front of the room delivering objectives in the form of a focus lesson or at least directly instructing small groups while having students independently attend to centers that are teacher created as the students rotate around the room.

CHAPTER II

LITERATURE REVIEW

Effectiveness of Montessori Education: What does Research Say?

Studies about Montessori education tend to support its effectiveness. Often, however, the studies are small in scope since Montessori education tends to serve smaller populations of students. Additionally, the studies are often conducted by Montessori teachers or insiders such as administrators and parents of Montessori students. The American Montessori Society, the recognized Montessori authority according to the Department of Education, acknowledges the need to continue research and has hired a research coordinator and committee to facilitate this endeavor. In the last few years, the Society began a research poster session at its annual conference and has encouraged members to write about Montessori in non-Montessori peer reviewed publications. Recently some committee members presented this initiative to the Magnet Schools of America conference. Having acknowledged this limitation, this literature review contains research summaries that give insight about Montessori instruction.

Dohrmann (2007) compared the scores of two groups of high school students, one group that attended a Montessori school from K to 5 and the other group that had not attended a Montessori school. In this study, the Montessori group outperformed the non-Montessori group in grade point average, math, science, English and social studies with particularly high marks for math and science. However, this comparison may have other

possible influences such as parental support or other elements that could have contributed to this outcome. Moreover, the possibility that the Montessori students were more affluent and non-minority was addressed in this study, but not in the context of the advantage this privilege may have represented.

Lillard's (2006) quantitative study used 59 Montessori participants and 53 non-Montessori participants from a pool of 5 year olds and 12 year olds and indicated a gain in such educational attributes as sophisticated sentence structures, creative story endings, a sense of school as a community, and positive social interactions. Lillard asserts that when Montessori methods are applied with fidelity, the results for students are equal or superior to non-Montessori students.

Rathunde and Csikszentmihalyi (2005) surveyed 205 middle school students as to the motivation for learning or as they termed it *flow*. The results of this study found that the Montessori students reported greater motivation and undivided interest in their school work. This quantitative study then compared both sets of students engaged in non-school related activities and the flow was even, but when engaged in school endeavors the Montessori students were more motivated to learn.

Peng (2009) showed that students with Montessori early childhood education experience had higher test scores in Taiwan than did students who did not have early Montessori childhood education. When comparing almost a hundred students who did and did not have an early childhood Montessori background, Peng found that the study's third graders varied significantly. This study also concluded that this method had a long term effect on language arts.

Hobbs (2008), in a causal comparative study, examined the results between sixth grade students who attended a Montessori school and those who did not attend a Montessori school. They both were administered the Ninth Edition Stanford Achievement Test. Using data from the two sets of test scores, Hobbs discovered that the Montessori sixth graders had statistically significantly greater scores in math and language arts.

The effectiveness of Montessori research is on-going and is still of mixed opinion. The difficulty to measure the approach has been caused in part because of the lack of consensus in defining the approach and the selection of the sample population. Defining the approach is an obstacle, because the Montessori instructional approach, or as Dr. Montessori called it, the method, was never copyrighted. Moreover, although the teacher materials have many similarities, the teacher training albums used to instruct teachers often vary in some degree from teacher trainer center to center. The sample population selection is often a problem because getting a comparable sample of student population is difficult because most Montessori school programs are parent-choice schools. Allowing for the bias of this factor can be an obstacle in a study. However taken as a whole, there seem to be studies that report some positive effects of the Montessori approach (Montessori Observer, 2013).

Effectiveness of Implementing Montessori Change in Schools

Although there is some research comparing Montessori education to traditional education, there is much less research regarding changing from a traditional elementary school to a Montessori school. Some of the scholarly research articles that do exist are

found on the American Montessori Society website. Many of the studies focus one various aspects of Montessori education or on children. However, Cobb Elementary is an exception to this rule as it tracked change that failed. Moreover, because of that failure, other Montessori schools learned from valued lessons that resulted in future school openings concentrating on better communications to the public and speaking in a way that communities could understand the school's mission. According to Elizabeth Slade (Benham, 2010),

> When we started Gerena [a public Montessori school in Springfield, MA, that serves Early Childhood through Elementary II] we began in the previous year in November working within the Community communication seems to be just the beginning of the issues a transitioning public Montessori school faces. (E. Slade, personal communication, February 23, 2009, Benham, 2010, p. 28).

According to Donna Kaiser (Benham, 2010), a 20-year public Montessori teacher, "we spent a great deal of time as a staff matching each state and district standard with all the Montessori lessons and curriculum" (D. Kaiser, personal communication, February 23, 2009). Being reflective and creative about how one includes and meets the standards is an on-going public Montessori teacher and school effort.

According to Kamine and McKenzie (2010), the Cincinnati Public School (CPS) has been a leader in public Montessori education but until 2002 the school system had not started a neighborhood Montessori school. All the schools started had been like Clark Montessori. They had been magnet or choice schools. The leadership in the system decided to begin a neighborhood public Montessori school in Pleasant Ridge, "one of Cincinnati's most racially and socio-economically diverse neighborhoods. The

community set itself to the task of rebuilding what had been a failing school that reflected little of the neighborhood's diversity" (Kamine & McKenzie, 2010, p 1). Much like Montessori did a hundred years ago, the leadership took a holistic approach to the problem, and they brought a former juvenile court magistrate who had experience with the type of student they were going to reach. He along with hundreds of social workers and health professionals looked at this neighborhood and asked how it could be enhanced through community afterschool outreach, social services and health and wellness centers.

The CPS superintendent encouraged the transformation of the school but stipulated three conditions for granting the request:

- Evidence of a sustained groundswell of interest in attendance;

- Support by all sectors of the parent community, including current parents;

- No displacement of existing families in the school. (Kamine & McKenzie, 2010, p 1).

The faculty from Xavier University worked with the community and the school system to brainstorm what it would take to make a neighborhood successful that had a 100% poverty rate. They came up with the following non-negotiables:

- Qualified teachers prepared by the Department of Childhood and Literacy, Xavier University.

- Fully equipped Montessori classrooms.

- Enrollment reflective of the neighborhood demographics.

- Bringing the whole neighborhood back into the school.

- Full enrollment.

- Parents educated about Montessori.

- Community fully aware of the new program and new paradigm.

The school opened in 2008, and the overwhelming response from the community since then has been positive (Pleasant Ridge Website, 2011).The parties represented in this neighborhood school change attribute the grassroots efforts to the success. This demonstrates the power of a cry for change from the bottom up and top down working together. The greatest winners in this transition were the students who saw "engagement that developed through the local ownership of the planning process produced extraordinary parental involvement that touched not only the schoolhouse but modeled for the children the too-rare lesson of participatory democracy" (Kamine & McKenzie, 2010, p. 3).

This example could be further proof of the niche or boutique nature of Montessori. Therefore, studying another transition as it is currently in progress may give more insight or information into the possibility of turning the traditionally small pre-school Montessori schools into a possible solution to today's educational problems. In other words, building on the small successes and the change of school culture, educators could examine the conditions which seem to create the best possibility for a public Montessori to survive and thrive for the sake of the students and the community. Also, to ask the question if we could reproduce enough public Montessori schools, could it be that the niche education can move to be a viable option for the American educational system?

Change and Conceptual Framework

  The nature of educational change. Recently our district introduced a new initiative with the quote, "No one likes change except for babies." The caption had a baby with a diaper that needed changing. For years, educational scholars have studied the resistance to change (Fullan, 1982; Sarason, 1972). DiMaggo and Powell (1983) call this institutional isomorphism, "the more things try to change, the more they stay the same." In particular, there has been an emphasis on how teachers view and resist change (Datnow, 2000; Gitlin & Margonis, 1995; Hargreaves, 1994, Huberman, 1992). There seem to be pockets of reform and success and then the success is not reproduced or generalized in another setting (Elmore, 1995; Stein, Hubbard, & Mehan, 2004). What is currently believed to be true about change is that one must change one's practice and prove that the change works before one can change one's beliefs (Huberman & Miles, 1984). It seems better to start small and work your way up in the change process and de-bug the system as one goes along (Fullan, 1997). In addition, organic change which occurs both from the bottom up and the top down seems to be more effective (Hopkins, Ainscow, & West, 1994). Fullan (1993) thinks this is the case because this type of change provides both accountability and initiative. However, all researchers and writers seem to agree that change is complex, fragile in nature and learning and reproducing change from the learning is even more difficult to implement.

  Watzlawick, Weakland and Fisch (1974) recognized two basic types of change. They label these as first and second order change. According to them first and second order change each have a specfic process: the first order change is psychological in nature

and the second order change is more ontological in nature. Marzano, Zaffron, and Zarik (1995) state that there are two basic approaches to what Kuhn called a paradigm shift: one that involves a teacher's belief system and the other involves a teacher's experiences. The complexity of change is due in part to the complexity of people. Very often, people will declare one set of beliefs and then act as if another set of beliefs are true instead.

Hall and Loucks (1974) stated that there are seven stages through which people who are executing change must pass. The seven stages are awareness, informational, personal, management, consequences, collaboration and refocusing. Awareness could be seen as an introduction stage. At this stage in the innovation there is little information about the change. One is learning about the change and that it will take place or needs to take place. The second stage is informational. At this point the one involved with the shift is seeking information as in something like a seminar, observation or conference. The third stage is personal. This is the stage that asks "what is in this for me?" or "how will this affect my daily life?" This is "why would I care?" The fourth stage of change is the managed stage, and it is at this stage the person has accepted the change and now wants to effectively manage it. The fifth stage is the *fall out* stage. In this stage, the person having managed the change to the best of their ability starts wondering "what are the consequences of that change?" The sixth stage is more global in nature. After considering the individual implications, the person looks at the advantage or disadvantage of working as a group to bring about a more effective innovation. The seventh stage is refocusing the efforts to deal with any new factors and navigate the shift successfully. Very often change does not make it past the personal stage, because we all have what Kuhn

described as a mental set of beliefs and in order to have a paradigm shift we must get beyond our set of beliefs.

Smith (1982) says we have a theory of how the world should be in our head and in order to practice and implement educational change we need to align our current mental theory to the new feature to affect change. In order to shake up one's theory there very often has to be something to jumpstart a person to leave the comfort of the current theory. This is first order change. In schools, it could be a data set of below average scores, an achievement gap or a directive from the district that will kick off a desire to change.

The second order change occurs when one examines the assumptions behind the theory. This is an ontological approach and involves some experience(s) that include the person who is questioning the assumption be immersed in the process. The result of resolving these experiences allows the person to interact in a new way with paradigms, beliefs and assumptions. The person is changed internally concerning their thinking so that as they act externally based on the new belief. In schools this can occur individually when teachers are reflective about their practice and expand or modify their instruction based on their assumptions such as how diverse students learn or how technology can be effectively integrated.

If the need for change is so great and educators and society agree that education needs to step up and meet the students' and society's demands, then why does it seem that successful reforms are the exception and not the rule? One possible answer is that the

nature of the problem is complex. The link between cause and effect is not necessarily linear in nature but may include paradoxes and contradictions.

According to change theorists (Berman & McLaughlin,1976); Bryson, 1995; Conley,1993; Ferrara, 2000; Fullan, 1997; Joyner,1998; O'Brien 1991)the cycle of change tends to follow three distinct stages: initiation (beginning), implementation (action or fidelity), and institutionalization (the confirmation of the change). The initiation stage is the planning stage and theorists disagree as to the amount of time that should be spent in the stage. Kotter (1995) says that the initial plan is the most important of his eight step plan for implementing change. The eight steps include:

- create a sense of urgency,

- create powerful cohort,

- frame a vision,

- communicate a vision,

- empower others to act,

- plan for short term wins,

- evaluate and consolidate reform and institutionalize new approaches.

However, Fullan believes that often way too much time is spent in the beginning stages, and that time takes away from the energy needed in the later stages. Moreover, Bryson notes that the implementation stage should be marked by moving from planning to doing. Spencer and Winn (1995) said that although the Kotter business model is a good model, most schools have a planning stage and an implementation stage and should

involve stakeholders in the action phases as soon as possible. Moreover, Berman and McLaughlin assert when the change is practiced, it can become institutionalized and moves from a special project status to an accepted practice.

Institutionalizing change may not be possible when one considers how many variables there are to educational change. Teachers face jobs that are very complex when one considers the student populations that they serve, the increasing demands of districts and the ever changing job market. Therefore when examining change some components to look at include, who will implement what, how they will implement it, how one will know when they are successful, and what is the criteria to determine where one is on the continuum of the change. What is accepted is that change needs to be planned, practiced, and reflected upon. Change needs to be included in crucial conversations to bring about innovations that make a difference in implemented instructional practice that benefits student learning.

Concerning the nature of change, educators must look at education with a macro and a micro view in order to understand what is happening when change is occurring. The macro view involves the staggering numbers of students who do not meet the proficiencies set forth for student achievement and the effect of these students on the society they will enter. The micro view involves teachers who work a low paying job often with limited resources, but must still manage to serve a broad range of students. "Most teachers just want to get through the daily grind; the rewards are a few good days, covering the curriculum, getting a lesson across, and having an impact on one or two individual students (success stories)" (Fullan, 2007, p. 24). The challenge of education is

difficult from a micro or a macro level, but the difficulty does not diminish the need for change to meet the needs of students as educational solutions are needed for our informational society.

   Four pillars of innovation. Watt (2002) divides innovation into four pillars and these four pillars form the conceptual framework of this study:

- change and people,
- change and culture and climates,
- change and structures and process, and
- change and leadership.

   According to Watt having the four categories does not bring about change, but rather it is the interaction between these four categories that brings meaningful organizational change. This approach offers a framework to examine innovation or change in a structured way. This section on change is outlined by the people, culture, structures and leadership involved in the change. In the Watt (2002) study, the interviewers asked how the participants would rate the importance of these pillars to accomplish innovation and the results were 64 per cent believed that an organization's *culture and climate* are very important to being innovative, 57 per cent said that *leadership* was very important to a school being innovative, 36 per cent said that *structures and processes* of a school were very important to being innovative, but the overwhelming response to the chief agent for change was the people. The repeated response was "schools don't make change people do."

Change and people. People are the human collateral involved in the change process. Watt (2002) asserts that the human resource refers to the knowledge, skills, and behavior of employees and how they embrace change and how they learn. More particularly, the teachers were mentioned as the chief drivers in the change.

Innovative educators share some common traits. They tend to:

- Think "outside of the box"

- Approach challenges and opportunities in a creative manner

- Be risk takers/entrepreneurial minded

- Adapt to situations well and be flexible

- Demonstrate great tenacity

- Be open minded to new ideas and approaches

- Be passionate about education and learning

- Be proactive rather than reactive.

    Categories of Educators that emerged from the Watt study:

- *Creators*: the thought leaders, idea generators, and out- of- the-box thinkers

- *Implementers or Executors*: the producers, doers, and operations people

- *Commercializers*: the entrepreneurs, marketers, and sellers

- *Managers:* the organizers, team builders, networkers, and collaborators.

This listing of other educators emphasizes that it is not just the innovators that are important to change but that the interchange between the more hesitant teachers is important as well to sustain change. The teachers who are reluctant may be the ones that

contribute to the sustained change while the innovators may be off to a new change. This stresses the value and perspectives of all the team's members.

When preparing for change, teachers often attend staff development. Research does not support professional development that is taught in one session (Desimone, Porter, Garet et al., 2000). However, research does support on-the-job learning opportunities for teachers and this does underscore the importance of this type of professional development for effective teaching (Little, 1982; Smylie, 1995). Moreover, work by Goddard, Goddard, and Tschannen-Moran (2007) maintains that when teachers collaborate and speak the same language, they support each other in a positive way for students. According to Loeb (2007), "good teaching starts with inducing habits of mind, but doesn't stop there. Good teaching affects students' values, commitments and identities" (p. 7).The beliefs of each individual involved in the change must be examined and understood especially when teaching is learner-centered, personalized, and differentiated (Watson & Reigeluth, 2008).

Research concerning effective teaching change seems to indicate the difficulty of the task. "It is not that easy to accomplish fundamental change even with large resources, commitments from a variety of essential partners…the hardest core to crack is the learning core – changes in instructional practices" (Fullan, 1993, p. 49). Fundamental changes in teaching practices that really affect student learning seem to be the hardest thing to achieve. The art of good teaching is complicated. A lack of understanding of this principle leads to many simplistic policy prescriptions: "test-driven accountability, 'magic' teacher-proof curriculum, merit pay, paying students for performance, and

running schools like businesses. None of these reforms address the nature of teaching and learning" (Fullan, 1993, p. 49).

Timberley and Parr (2005) say that essence of change falls into three areas: beliefs and values, knowledge and skills, and outcomes. Fullan (2007) states that behaviors and emotions change before beliefs, but that lasting and effective change does not happen until the beliefs change as well. Interestingly enough, often beliefs are influenced by practice. Therefore, teachers need to practice the change or at least be open to it and then see the effect of the practice on students before they change their beliefs. This is why very often the planning for change can become counterintuitive to the process of change, because often it is when we try something and have some reflective experience with change, that we change in our thinking as well. It is then that the change becomes a successful outcome for students rather than just one more initiative in the ever changing five or six year cycle of state or district mandates. Pffeffer and Sutton (2000) and Mintzberg (2004) call this process of acting and reflecting and then changing beliefs- *reflection in action.*

Change and structures/processes. Fullan (2003) discusses the importance of both a capacity to change and the change itself. He states that *restructuring* in schools is done time and time again whereas *reculturing* is needed to bring about true change by questioning beliefs and habits and seeing what is needed to identify, implement and course correct for the good of student learning (Fullan, 2007, p.25). In order to re-culture the institution, the structures must be examined. What processes and procedures are in place to facilitate the innovation while at the same time normalizing it? These types of

structures are key in duplicating the helpful parts of the innovation and at the same time

can act as a filter for modifying and controlling aspects of the change that are not just

disruptive but destructive to the organization and to positive change. Examples of such

structures include the way communication is shared, the way teams are formed or the

way teacher leadership is chosen or emerges. According to Swaffield and MacBeath

(2006):

> "Embedding" is a concept applied to a vision, a set of procedures which become integral to the structure and culture of the organization. Over time, sooner or perhaps later, new ways of seeing and acting become habitual, reflexive and ingrained in practice. (p. 202)

Therefore, in this change, there are two sets of structures that can be examined: 1)

the structure for change that existed when the change began and 2) the structures being

embedded by this new change.

Change and leadership. Right behind, in front of, and all around educational

change are the people who are the catalyst for the innovation. These people are the

leaders. They provide the vision, materials, the direction, and the support for the change.

Jellison (2006) says that the leader must consider the long range value of the change and

then engage the followers into the process. Together they must reflect on the value of the

change after it has been implemented and agree on the change's continued value for

student learning. Swaffied and MacBeth (2006) describe the dilemma that exists for the

leaders, because they must resolve the tension between the top down mandate and the

struggles that the bottom up teachers encounter in order to achieve the goal of change.

Top down approaches can convey a clear message about expectations and focus for

improvement but this alone does not win the *hearts and minds* of all teachers or build

internal capacity (Department for Education and Skills, 2007, p. 7). Walters (2012) states

that a shared vision among teachers and leaders where there is a two-way communication

exchange is a better approach which he calls "one vision, many eyes" (p. 124). Goleman

(2002) interjects that this two-way communication comes when a leader has emotional

and social intelligence and is aware of the possible emotional backlash of change and

mediating that can bring about change. Walters states it this way, "leadership means

actually reflecting a social constructivist view of learning and becomes aligned to the

learning process" (p.124). Ylimaki and McClain (2009) assert good educational

leadership is "wisdom-centered educational leadership" (p. 3), and Fullan (2009)

describes this phenomenon as "change savvy" (p. 2).

Spillane, Haverson and Diamond (2003) assert that a *top down* leader who tries to

enlist aid from teachers in the change process is called a distributed leader. This type of

leader knows that only through the combined efforts of everyone in the school can a

complex change be implemented. Another type of leader that can emerge is called a

tempered radical (Meyerson, 2003). A tempered radical is a *bottom up* leader and this

person(s) usually emerge (s) from the teacher's group. This person(s) can bridge the gap

between the vision and the implementation of the change. This type of leader can come

from a group of like-minded people or the group may be the set of leaders. Moreover, the

convergence of the distributed leader and the tempered radical can result in effective

school change (Kezar and Lester, 2011).

Beyond distributing responsibilities and bridging the gap between the top and the bottom of leadership, a school principal or leader establishes a collaborative school community. Giving descriptive feedback about students allows the conversation to begin and defines higher standards in teaching. Establishing a culture of peer pressure after high instructional expectations have been set and providing time for adults to share positive change stories can impact positive school change (Elmore, 2004, Fullan, 2010, Hattie, 2012). In addition, framing school change from the viewpoint of the students' progress and the students' need for differentiation can result in a community that not only acknowledges all of the stake holders' efforts but also focuses these efforts in the correct endeavor which is student achievement (Dufour & Mattos, 2013).

According to the Watt study (2002), a good leader has the following common traits:

- Visionary--knowing where the school is heading and how it is going to get there

- Focused having clear goals and objectives

- Trustworthy and supportive both emotionally and financially of the vision and efforts of staff and students

- Good listener and communicator and a consultative and open to new ideas and new ways of working and doing things

- Optimistic and encouraging of staff to take initiative and risks, celebrates initiatives, achievements and successes of students and staff.

As I examined the traits of the leaders in this study, I also wanted to know: How did leadership facilitate or hinder the change to public Montessori instruction?

Change and school culture. In examining the transition from a traditional school to a public Montessori school, the subject of changing school culture is front and center. Bruner suggested "that how a culture or society manages its system of education is a major embodiment of the culture's way of life, not just of its preparation for it" (Bruner, 1996). What is school culture? According to Boas, school culture "at its core, is invisible, comprising a social group's distinct ways of thinking and understanding" (Boas, 1938, p. 211). Fullan states "the way teachers are trained, the way the schools are organized, the way the hierarchy operates …is more likely to retain the status quo than to change" (Fullan, 1993, p. 3) Therefore, change is inevitable, constant and also resisted at the same time.

Bolman and Deal (1984) assert that there are four frames or organizational structures that tend to be used by leaders when confronting change. The first of these perspectives, the structural frame, derives its outlook particularly from the discipline of sociology. The structural frame uses data to solve problems. This type of leader likes the neatness and attention to detail provided by this frame. Data also is important in addressing and monitoring the real problem or the response to the progress. The human resource frame is the human relationship frame. This type of leadership frame approach involves realizing the value of relationships and seeks to empower people around them. The human factor is important to any change because getting people to try new things involves trust which comes from a relationship. The political frame sees leadership as

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distributing and promoting power and the opportunity of power to get resources for one's group. The symbolic leader sees the need to inspire those around them with symbols of the school's vision. The symbolic frame derives meaning through symbols as rallying points to move forward to solve problems or initiate change. According to Bolman and Deal, leaders tend to rely on the structural and human resource frames in leadership most, and they tend to give less time to the political or the symbolic frames.

However, Dever (1997) asserts that Senge (1990) uses three of the four frames in his approach to organizational models that determine culture. Moreover, Senge's frames parallel Bolman and Deal (1984). The three are 1) *designer* (structural leader), 2) *leader* (symbolic leader) and 3) *teacher* (human resource leader). Senge also adds that he does not agree with the political frame, because he sees the group as reinforcing personal growth and from personal growth there is forward change rather than change determined by an organization's internal hierarchy. He sees the group as the organism and politics as taking from one to give to another. Senge wants the organism to move forward and be responsive to the needs facing the whole organization. This approach would be closer to DuFour's (2011) concept of Professional Learning Communities and the group ownership of problems and solutions. However, DuFour states that group work alone will not change the culture until "educators in these schools will collectively identify the right work and then create processes to support teams as they focus their efforts on those matters that improve student learning" (p. 23).

Although he is not an organic leadership or manager proponent, Watt (2002) states that in order for an organization to change there has to be an open and sharing

culture that seeks new ways of doing things. This environment must celebrate risk-taking and provide a safety net for mistakes and failures. MacDonald (2011) states this type of culture comes from "focus on the dilemma, not the teacher." However, stabilizing the disruptive nature of the effect of change on the organization often involves coming to some sense of normalcy after the change which, in turn, institutionalizes the change.

According to Watt (2002), culture is the set of commonly agreed upon behavioral norms. In order to facilitate the culture, the leaders must set and repeat mission statements that are simple and focused, enthusiastic and rallying, clear, and reflect the school values and priorities. In his study, he found that maintaining a flexible school environment that involved all school departments cultivated ownership of the change. In addition, new ideas were often aided and enabled by the technology components. Moreover, combining ideas with delegated decision making among and across all staff members facilitated substantial change.

The obstacles of innovation were listed as inflexibility in curriculum,, inflexible timetable and scheduling, standardized testing, something inherent in the building or structure, isolation of the educators and the community from what they were doing, and parent education. Hall and Hord (2001) suggested, "the press to make change quickly means that there is no time to learn about and come to understand the new way, nor time to grieve the loss of the old way" (p. 5). In addition, they explained: "When people must change, they have to stop doing some things that they know how to do well and in fact like doing, which creates a sense of sadness" (p. 5). Besides the psychological aspect of letting go and the trauma of beginning something new, there is a process of unlearning

involved in this as well. Schein (1996) explained that the "problem is not only how to acquire new concepts and skills, but also how to unlearn things that are no longer serving the organization well. Unlearning is an entirely different process involving anxiety, defensiveness, and resistance to change" (pp. 63-64). Often, the unlearning process is characterized by discomfort and anxiety.

Change leaders must be aware of this process of loss and the possible feelings that result so that they might effectively manage the transition period. Bridges (2003) suggested that "the failure to provide help with endings and losses leads to more problems for organizations in transition than anything else" (p. 8). Bridges identified the reason for the hesitancy in dealing with this stage of transition when he stated, "The problem is people don't like endings" (p. 23). Schein (1996) proposed that leaders as change agents must "have the emotional strength to be supportive of the organization while it deals with the anxieties attendant upon unlearning processes that were previously successful, that is, the ability to create for the organization a sense of 'psychological safety'" (p. 64). If the leaders are able to accomplish this, a positive outcome is possible. Fullan (1991) stated, "Real change, then, whether desired or not, represents a serious personal and collective experience characterized by ambivalence and uncertainty... if the change works out it can result in a sense of mastery, accomplishment, and professional growth" (p. 32). The change itself can either be a growth opportunity that paves the way for more change because the experience was positive, but it can also have the opposite effect if recurring change is negative or at least unwanted.

Moreover, Schlechty (2001) clearly outlined the difficulties of sustaining change when he stated, "Compared to sustaining change, starting change is relatively easy" (p. 39). Finnan (1996) also pointed out the complexity of sustaining change when he stated, "The challenge for all schools is to maintain momentum" (p. 119). Schlechty (2001) listed two things needed to sustain change: "One is a leader or leadership group that acts as a change agent; the other is a system or group of systems, that supports change" (p. 40). Many educational reform initiatives fall prey to difficulties during the change process and the efforts at reform are abandoned. Schlechty states in the change process there is usually a dip in performance at first then there is the tendency to go back to the old habits, but these elements can be managed by acknowledging these as possibilities and facing these downturns with reflection and re-focus on the original problem and some successes that have occurred. Kouzes and Posner (1996) suggest having "visible signs that change was taking place in order to keep up the momentum, and in order to restore confidence" (p.101). Many researchers believe that at this juncture of the change phase, change can be managed by a commitment to a common theme (Fullan, 2001, Kpuzes & Posner, 1996, Schlechty, 2001). Schlechty (2001) states that a leader "must communicate a clear vision of the future that will sustain the program even in the face of adversity" (p. 49) and remind involved in the changing even the view of what the new change will look like.. This type of vision and leadership will foster commitment rather than just compliance. Senge (1996) states "there is no substitute for commitment in bringing about deep change" (p, 43).

Pollock (2008) added to the framework written by Watt, (2002) and she noted that the emphasis on teachers' leadership in the change process versus the leaders' role in process of change would be reversed if the leader was a transformational leader. She stressed that there was a need of a *shepherd* or principal leading the teachers through this transition, and she cited her study as an example of the right leader who had the right vision making a greater difference and having a bigger impact on the innovation at the Villa Nova School in her study. "Transformational leadership… practices (Leithwood et al., 1999) appear to be ideally suited to shepherd schools through innovative changes"(p. 16).

The Watt framework noted that for innovation to work the total balance of all elements is very important. Therefore, the following summative concept mapping chart lays out the proposed various parts of the change components that were thought originally to be needed in this case study. Fink (2000) expresses it this way, "change agents tend to concentrate on tangible structures to the exclusion of those forces that are unseen, but represent the interconnections and interrelationships in the organization that make the organization whole" (p. 110).
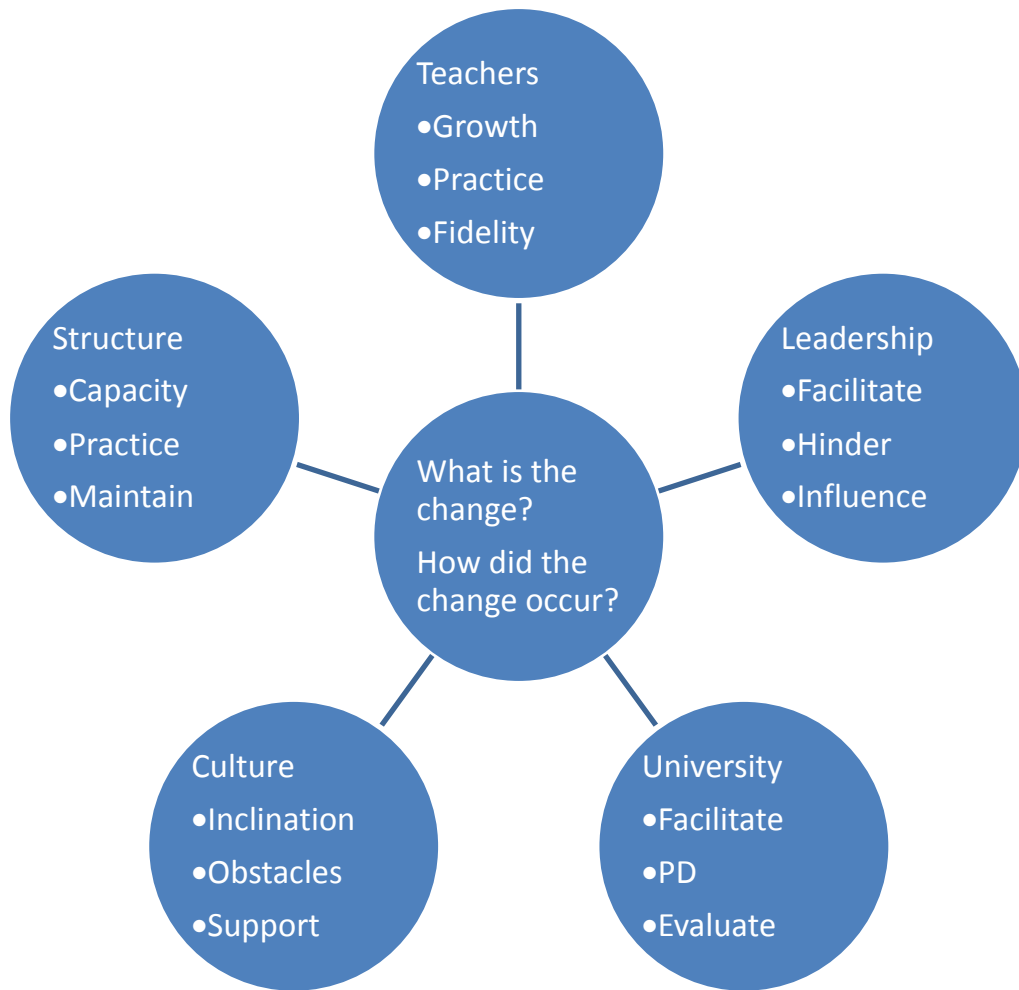
Figure 1. Original Conceptual Framework Based on the Watt (2002) Study

CHAPTER III

RESEARCH TRADITION

This is a case study of a large elementary school changing from a traditional school to a public Montessori school. Morrow and Smith (2000) state that the purpose of a qualitative case study is to show as many sides of the event as possible and let the participants narrate their own meaning. Creswell (1998) asserts that this methodology is inquiry-based and allows a social problem to emerge from a holistic complex picture. It is the ideal tool to explore something as complex as school change by seeing it as a multi-faceted event. Yin's study (1992) maintains that there are four applications to the case study model: 1) it explains complex links, 2) it describes real-life context, 3) it describes the intervention itself, and 4) it explores an intervention which may not have a clear outcome.

Setting

The *Big Box School* in this case study is a large elementary school in the southeastern part of the United States. It has almost 1,000 elementary students, and it is so large that the school has two principals and two assistant principals. The school population consists of mostly white and low socioeconomic families. The free and reduced lunch percentage is almost 90%. The challenge to meet the needs of this county prompted the district officials and a nearby university to partner together to open an early children's center. This center has several hundred preschool students and is the real

reason that there has been a ground swell for change for this school. The early children's center adopted a Montessori approach and the parents, administrators and teachers were so excited about the change this center made in the students' lives that they requested the elementary school across the street be turned into a public Montessori school. The school is broken into two parts consisting of first and second graders with their own administrators and third and fourth graders with their own administrators. The building is located in the middle of nowhere. It looks like a small airport as one drives up to it. Both sections of the school are located in this building, separated by signs in the hallway. Having them all in one large building allows the county to save money by building only one media center and one cafeteria.

During Summer I, 25 of the teachers began Montessori training which was held at the school over a course of four 40 hour weeks. In exchange for the training, the teachers received graduate credit that went toward a master's degree or *thirty plus* money that the state allows for teachers who have 30 hours over a master's degree. During Summer II, four more teachers joined the training. Among the teachers were four National Board Certified Teachers. The teachers presented as highly motivated and the administration sat in on many of the summer sessions.

Data Collection

Data collection included an email interview with a school district leader and a university leader involved with the Montessori initiative. I conducted a face-to-face interview with the principal of the primary wing of the school and reviewed archival documents to reveal how the change to a public Montessori school occurred. In the

Kamine and McKenzie (2010) case, how the district and the university worked together contributed to the successful outcome of the transition. Therefore, I wanted to know the historical background and circumstances under which this transition got its start.

The interviews used pseudonyms for the teachers, parents, community or university partners, administrators and the students. The interviews were transcribed and kept on an individual laptop and were not connected to a district-wide school server. Every attempt was made to protect references to bosses or co-workers when these references could in any way harm the teachers in their present work environment.

Moreover, I examined the interviews with the district, university and building leaders and compared them to the standards set forth by the North American Montessori Teacher Association (NAMTA) that outline how to transition a public school to a Montessori approach and what elements should be included in the process (e.g., materials, training, personnel). The American Montessori Society (AMS) is recognized by the Department of Education as the governing body of Montessori in America and NAMTA is the approved accrediting body of the AMS.

Their standards for a Montessori school are listed below:

- Employ an experienced Montessori teacher to serve as curriculum coordinator
- Employ a building principal/educational leader who has knowledge of Montessori principles and curriculum through Montessori coursework
- Provide an Administrator Credential and/or annual conference exposure
- Maintain commitment to the core Montessori curriculum and instruction even with changes in administrative staff

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- Sustain the support of the central administration through high profile communications about program development

- Recognize that the best implementation process is to begin with the two and a half to six year old age group and add one age at a time for a gradual progression

- Provide Recruitment/Parent Education

- Provide Montessori parent education programs that promote understanding of Montessori principles and curriculum

- Develop an admission process that informs parents about the nature of Montessori and seeks the necessary commitment to the program

- Purchase a full complement of Montessori materials from Montessori dealers

- Develop a classroom design that is compatible with Montessori "prepared environment" principles

- Create uninterrupted daily work periods of 90 minutes to three hours, considering the three hour work cycle as ideal

- Integrate specialty programs (e.g., music, art, physical education, etc.) around the uninterrupted work periods

- Apply the appropriate multi-age groupings: two and a half to six, six to nine, nine to12, 12 to 15, 15 to 18 necessary for the diversity, flexibility, and reduced competition integral to Montessori

- Alignment-Use a process of reporting student progress that is compatible with Montessori and includes parent conferences and authentic assessment tools such as observation, portfolio, performance assessment with rubric, etc.

- Implement state mandated assessments in such a way that the character of the Montessori program is not compromised.
- Create a Professional Development-Budget for continuing education through Montessori workshops and conferences
- Maintain membership with one or more of the professional Montessori organizations and seek Montessori accreditation to assure consistent quality

Based on this information, I asked the district and university leaders the following questions:

- As a district or university leader what role did you play in the transition of this school to a public Montessori school?
- Why was it important to have a public Montessori school in this district?
- What role did the collaboration between the district and the university play in this transition?
- What considerations were important to you as you approached making this change?
- How were the parents and the community informed of this transition?
- Do you or how do you plan on educating parents concerning this transition?
- How will this transition be supported throughout the gradual phase-in of Montessori throughout the school?
- What do you see as your end game or what is your criterion for judging this transition as complete or a success?

- From this project, I am most proud of _____. If I had it to do over again concerning this project I would do _____.

- How do you see this transition affecting the future plans for this state or district?

I interviewed the principal from the primary wing who was a change agent in this transition process and asked her these questions:

- How was the experience in general?

- How did you see Montessori methods in your school this year?

- If so, what were elements of this approach that you like and why?

- What were elements of this approach that you did not like and why?

- If you supervised the Montessori methods this year, what were elements of the approach with which you had great difficulty and what were the elements in which you thought you did well?

- How did the teachers aid this process? Did you see categories of teachers emerge?

- What structures or procedures are in place in the school that have or will continue to aid the school in the transition to a public Montessori school?

- What were/are the school's biggest obstacles? In examining the culture of your students and parents what successes and obstacles did the school face?

- In examining the culture of the school, how has the transition affected the school negatively or positively?

- What did you observe concerning the positive or negative affect this method had on students?

- What were the positive and negative responses from parents?

- What should be done differently next year? What should stay the same?

- How has this process of change affected your leadership?

- If you could describe the change process that you went through this year, where were you at the beginning of this change concerning this approach to teaching and where are you now?

- Do you think that this is just going to be one more mandate that comes and goes? Why or why not?

- Has this change been a good one for you, for your teachers, for the students or for your school? Why or why not?

- What will support and sustain this change as you go forward from here?

I continued the study by surveying the 29 teachers who were trained last year, asking them about the past year's teaching experience since this year was their first full year of implementing Montessori methods. The surveys contained eight open-ended short answer questions, and the questions helped me identify the teachers to select for longer interviews because the last question asked teachers to rate themselves on a change continuum in the form of a ratio as to how they thought they were implementing the change. I identified the teachers to interview by randomly selecting two teachers from each of the categories that emerged when I compared the teachers self-reflect rating of Montessori instructional implementation against their observed field rating of the inclusion of Standards-based instruction. Moreover, I confirmed what the teachers said in

the survey by triangulating the teachers' words from the surveys with a field work rating system for the classroom in an attempted to match the teacher reflection to their actual classroom practice. The rating system rated the presence of Montessori materials and lessons and standards materials and lessons and their use by the teachers and the students in a 30 minute snapshot. The rating system and the survey are in Appendix A.

From the correlation of the survey to the field work, I randomly identified two teachers from each of the six categories that emerged: 1) more Montessori, 2) more Standards, 3) more Balanced, 4) more Montessori than self-rated, 5) more Standards than self-rated and 6) more Balanced than self-rated. I interviewed them asking them to expand on the answers that they gave to the survey in greater detail.

I interviewed the teachers and asked them the following questions:

- How was the experience in general?

- Did you teach the Montessori methods in your class this year?

- If so, what were elements of this approach that you like and why?

- What were elements of this approach that you did not like and why?

- If you taught the Montessori methods this year, what were elements of the approach with which you had great difficulty and what were the elements that you did well?

- How did the administrators help you in this change process?

- What structures or procedures are in place in the school that have or will continue to aid you in your transition to public Montessori?

- What were/are your biggest obstacles? In examining the culture of your students and parents what successes and obstacles did you face?

- In examining the culture of the school, how has the change affected it negatively or positively?

- What did you observe concerning the positive or negative affect this method had on students?

- What were the positive and negative responses from parents?

- What should be done differently next year? What should stay the same?

- How has this process of change affected your teaching?

- If you could describe the change process that you went through this year, where were you at the beginning of this change concerning this approach to teaching and where are you now?

- Do you think that this is just going to be one more mandate that comes and goes? Why or why not?

- Has this change been a good one for you, for your students, for your class or for your school? Why or why not?

- What will support and sustain this change as you go forward from here?

Data Analysis

All interviews and field notes were transcribed. Interviews were coded and themes were identified. Interviews were coded for the way respondents' answered concerning how they used Montessori versus traditional school references. They were

also classified according to the influences of people, leaders, structure and culture categories from the conceptual framework, and their reflective thoughts concerning culture and school change. Subsequently, there was a comparison made between what the teacher said about his/her Montessori approach to teaching and what was seen in the classroom. I made constant comparisons (Glaser, 1978) and looked for relationships that explained the change and the viewpoints toward the changes that had or had not taken place in the school and in individual teaching practices by interpreting the responses to the research questions. More particularly, I looked at the conceptual framework to see how the people, culture, leadership and change structures influenced the change.

The interviews and observations were coded using a coding scheme developed from the emerging themes found in the interviews using a constant comparative method (Glaser & Strauss, 1967; Strauss & Corbin, 1990). This method states that interviews and field notes are reviewed to locate the code that best fits the line, sentence or statement. Furthermore, I used a three step process to analyze the data, per recommendations from Glaser and Strauss (1967) and Strauss and Corbin (1990). The first step of the process is to become intimate with the data through careful reading, knowledge of the literature, and associations with the interview questions. The next step involves deciphering and identifying the themes present within the data and creating the codes associated with the overarching themes. Finally, the coded data were separated into the thematic categories into which they fit and the categories were rechecked by member check to provide cross-checking of the data and codes (Denzin, 1978).

The coded data were then separated into the thematic categories and analyzed for subgroups and subthemes. Using a recursive abstraction technique, I summarized the data categories into subthemes within our major themes. From this procedure, I began the writing process by individually focusing on a data category and its subsequent subthemes. While writing, I focused my findings on the connections to the major themes and used quotes from the interviews to highlight the sub-themes I found. I cross checked my analysis to triangulate my findings and bias (Denzin & Lincoln, 1998).

Trustworthiness

Trustworthiness was triangulated by comparing the words of the teachers who were interviewed with their field observation. In reviewing data collection, I used identifiers instead of names so that I would not be swayed in making assumptions based the relationships that I had established with these teachers in the course of the data collection and/or the previous instructional courses I had taught with some of these teachers. I employed a member check utilizing a Montessori teacher and a traditional teacher to examine the consistency of coding and analyzing the data throughout the process and regarding the end results. I met with each of the teachers and discussed their concerns and incorporated their feedback into the revisions of data analysis interpretation, and sent the final dissertation document to each of them for additional comments and revisions. I reviewed their comments and edited this document based on their final suggestions to more accurately reflect the concerns of both the Montessori and the Standards-based teacher.

Subjectivity

Peshkin (2010) states "subjectivity is a coat that cannot be removed." Let me reveal that the garment I wear is that of a progressive public Montessori teacher who has made the choice to innovate the two systems (Montessori and standards-based) together. Therefore, I asked a traditional educator and a public Montessori teacher to serve as peer reviewers (Guba & Lincoln, 1994) for my conclusions and provide feedback in the interest of understanding my own subjectivity. Since I have determined to listen to the district mandates respectfully, but to honor my Montessori roots, I was mindful that I did not assume that other teachers have made that same choice. I was conscious that the data reveal themselves to me instead of revealing myself in the data using the evidence that I have collected. I was mindful to be respectful of the choices that other educators made by using reflective commentary to develop a *progressive subjectivity* while evaluating the emerging concepts. I understand that these choices are not easy and that a professional journey is just that: both professional and a journey.

Due to the fact that I used observations and interviews as my main form of data collection, there could be some inherent biases and subjectivity apparent in the study since I have taught two of the Montessori masters courses for the teachers. The Montessori Master program is 36 hours, and I taught 6 hours of the program. I taught science and art, not philosophy or core subjects. I did not interview the teachers until the grades I gave them for the courses were recorded. The grades were based on a rubric that did not serve as data for this study, and I kept all communication confidential.

Benefits & Risks

The benefit to the participants was feedback concerning their teaching practice from sharing the results of the study and the member checking feedback. This study also offered the opportunity for teachers to be reflective about their practice. The risks of this study involved the intrusion into their class and the possibility that they may think that their summer Montessori grade would be influenced by this interview or observation.

Key Terms

For the purposes of this study the following coding and key definitions need to be explained:

- Facilitated teaching: the Montessori teacher facilitates the classroom activities, carefully planning the environment, and helping progress from one activity to the next. Montessori professionals are trained to deal with each child individually. This is often called "following the child." A Montessori teacher often stands back while the child is working, allowing them to gain satisfaction in their own discoveries (NATC, 2007).

- Student centered learning: the focus is on children learning, not on teachers' teaching (NATC, 2007).

- Teacher centered learning: the focus is on the instructor and time is spent listening to the teacher lecture.

- Whole group teaching: whole class teaching.

- Small group teaching: smaller groups gathered by interest or skill.

- Individualized instruction: personalizing education based on formative mastery assessment.

- District or state mandates: policies or mandates that must be followed such as pacing guides.

- Managing an independent learning environment: the management of students while small group instruction is occurring often known as centers in traditional education.

- Student self-empowerment or choices: viewing students as a part of the collaboration process.

- Uninterrupted work cycle: two to three hour block of instructional time.

- Multi-aged grouping: three year grouping of students.

- Grade level grouping: one grade level.

- Normalization: Montessori observed that when children are allowed freedom in an environment suited to their needs, they blossom. After a period of intense concentration, working with materials that fully engage their interest, children appear to be refreshed and contented. Through continued concentrated work of their own choice, children grow in inner discipline and peace. She called this process *normalization* and cites it as "the most important single result of our whole work" (Montessori, 1949).

- Stages of development: Dr. Montessori's observations led her to divide the children's educational and psychological growth and development from childhood

to adulthood into four planes of development; 0-6 years, 6-12 year, 12-18 years, and 18-24 years.

- Grading system: letter grades.

- Mastery system: a record keeping system of keeping track of individualized essential objectives.

- Gap standards: this term was coined by the teachers and emerged as a description of the standards that were not covered by the Montessori materials.

- Montessori albums: the collection of lesson plans that are the teacher's guide to the curriculum of the Montessori pedagogy.

According to the National Association of Montessori Teachers, the tension between traditional education and Montessori Education includes: Worksheets versus kinesthetic materials, uninterrupted blocks of time versus scheduled subject units, single grade verse multi-aged grades, students immobile directed by teachers in desks versus freedom to move and talk within the construct of social consideration, students fit the mold of the school versus school adapts to the needs of the students, product-oriented report cards versus process-oriented mastery check-list.

Data Analysis

The research analysis segment of my study was done by compiling the answers from the eight open ended survey questions and reviewing the interview transcripts. A field observation protocol verified that the answers accurately represented the implemented instructional practice. Using this approach, the teachers' instructional practice and answers were compared and contrasted against the teachers' proclaimed

continuum for balancing the dual curriculums of Montessori and Standards based instruction. In addition, the teachers were given an opportunity to rate themselves as mostly Montessori, mostly Standards-based or a balanced combination of the two. Their assertion was checked against the 30 minute observational protocol which looked at the composition of the materials--Standards versus Montessori, the teacher instruction, and the student practice. Using this protocol, six categories emerged. The first three categories were expected and included More Montessori, More Standard and a Balance on the continuum of this change. However, three other categories emerged. These categories include: more Montessori than rated (MMTR), more standard than rated (MSTR) and more balanced than rated (MBTR). With the six categories identified, two participants were randomly chosen from each category to interview using an interview guide. The twelve participants were also observed for an hour using a running record method describing minute by minute what the teacher/teacher assistant and the students were doing during that time. The next step was to decipher and identify the themes present within the data beginning with the three research questions and creating the codes associated with the overarching themes. Finally, the coded data was separated into categories and organized by likenesses and differences. The categories were member checked by a standards-based member and a Montessori member to provide cross-checking of the data and codes (Denzin, 1978).

Table 2. Self-Rating Versus Field Work Rating: Categories

Name	Montessori	Standard	Sum	Ratio of B to Sum	Ratio of C to Sum	Observe - Rated	Self- Rated
Montessori 1	20	11	13	65	35	70-30	80-20
Montessori 2	20	4	24	83	17	80-20	70-30
Montessori 3	20	13	33	61	39	60-40	60-40
Montessori 4	17	10	27	63	37	60-40	70-30
Montessori 5	17	11	28	61	39	60-40	70-30
Standards 1	8	18	26	31	69	30-70	30-70
Standards 2	4	16	20	20	80	20-80	30-70
Standards 3	4	20	24	17	83	20-80	30-70
Standards 4	6	18	24	25	75	20-80	30-70
Standards 5	4	20	24	17	83	20-80	20-80
Standards 6	4	20	24	17	83	20-80	10-90
Standards 7	10	20	30	33	67	30-70	30-70
Balanced 1	12	11	23	52	48	50-50	50-50
Balanced 2	12	11	23	52	48	50-50	50-50
Balanced 3	17	15	32	53	47	50-50	50-50
More Montessori Than Rated 1	20	11	31	65	35	70-30	50-50
More Montessori Than Rated 2	20	11	31	65	35	70-30	50-50
More Montessori Than Rated 3	23	10	33	70	30	70-30	50-50
More Montessori Than Rated 4	20	11	31	65	35	70-30	50-50
More Montessori Than Rated 5	19	11	30	63	37	60-40	40-60
More Standards Than Rated 1	6	19	25	24	76	20-80	50-50
More Standards Than Rated 2	10	19	29	34	66	30-70	50-50
More Standards Than Rated 3	10	20	30	33	67	30-70	50-50
More Balanced Than Rated 1	15	16	31	48	52	50-50	70-30

More Balanced Than Rated 2	14	14	28	50	50	50-50	70-30
More Balanced Than Rated 3	14	14	28	50	50	50-50	70-30
More Balanced Than Rated 4	15	15	30	50	50	50-50	30-70

The table represents the 27 teachers who rated themselves (one teacher rated her outside time as 85% but gave no percentage rating as to her ability to balance the two curriculum and one other teacher said that he did not understand the question), and these self-ratings were compared with a fieldwork guide and out of the comparison, six categories emerged: Mostly Montessori, Mostly Standards Based, Mostly Balanced, More Montessori Than Rated, More Standards Than Rated and More Balanced Than Rated. The Mostly Montessori, Mostly Standards and Mostly Balanced categories came from scores that were in agreement with the self-rating or were adjacent to the self-rated score such as 70-30 and 80-20. The More Montessori Than Rated, More Standards Than Rated and More Balanced Than Rated came from field observation scores that were at least two scores away from the self-rated score such as 70-30 and 50-50. These were not adjacent scores. The raw scores were rounded to the nearest tenth.

Two people were randomly chosen from each category for a one hour interview and then an hour of observational running record was made in each classroom to confirm, clarify or understand the instructional practice of each teacher. I randomly chose to interview M1, M5, S1, S4, B1, B3, MMTR1, MMTR3, MSTR2, MSTR3, MBTR1, and MBTR3. Noting the teacher's place on the continuum of this change from a traditional

public school to a public Montessori school was the focus of the comparison between the observations and the interviews.

In addition to the 12 teachers who were interviewed, the primary principal (grade 1 and 2) who was involved with the process from the beginning was interviewed because her answers provided the background information needed to understand the context and setting of the change. The principal was interviewed for an hour. The superintendent who began the change and the university leader in charge of the professional development were not available for an interview, but instead completed the interview guide and emailed it to me. Both of these individuals added insight into the behind the scenes process of this change. Their statements are included throughout the findings wherever it could lend insight or clarification of the change.

The coded data were then separated from the question categories and compared against the conceptual framework. I then analyzed patterns of subgroups and subthemes. I summarized the data categories into subthemes within the major themes. After following this protocol, I began the writing process by individually focusing on a data category, and its subsequent subthemes. While writing, I focused my findings on the connections to the three major questions, conceptual framework and emerging themes and used quotes from the interviews to highlight the sub-themes I found.

The next chapters unpack the interview and surveys results. Chapter Four is a descriptive chapter that answers the question, "What was the change?" In this chapter the change is reviewed chronologically and examined from the viewpoint of the principal most involved with the change and from the teachers. Chapter Five answers the question,

"How did the change happen?" This chapter analyzes the components that caused the change to occur. Chapter Six answers the follow-up question concerning, "How was the mandate between Standards and Montessori balanced?" This change involves transitioning to a public Montessori school and as such the school and the teachers must make choices of just how to utilize instructional time and resources. This change is unique in that in it is not just a change from one program to another program, but this change involves folding one approach into the other approach in a particular way so the result reflects both. Therefore, Chapter Six deals with the tensions and the decision making processes that positively and negatively impact this very specific type of change. Chapter Seven narrates the internal and external chronicle of teacher change by looking at this change from the teachers' viewpoint. Chapter Eight summarizes and analyzes the conditions under which the change was accomplished and outliers concerning the change.

CHAPTER IV

CHRONOLOGY OF THE CHANGE

In order to understand the chronology of the change, it is first important to understand the school setting and how the change came about. This chapter reviews the chronology of the change towards a school transitioning from a traditional approach to a Montessori pedagogical implementation. The public Montessori program in this school is classified as a school within a school. On one side there is a primary school entrance with its own office and principal and assistant principal, and on the other end is another entrance with another principal and an assistant principal. The middle of the school is open to both sides so that each side can use the cafeteria and media center. There are playgrounds at either end of the schools and in the back of the school is a school bus depot.

This change began from the superintendent's belief concerning where to begin school improvement to increase high school graduation rates. She believed that this reform should start at the lower grades by facilitating success for failing students especially in reading comprehension. She thought if students were engaged at the younger ages, as young as three, four and five, they could be more successful in school. To this end, she acquired the funds to begin an early childhood center. She researched what program to use in that center and was most impressed with what she read about Montessori education. She then viewed several Montessori schools and believed that the

level of engagement that she saw in these schools would enable this county to see the growth in learning for students that she would desire.

Being convinced of the need for early childhood education, the superintendent acquired the funds and the early childhood center began as a pre-school Montessori program free to the public. This three through five year old program enrolled approximately 500 students and used the Montessori approach in all of the rooms but one. This pre-school was the first wave of the teacher change concerning this county's transition to public Montessori education. At first, this was to be the beginning and the end of this change. The county had a way to help students at an early age which was the goal. However, there was such a positive response to the center that an idea formed that the Montessori program should move from an early childhood program across the street to the recently built elementary school with an enrollment capacity of a thousand students.

As part of the chronology, the roles of the leaders, teachers, parents and students will be discussed as surrounding influences. The viewpoint of the narration is mostly from the perspective of the teachers and the principal involved in this initial phase of the change. This study focuses on what is really the second phase of the change, since the first phase was the early childhood center. This chapter addresses the influences that brought about this change and the opinions and reactions of the teachers and the principal involved as they describe and comment on the change and reflect on the reactions of the students, parents and community to the change.

This chapter describes the Montessori pedagogy by comparing the school's changes to a Montessori and a non-Montessori source. The Montessori source is Lillard (2006) who communicates this pedagogy in terms of eight principles. The non-Montessori, or standards, source is Zemelman (1998) who communicates the change in terms of what is seen in traditional educational settings, but outlines a desire to improve this instruction by comparing traditional education to a less and more set of principles that describe best practices of traditional education. In describing the change, it is important to note that both of these sets of principles set high expectations for instruction. By comparing and contrasting, they present a positive and negative view of instruction both for Montessori and traditional/standards-based education.

The Setting

As one travels to the schools from the nearby urban city in the southeast, one drives for about 45 minutes and then, past farms and old factories as if from out of nowhere, there are two schools. The smaller of the two schools is the early childhood center. The larger of the two buildings looks like a small airport. The parking lots outside the school wind around to accommodate the carpool parents who wait for as long as an hour in the labyrinth of internal circles that organize the dismissal lanes. The physical buildings reflect the history of the change. The first building, the early childhood center, reaches younger students through the Montessori approach. The second building, the primary/elementary school, is the site of the second change--an attempt to upgrade the educational future of these rural students.

The school next door is a completely free public Montessori early childhood center. In each room a visitor sees row upon row of shelves with didactic materials on display. Most of the Montessori materials have a self-correcting feature so that once introduced to a student, they can be used individually by a student or they can be used in a peer teaching group or a small student group. The tables are proportional to the students. There is gardening space just outside the indoor classroom and the students are utilizing both learning spaces. During one of my visits, a small group of students was spreading mulch in the outdoor garden under the supervision of the teacher, while the assistant teacher was indoors monitoring the three, four and five year olds who were rolling out rugs and putting the *works* on them or sitting at tables watering flowers or sorting math materials. There was a soft hum of students talking and occasionally laughing. Two students started to argue and one of the students got up and went to a table and picked up a white rose and took it to the other student and said, "I declare peace." The student with the rose spoke, "I don't like it when you take my snack crackers. Please give them back." The two settled the dispute and returned to their work. The classroom area is organized by the practical life, sensorial, math and language areas. The practical life area is usually near a sink and the floor around it is tiled. The brooms and dust pans are all small and match the size of the students' hands, because they are the caretakers of this environment. This area is a bridge between the home and school. Students learn self-care and the squeezing activities help to refine their pincer finger grip to prepare them for writing. The sensorial area is the area where the senses are isolated in discovering such concepts as length, width, and height. There are color grading and sorting and exercises

that allow the student to explore with his/her senses. The math section builds on the

sensorial section by turning the length rods into math counting rods, and the language

section allows a student to map or match phonic symbols to tiny little objects. The

classroom reflects a learning environment that is hands-on in practice and built upon the

Montessori concept of following the development of the child to promote optimal

learning for each student.

The Beginning Influences

The teachers expressed that the culture of the area was one of a

> Low-income district. I think a lot of the parents out here don't support education
> in general-so I think that with Montessori I guess what I'm trying to say is that if
> you come from a background that doesn't value education. The students usually
> don't do as well but being in an atmosphere like this helps.

The teachers felt that, instead of this being a bad thing, having an opportunity to

see education differently might be good in this lower income county.

> I think that the students get to see a different kind of education. They get to see
> the advantages of learning in a class like this. The students get to see other
> students excited about learning.

The administrators were also well aware of the backing and support from the

district. As one principal said, "The district has made a huge investment financially for

one thing. I can't even begin to imagine what this classroom cost in terms of dollars and

to train all the teachers that have been trained. I think the teachers have embraced it. I

think that our teachers have a great attitude and a great work ethic." As an example of

this work ethic she cited that, "any day if you ride by this parking lot at six o'clock, you

will still see teachers here working to get things done for their classroom. I am not saying that just the Montessori teachers do that, as a staff, we have people who go above and beyond." She also stated that she felt that in her experience lasting change would come from changing the culture of the school towards going above and beyond as the standard and changing the mentality of the parents in understanding and supporting the school.

To that end, one of the teachers mentioned she felt the communication to parents in the initial stages of the program had been successful. "There were meetings held so that they could make the best choice for their child. I think that has contributed to a lot of our success." She also felt the administrators had done a good job with the initial stage of implementing the program. "I feel like the school has tried their best to get us as many materials as they can but sometimes that is a challenge." When I first saw the school over two years ago in the summer, the halls were being filled with boxes and boxes of materials. The boxes were stacked as high as the top of some door frames and the teachers had to unpack the boxes and try to figure out what the materials were and how they were to be used. The receiving and distribution of the materials into the proper rooms and unpacking all the boxes became its own challenge. Ordering from different vendors and coordinating the arrival of this many boxes of materials was an accomplishment in and of itself.

The teachers were described to me initially as "country women folk." What I found when I visited was seasoned professional educators that included several National Board Certified teachers. They did have the country charm of bringing baked goods to the classes, but this is where the folksy southern fried chicken image ended. This mostly

female group of educators is smart, instructionally savvy, and dedicated to the rural lower socioeconomic students. They often fell into the category of seasoned teachers of ten or twenty or more years of teaching or they were young, intelligent, recent college graduates with great technology skills. All of the teachers interviewed happened to be women which may be logical when choosing randomly from six different self-identified/rated categories when there are only two men in the group. Many of these women and one of the men have their children in this school as well. Often their children are in the classrooms of their Montessori friend next door.

The beginning school culture as recalled by the teachers was positive and supportive. "As a school, we value respect and procedures. I think that ties in real well with Montessori because of the teaching on *peaceful community* and also the procedures are very important. This is how we do the work and this is how we record it." Other teachers who were not Montessori teachers even responded positively to the change in school pedagogy. "Our Related Arts teacher (specials teachers)-well specifically our art teacher- is interested in what we are doing in the classroom and tries to relate what we are doing in the classroom with the arts."

The teachers' beginning concerns ranged from their fears for themselves and their fears that their students may not do well with this approach. As expressed by one teacher,

> When I first started I felt overwhelmed, did not know where to begin. I wanted to first start with the Great Lesson and I wanted to start my year off with that but having not taught that way before I didn't know where to start. I also didn't know how my kids would be able to handle it as far an endurance and confidence.

Another teacher said,

When we actually had to get in the classroom and start teaching it [Montessori], it was easy to go through the training and to learn about it. As you were going through the training, you felt like, "I understand this, yes." But then to come in here and actually start up and you've got a Montessori classroom now that was probably the biggest obstacle. I've heard many teachers say that their biggest fear was that they lay in bed at night thinking, "What am I going to do the first day? How is this even going to get started?"

However, the teachers pushed through their fears and then recalled,

When I first started last year, I thought that I was not very successful. I felt like kids were wasting a lot of time and weren't very focused and that it would be better for me to do traditional but as I stayed with it and kept reviewing the procedures and practicing, it seemed like it took a long time but once the kids learned the procedures and learned the materials, I noticed that they were focusing more and doing productive work. It just took a long time in the beginning to learn all of the materials, because they had never seen them before. So that was probably the hardest part at the beginning.

Almost all of the teachers said that they would not have had the courage to push themselves to try teaching in a way that was this different and unfamiliar to them if it had not been for the support from the administrators and the positive feedback that the administrators from both sides of the building kept giving them.

I feel that our administrators are supportive. When they come in and do observations, they know that in the Montessori classroom, it's not going to look exactly like a traditional. So when we signed up to do our observations, she even said, "If you are Montessori and only have three kids on the rug, that's fine. We just want to come watch you do a lesson. So whatever it is that you do we just want to come see it. That's all." Like I said, the feedback was all positive.

Every teacher who was interviewed from the primary or the elementary school stated she felt that in the beginning the energy and positivity for the program was in place from the leadership. "I feel like that this has always been a positive culture. I feel very happy here. I don't think Montessori has taken away from that in any way. Like I said it has given us more resources and more opportunities to talk about things and the best practice for kids."

However, there were still teachers who struggled, most particularly with the changes that were so unfamiliar to them: seemingly simple things like the lack of furniture. One said, to her it was

> Like all the traditional stuff had disappeared and all that was left was Montessori materials and some of them, all the language, I'm just having that class now so I had no clue as to what all the language materials were, but I know now, but it was a big change.

Another simple thing was that Montessori suggests that teachers not have desks because the desk can be a place that separates teachers physically from the students. Some teacher's desk size shrunk, but they almost all wanted to keep some type of desk so that they could store record keeping information. Sometimes it was these little familiar comforts that were hard for teachers to give up. Some of the teachers got stuck on just such an artifact and could not seem to get past it.

Some teachers expressed frustrations when they had to articulate what they would be teaching to the students' parents as they came in for open house inquiring about the new direction and instruction. As one teacher, expressed,

A lot of the parents came in and wanted to know, "what are you going to do this year? What are you going to teach my child? How is he going to learn?" and that is something that I'm still learning now, as to how far we can go and where we can go and how we're going to get there. I know what I want to teach. I'm just working on how to get there.

Some teachers grabbed the pieces that made sense to them, and they ran with that like taking a part of a tiny thread and pulling that to get to a more complex tapestry of a concept. One teacher stated,

Like me, I started with my atmosphere. I started with how I wanted my class to act and to feel. I started out the year last year as a traditional teacher, and I started with the small group lessons. I started with a *fake* shelf and with them learning to take out work and put it back. Then we started with a work plan. Lots of choices and then we worked on independence. Take it one step at a time. Should I really be doing this? Every day I am learning.

The responsibility of learning this new approach in a way that would facilitate students' learning weighed heavily on the teachers as they began this new way to teach at the start of the school year. One teacher mentioned there was not a lot of sleep at the beginning of the process, because they were so overwhelmed since they did not know what they were doing. She said however, as they came to understand how to teach in a student facilitated learning classroom, the teachers still did not get a lot of sleep, because then they were involved in making Montessori materials that combined standard objectives. Either way this past eighteen months became sleepless months for these teachers. One teacher stated she got through this because they were told by the administrators, "they think this is a good way for the types of children we serve in our school district to learn because a lot of them are on free or reduced lunch. I think that

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they feel like this is a really individualized way to take each child and move them forward from there." In the beginning, the teachers were sustained by the vision of the support of the administrators and their hard work and belief that this approach could possibly make a difference in student learning.

The Chronology of the Change

       Phase 1: Change began with the leader's vision. The principal of the primary school, which includes approximately 500 first and second graders, shared the history of her involvement in this change. She had been the administrative assistant to the current superintendent when the superintendent decided to investigate Montessori as a possible option for this mostly low socio-economic student population. Several years before the school changed, the superintendent and the administrator began conversations about what it would take to transform these educational outcomes for the students in this county. The superintendent sent her then-administrative assistant to observe Montessori classrooms around the state. As mentioned by the assistant administrator, who later became the principal of this school, "she (the superintendent) believed, and I do too, that the chances for all the kids to get help would be better in an independent environment where children were all learning independently--given the opportunity to have better resources." In their current roles of superintendent and principal, they tried to change the school at first using various methods such as "afterschool programs and in-school tutors. It helped but it didn't provide us with the increases that we wanted." They both regrouped and discussed what they were up against in terms of their students and about what possible solutions

might help change the cycle of poverty in this area. Describing the town, the principal stated,

> This area through the years has had a lot of trailer parks and economical housing. A lot of people who moved here say that they moved here because they could afford to live here. The bad thing about that is that brings an element of high instance of meth and drug activity. In fact, this area is known by law enforcement people as the- Devil's Meth Triangle because there is so much drug activity. Of course, that is not just here, but we have a lot of that.

When asked about how the poverty issue was identified by the school, the principal said that the free and reduced lunch ratio was 82% of the school's mostly white population. She mentioned that as the county determined poverty they had a 45% real poverty rate with a 5% homeless population. Both the principal and the teachers indicated that some of the students have one parent in jail. Faced with these challenges, these women began a conversation concerning how to help these students. As relayed by the principal,

> This change started because of the superintendent. She has always been a bottom to top leader. She was one of the few people that didn't think that you could fix things from the high school level. I was fortunate when she began as an associate superintendent, I was her administrative assistant. Even back then she thought we needed to fix things at this level, and we really didn't have things to put that into place. She felt strongly that Montessori would work well with children of poverty. We did a lot of study with children of poverty and knowing that our children were coming in way behind. Our summer reading slide was 3-4 reading levels. Whereas, it may be normal for students to lose a level or 2, our students would come back losing 3-4 levels because there was no reading over the summer.

With the implementation of a public Montessori school as a possible solution, administration developed a plan that started with three, four and five year olds. In

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partnership with a local university, the board and leadership set out to create a Montessori

early childhood center that was open to the public.

The university coordinator explained her role in the process as follows,

The district had already made the decision to explore the possibility of
implementing a Montessori program as an option for choice in their new early
childhood center. I was contacted and invited to come meet with a number of
district and building level administrators in 2009. At least one other Montessori
training program (non-university) also met with the district as they decided. I had
no prior experience in (County). My role was to explain the procedures for
gaining approval to offer an accredited course at their site, explain the course
content, a timeline for implementation and a fee structure. Soon after that
meeting, the district contacted me and said they would like to enter into a
contractual arrangement with [my university] to provide coursework for
Montessori certification. It was not until after the teacher training began that the
district decided to proceed with a total Montessori program. The quality of the
instruction and the enthusiasm of the teachers in the classes convinced them to
offer Montessori to all families.

The center was successful, and because of that success, when the students

transferred over to the primary school of first and second grade students, the parents

wanted to continue with the Montessori approach. It was then that I came in contact with

this program as a Montessori teacher-trainer to the first wave of teachers who started the

Montessori master's level training on the school's site, coordinated with the nearby

university that offered a Montessori master's program. The superintendent and the

principal saw this as the best way to make a lasting impact that could possibly change

education at this school by delivering quality materials that would improve student

engagement. The commitment was to bring the best quality of education that they could

find to a lower socioeconomic area and in the principal's words,

> Wouldn't it be wonderful if we look 10 years down the line at the graduates-to see the graduates from (poorer county) were doing as well as the graduates from (richer county), and if that happens, I think that is when you say it worked, but I don't know if that will happen, but if it does, it worked.

Her measure of success was to see the students of her county having the same opportunities as that of the nearby wealthier county. By providing this change, they might possibly change the downward cycle for which these students seemed to be headed. As the principal summarized,

> I love Montessori, and I just think that is the best thing that could have happened to the district. I think that it will be years before we see the effect, because it is going to take time for it to go through, but I think that these children are going to be better problem solvers because of these experiences. They are going to learn it on their own. They are going to be better note takers (since they write down their work after they sort it), because they have built the stamina to write that length of time. I see this as being a real positive experience. These kids got what normally only affluent kids were able to get.

One of the things that were determined early on was that parents would have a choice when transitioning to the primary school. Part of this was done by necessity, because it takes time for a teacher to understand and implement a Montessori classroom and part of this was done by design so that the school was designed around the freedom of choice. Parents were the ones that chose or did not choose the Montessori program. If they did not choose Montessori the other option was an integrated literacy program. This is what the traditional classrooms in this school are called. Currently, two thirds of the primary school consists of Montessori classrooms and one third of the classrooms are integrated literacy classrooms. The school is a big building with almost 1,000 students. There is a principal and an assistant principal on the primary side and a principal and an

assistant principal on the elementary side. The building has no wall between the two school sides. There is just a stop sign in the middle to indicate that you are going into the other side. This may have been done so that only one cafeteria, media center and service offices needed to be built to serve all of the students. Across the street the early childhood center serves approximately 500 students. In that building, all of the regular education classrooms used the Montessori approach except one. In the other building there are two sides one named primary that includes first and second grade students and the other side named elementary that includes third and fourth grade students. On the primary side of the building two thirds of the students chose Montessori and on the elementary side of the building in this first full year of implementation only one third of the students were in a Montessori classroom. So about half of the students were in a Montessori named classroom and half were in what was named an Integrated Literacy or traditional/Standards-based classroom. There was a total school student population of 1000. This school with the two choices option is considered to be a school within a school, one of over forty of its kind in this state (Ripa, G., Personal Communication, 2012).

During this time period a nearby university Montessori coordinator was invited to the discussion of bringing Montessori training and materials to the Early Childhood Center and eventually the primary school. From the university administrator's viewpoint this was done because,

> The district was trying to take a long-term, strategic look at the needs in their community. Quality early childhood (education) that was available to every

family in the district was determined to be a key element to achieving their goals for improving student achievement and raising graduation rates.

The principal said the superintendent was interested in this approach, and because of this, she asked a group of teachers to travel to a city in a neighboring state to observe in several Montessori schools. When the teachers returned, they were so excited about what they had seen and the difference they thought it could make for the younger students in this county. The principal remarked concerning the superintendent,

> I think that she has been interested in it for a while. The way that we opened up the early childhood center… the way that we bring in the three year olds to try to start intervening at an early age that this was seen as a good way to do it because all of the classes over there except for one are Montessori. If the parents want them to continue in Montessori, then we have to have enough teachers trained so that we can meet that demand.

The university was contracted to provide training and consultation while transitioning the early childhood center and primary and elementary school to a public Montessori institution. This partnership with the university was key for two reasons: 1) It enabled the school to offer the teachers, who were taking the training, a master's degree or 30 + hours which would result in a raise for the teachers which made it easier and more attractive to recruit teachers and 2) It ensured that the Montessori program would have a university coordinator in the oversight of the program who could act as a guide through the process of hiring trainers and advising the administration concerning what materials to purchase. This gave some cohesion to the process since the administrator who oversaw the process did not have Montessori training and did not initially know all

the ins and outs of the program. Pairing with the university consultant gave her a source of information and initial contact to navigate this transition.

        Phase 2: Teacher training. The training began two summers ago with approximately 25 teachers and continued through to last summer with the 29 teachers who are the focus of this case study. It was at this school location that the university sent Montessori teacher trainers to instruct these teachers in the Montessori pedagogy. The training included all of the major subjects during the first summer: math, language, science and cultural studies. In the fall, the teachers attended weekend philosophy sessions. Some of the teachers started their public Montessori classes the first year to accommodate the first and second grade phase to this approach, and some teachers were taking the classes that summer to get prepared to teach the third and fourth grades the next year.

        This approach was both a positive one and a negative one according to the teachers. Positively, the professional development was offered in the summer because teachers would have the time to take intensive training. However, depending on when the teacher started the training, it could be a year or longer before they began to implement the newly acquired skills in the classroom. During the interviews, some teachers mentioned that before they had a Montessori classroom, they were trained with specific Montessori materials in specific subjects, but then 18 months later when they had to teach the subject, they had forgotten much of the material. The timing of training teachers while implementing the training in a classroom is a difficult thing to accomplish, because the balance of having enough training to implement the program while working a full

time job of teaching in a classroom offers up difficulties. As one teacher shared, "I think that one thing that really helped this transition is I probably wouldn't have done the training and done this if they hadn't brought the classes to us." When offering teacher professional development, it is often a delicate balance between sitting in the classroom learning about Montessori and applying it in the classroom as one teacher shared, "When I actually do it in my own classroom, it is then you really start learning."

Phase 3: Bringing the parents along. The change with regards to parents and even the community was a mixed bag. On one hand parents were positively appreciative for the opportunity available to their children, because they chose this class for their child. "Parents for the most part have been positive. They are impressed with the work that their children are doing." However, on the other hand, the parents were often unable to express why they had made this choice or to defend it to the community or to family members. As one teacher expressed, "I think the biggest obstacle was the thought process and public perception and changing the parent mind set." Murray (2008) supported that there is "strong evidence for the need to educate the public regarding several aspects of Montessori education. This is particularly true for those aspects of Montessori education that are unique relative to other educational approaches" (p. 75).

The public clearly lacks understanding of Montessori's philosophical stance on things such as the importance of an intrinsic reward system, its hands-on math materials, and the need for the delivery to aid in the development of a student's ability to concentrate. However, according to Murray (2008) even though most people cannot name the basic tenets of Montessori, they still believe it to be a favorable educational

system designed to help children. Some people thought that one of Montessori's goals was to help children do better in life, as in bettering their station in life.

Teachers expressed that they felt a responsibility to educate parents, but in this community it has been hard to get parents to come to parent education meetings after school hours. Since the school is located far away, about 30-40 minutes off a highway, parents who drive to the school often drive a great distance. It was reported that parents will show up at school 45-60 minutes early to sit in a car pool line. The school is large and with almost 1,000 students dismissing at the same time, the car pool line is very long so once parents retrieve their students and make the trip back to their home, they do not often want to return for parent education meetings. As one teacher shared, "we struggle with how to get working parents in for parent-education. It is not that the parents don't want to know, but it is hard getting them here." They will however, return to parent-teacher conferences. This has been the best opportunity for teachers to communicate about the teaching shift. "I was nervous about parent /teacher conferences, but all my first grade parents were so complimentary."

One teacher felt that the parent perception problem went beyond even their knowledge of Montessori to the problem of education in general.

> A lot of times, people think that the way they learned is the way to learn and a lot of them had bad experiences, and they take that type of mentality to their children. And so they want certain grades. If the grades aren't there, then Montessori isn't working. But they are not willing to wait it out. We have a very opinionated set of parents, and yes, they should have an opinion. I also feel that you should leave education to the people that are doing education and a lot of times, I think that our power is taken away because of the fuss that parents can make.

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This teacher reflected on the nature of change in education and the lack of understanding most parents may have about these changes. She addressed the fact that this year is the first year of the Common Core implementation in the state, and she said that the average parent knows as much about Common Core as they do Montessori. She explained that this lack of understanding would still not impede their judging both changes according to the one thing that they do understand: grades. In her words,

> We know this (Common Core and Montessori implementation changes), but the parents do not understand this. They're not even going to think about it-- that we are starting a new test and with the new test, the scores may go down. If we got proficient last year, we need to do that this year. Otherwise, Montessori is blamed. They want someone to blame. If they get basic (lower score) it has to be Montessori's fault. Before Montessori came, they blamed teachers-now they can blame Montessori. Parents want to say it is all of us. They want to take themselves out of it.

Although some teachers encountered negative reactions, other teachers had experienced positive comments from parents. Teachers commented that since parents had seen some positive success for their child in the early childhood center, they were inclined to see that same experience at the primary school. "The only negative responses that I have are from parents that their children are having trouble managing their time and completing lessons." This teacher said, "I have started documenting the interventions that I have taken with him, like trying to make sure that he does a variety of activities and actually completes the activities and lessons. That is like the first step so that I can get him back into a traditional classroom." Since it is a choice school, the teacher who felt the student would benefit from a more traditional environment gathered evidence to make a case to the parent to move the student.

"Why are you working on the floor, can't you afford tables?" This is the question that one parent asked when he first walked into the primary public Montessori classroom. This teacher reflected that sometimes parents have interesting concerns,

> The biggest thing with parents--Parents still question the whole method-desk-thing versus working on their floor. It is petty, but they want their child to have their own desk. I have a couple of parents who have requests that their child sit at this table. I also have had parents come in and see students working way below their child's level and they say is this a resource class (special education class)? No, children here work on all different levels, and they found that to be uncomfortable. That was a new parent, and I explained that this approach is very individualized and your child works on at their individual pace versus doing what the other children are doing at that time.

However, this same teacher said that it is valuable listening to parents as well, because she had been having some concerns about the lower reading levels that she saw coming from the students who had attended the Early Childhood Center which was very phonics based approach:

> I have had a couple of parents with reading concerns. They felt that their child was in the ECC program, and they did not leave the five year old program a reader. So we had to kind of address that early on and why I feel like that is happening.

The teacher expressed that she was concerned about the lower reading levels. Moreover, when the parent brought it to her attention, the teacher acknowledged that the students' reading levels coming from the Early Childhood Center were behind the reading levels seen from traditional kindergartener classrooms in the past. She brought this concern up to her administrator.

This conversation illustrates the value of parents as partners, since the things they ask and understand and misunderstand can start some valuable conversations. The teacher who asked these questions brought them up to the Montessori mentor/coaches and the coaches and the leadership began working on the problem.

As I continued the interview with this teacher, I inquired about the floor question: "So what did you tell the parents about working on the floor?" She said, "I say that students get to choose, and some large works may need to be done on the floor because they are too big for a table. Those are some of the reasons that they are on the floor. Some of the works are too big to fit on a table."

Phase 4: Understanding two different classrooms. In the primary and elementary buildings that stand side by side, there are two very different approaches to education. These approaches are Integrated Literacy (Standards) and Montessori. In the Integrated Literacy classroom, there are individual desks for all of the students and most of the desks have their decorated name tags. The students sit in their single grade level classrooms and the teacher either stands or sits at the front of the room with either a white board or a smart board to display directions or concepts. Throughout the day the students move through the subjects in allotted time slots, and the teacher teaches and walks around and monitors the student learning. The sound of the room is either quiet or soft talking depending on the assignment and the level of noise with which the teacher is comfortable. The students have individual desks or tables that are clustered together so that the students can work in groups or pairs with projects or partners. The students work

with manipulatives that are on the clustered tables and very often supplies are located in the middle of the tables for the students to use.

Next door, there is a different type of classroom structure. There is very little furniture in this classroom. In the open floor space, students are working individually or in small groups with materials on a rug or on a table. The teacher is sitting on the floor giving a lesson using hands-on manipulatives and around her is a group of students. The assistant teacher is walking around the room correcting misconceptions that the students may have while sorting the materials. The sound of the room is soft talking and in the background of most of these classes there is classical music playing. The supplies, or manipulatives, in this room are located on the shelves that surround the outside of the room. These are the physical differences in the two rooms.

During this study, I spent an hour in the classrooms of the twelve people I interviewed and 30 minutes in each of the 29 classrooms of the teachers who completed the eight open survey questions verifying that the classroom work did or did not match the self-rating from the surveys or the interview answers. I observed both the classroom the teachers taught in and the classrooms next door. This gave me a sense not only of the classroom culture of the rooms that I visited but also a feeling of the school-wide culture as I traveled the halls and sat in cafeterias and media centers.

As I spent time in these classrooms, I was looking for the features of instruction suggested by Zemelman, Daniels and Hyde (1998) in the form of *less and more lists* as well as the Montessori aspects of the materials and the individualized approach to education. Comparing and contrasting these suggestions against the changes that the

teachers noted from their experience gives insight into what was the pedagogical change. This approach allows a systematic basis for comparing the two very different classrooms at the primary and elementary sites. It is important to note that even as the teachers were changing to a public Montessori model that the national instruction is changing to a Common Core Standards model. In reviewing the less and more of traditional Standards-based instruction, I will note where the shift to Common Core has some similarities to the Montessori instructional approach.

Less whole group instruction was a recurring theme cited by these teachers as they articulated their understanding of this change. The teachers expressed the pros of less whole group instruction, including getting to know their students better, but they also noted the cons of trying to teach a multi-aged group and covering every standard and still doing it through small group instruction. "I just think that when you're getting away from whole class teaching… I guess, (it's best) to teach the whole class certain content, (such as) social studies and science." The teachers reflected that they would love to teach in smaller groups but felt the pressure to cover standard objectives. These teachers explained that the lack of time often kept them from teaching in small groups. Therefore, many teachers felt pressured to teach in whole groups. The teachers also felt the need to they feel get all of the material covered. If the material is not covered, their students may not be successful on assessments.

Less student passivity translates into engagement, and it was this instructional component that the teachers felt was lacking. As stated by the first and second grade principal,

Most positive effects teachers feel that they have things to work with all the students all of the time when you are teaching in a traditional class and you are teaching you are missing about three quarters of the class and only about a quarter are listening to you and that quarter may not be engaged. I think that engagement level has certainly spiked not where we want to be because we are at the implementation level, but everybody is engaged.

She stated that, as the person who walks in and out of all the classrooms, she had seen an increase in student engagement in every classroom, even the classrooms where teachers were struggling with the change. She observed that students were even working in the hallways with the larger works that needed more space.

Less one-way teacher communication was both a positive and a negative for some teachers. Positively, one teacher related, "It has changed. I am less of the center of the class- It is more about the kids. It is good for them to hear things from them than from me." However, giving up this control made teachers feel uncomfortable as stated by one teacher who said, "I know something that I have a lot of trouble with. I have trouble with letting them talk while they work as they work together. It was hard for me to lose control. It is hard."

This communication issue relates to *less* prizing and rewarding silence in classrooms. As a very progressive teacher put it, "it's been a challenge to just trust them and let them learn through this too, I guess. Or wanting it to be and look a certain way and that's just not realistic. It's just not going to look like that right away." She stated that she had to work through the messiness of the talking and the moving around and not worry about what it looks like from the viewpoint of outsiders, but rather to concentrate on "making sure that I'm being effective." In her interview, she went on to describe being

effective as the students being engaged in a way that will result in academic success for them. This aspect of the change is interesting in that a teacher could be too concerned about looking like they are making the change versus whether they are actually being successful with the change itself for the sake of students.

The notion of *less* time on textbooks, basal readers, seat work and worksheets describes expanding the materials and methods of the delivery of instruction. This kind of instructional delivery approach is often fundamentally rooted in teaching practice. Even though Montessori places an emphasis on hands-on materials, I do not think that there was a room that did not have some type of worksheet. They were changing from less worksheets to more hands-on manipulatives, but they all relied on the standards-based approach of worksheets to some degree. However, the textbooks that I saw utilized in the classrooms were used as research or supplemental and not as the drivers of the instruction except in the upper grades of the intermediate school and middle school where textbooks were read word for word and page by page.

These teachers felt the need to *cover materials,* and there is justification for that assumption from pacing guides and scope and sequence documents., Moreover, almost all of these teachers felt it necessary of covering material for the upcoming assessments even if the student could not yet understand the skills needed. Even though the new Common Core standards look at covering fewer standards well, the teachers felt the need either internally from the self-imposed pressure or externally to teach the learning objectives whether they were even understood by the students. One principal said, "Where we need to go with Common Core, we need our kids to be heavily entrenched in

the thinking process and then write about it." The teachers were in the first year of Common Core and Montessori implementation. Their principal leader felt that the combined change would eventually be a positive one but for the immediate school year, teachers expressed that they were struggling with the need to cover material in a different way as the content and the assessments were changing.

Less rote memorization is reflected by the dual approach of Montessori and standards as reflected in the Common Core national curriculum adoption. This is a point about which both curriculum approaches agree. The teachers understood that the Common Core emphasizes concepts that are called enduring understandings (Sample, 2011), and Montessori is very conceptual in nature. The teachers appreciated that where rote memorization is important, such as math facts, Montessori (2011) developed materials that aid in memorization by hands-on manipulating addition, subtraction, multiplication and division charts so that a student could learn these facts in the schema of the whole by taking parts of the charts away. The idea of embedded memorization by understanding seems to be a point where the teachers saw that these two approaches supported each other.

Less emphasis on grades is a concept that the school had to consider when making this change. In order to allow time for practice and skill based learning, some Montessori public schools delay grades until the third grade or later. The grade reporting system is replaced in these cases by a skill list which shows the introduction, practice or mastery level of each student in meeting these objectives. As the teachers related, the administrative response to the report card issue was to have the teachers align the

Common Core standards to the report cards. "We had paid days this summer to work on our progress report and common assessment, and align them with the Common Core." The emphasis was on aligning the standards to the report card, but they were encouraged to use the Montessori materials to meet those standards. "They fully support all of our efforts and encourage us to combine our Montessori training with knowledge of the standards." Moreover, they were also *let off the hook* if they had Montessori objectives that did not line up to the standards. "Administrators have been supportive by telling us to teach what the standards mandate and not to worry about topics in the Montessori curriculum that doesn't align with the standards."

Instruction best incorporates *more* hands-on activities. As one teacher reflected concerning a positive of the Montessori manipulatives, "the-value is it (hands-on materials) makes it real to them. It is like teaching variables with the Montessori bead stairs, they say 'oh I get it because I am touching it and I understand it.'" One teacher said that if she had to change to another way of teaching tomorrow, she would still keep the materials even if she had to buy them with her own money, especially the math materials. Another teacher expressed some students do not feel confident in math, and she was one such student when she was younger, and she thinks that these materials give students the opportunity to feel confident in learning math.

More active learning speaks to student engagement and the principal mentioned that she enjoyed walking through the school and seeing the increased active student engagement. "I see a kid mulling over a problem. He is so engrossed with figuring that out. You can even see the wheels turning and that is so exciting, and I love seeing *more*

responsibility for problem solving transferred to students." She mentioned that she was excited for the low socioeconomic level students at her school to have access to what is often thought of as a more expensive education or at least a private school option.

More diverse roles of the teachers such as teachers as coaches and not as the center of the classroom emerged from the teachers' interviews. The teachers understood that teachers can be *the guide on the side* versus *the sage on the stage*. This shift does coincide with Common Core. Common Core Standards teaching shifts the best practice of teaching to teachers as co-learners and co-teachers with their students (Hufferd-Ackles, Fuson & Sherin, 2004). This approach sees teacher and student conversations as a valuable component of teaching and formative assessment. The conversations or *academic talk* should contain the understanding and misunderstanding of the students. Therefore, teachers gain ideas for new lesson plans to address student conceptual comprehension.

Instruction should include *more* choice for students, *more* attention to the needs of students, and *more* collaborative learning. One teacher related that these three things: choice, attention and collaboration, can result in some positive learning for students.

> Success-(results in a) confidence in themselves. Some of the kids that have struggled more and they are working with someone and they are getting things more because it is presented in this setting. I just think about kids like K. and C. K. who didn't come to school until later and C. have fun with each other, and I am seeing his confidence grow. First thing that he told me was that he was –stupid, and he didn't want to sit in morning group, because he was afraid to be in the group and now you should see him three months later.

Allowing these boys to work together and choose their work because the teacher was sensitive to the learning needs but also the emotional needs of these students can cause some powerful results for some students.

More heterogeneously grouped classrooms were mentioned often by the teachers interviewed as a difficult thing for them. The multi-aged classrooms are a particular Montessori construct. Their prescribed age grouping is a three year grouping, but the school has put only two grades together in part because the principal saw this as a hard thing for the teachers to navigate. One teacher said, "This difference is more foreign-I am not used to it." Since these teachers began their careers as traditional teachers, they are very used to the standards of just one grade. Therefore to think in terms of multi-grades and the accompanying standards seems an unreasonable instructional model for them.

A pedagogical approach should consider *more* individual student learning needs. However, the individualization part of this pedagogy has been the easiest thing for almost all of the teachers to change. As one teacher reflected, she could teach multiplication, but she could teach it at different levels ranging from different place values for the divisors and dividends, different concepts such as arrays and with different levels of difficulty. This teacher expressed that the individualization guided instruction:

> Their daily instruction comes from what I know (they) need to work on because otherwise it would be a waste of time. (They) would be frustrated. I would be frustrated because I am trying to teach you something that I know you are not ready to learn.

Although this individualization was easily accepted by most of the teachers, it was also a great source of frustration for them as well, because they felt overwhelmed

trying to keep records for over twenty students. A shift in teaching that emphasizes *more* reliance on teacher description including observations and anecdotal records, conferences, and mastery assessments. All of the teachers interviewed mentioned that keeping track of student learning was one of the biggest challenges. As one teacher put it, "Me, personally, I'm just not organized at keeping track of stuff. I'm still working through ways of keeping track of what I've taught, when I have taught it, how the year progressing on it, documentation of their progress."

Phase 5: Supporting the change. During the next 12 months, the leadership was mostly characterized by the word, "supportive." The primary principal is a well-known person to most of the staff. Two of the teachers had been in her high school music class when they were in high school. She had seen them grow up and watched them have their babies and she is two years from retirement and wanted this change to be the last gift she gave the students of this county. The other administrator was younger, but had the respect of most of the teachers because she is, as one teacher said, "open minded about what we are doing in our classroom. They care about what we are doing, but they also trust us to do right by the students." The teachers would summarize the leaders as "very supportive as far as procedures and stuff go. They haven't really been demanding like 'you need to do this and this.' They have given us our (professional planning) day and said to figure out what works and then supported us."

The first year the teachers piloted the change. The second year, the teachers began to fully implement the program, and it was then that they felt fragmented in the way in which they had received training. They felt there must be a better solution. In addition,

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about this time in the process, teachers were having difficulties with the amount of work that they felt they were doing to make up for the purely phonics based reading program that was offered by the early childhood center. The teachers had taught students from other kindergarten programs before, and they were not seeing the literacy development concerning leveled readers that they had seen before. They were surprised that the students who were instructed at the center two years longer were not reading at the levels they had seen in the past. The teachers approached the primary principal with these issues.

The primary principal responded by contacting the university partner for help. The university partner reviewed the literacy program and recognized that the second part of the language training needed to be brought to the school that fall. She heard that a couple who had just retired from over twenty years as teachers in a public urban Montessori in a neighboring state was available to teach in the fall. They contracted with the school district and with the university to be employees for both. They came down on a Sunday night and stayed until Tuesday afternoon to teach a language class for the university on Monday night and to offer assistance with professional development to both schools during the day. As one teacher said, "Last year we didn't really have a mentor but this year, we have had the Logans, and they will meet with us and having them has been a help." Another teacher echoed that thought,

> I would have preferred them to be mentors the first year. They have a lot of experience, like more than 20 years in a public Montessori school. Just being able to go and talk to them would have been helpful. Doing this myself I would have it would have been hard I would have just had to listen to my kids get their input and listen to the voice of students. It is really helpful to have someone to bounce

ideas off of. Until they came, I just had to take the students advice more into consideration.

Every teacher at the school praised the retired couple, the Logans (this is a pseudonym), that came to the school to teach and ended up making a lasting impression on both the school and the teachers. The primary principal complimented them by saying,

> The Logans have been instrumental in helping me teach these things to kind of bridge the gap between where they really should have been when they came here and were they actually were. Some of them, not all of them, some of them were where they should have been and were ready to do the pink tower and the word work and were ready to begin

Originally their contract was to end in October, but the two principals went to the superintendent and asked for the contract to be extended. They argued the program would never be what the superintendent hoped it would be without these two people. Their contract was then extended through the whole school year, and they continued to come every Monday and Tuesday.

When judging the effect they had on the program and the need for them to be there at that particular time in the history of the program, one teacher recalled,

> It was November, and I really do feel like 'I can't take it anymore,' and I just feel worn down. I guess I'm scared I'm just going to be burned out. But Mr. Logan was the one saying, "you don't have to give everything to every single child, you can't do that, there isn't any way." I said, "I mean I think that is what I'm trying to do." He said "If you throw yourself so off-task over here, then you don't have the energy to fix what is wrong." The Logans shared this saying with us. "If you don't focus on what is going right, you do not have the energy to fix what is going wrong. There is always plenty that is right."

The teacher continued to say that this was a turning point for her in the change

process. She went on to express that she was doing everything "humanly possible to

make things work. I know that I am a learner, and I have asked a lot from the Logans for

help. I think I am good at knowing when something is working." She said that the help

these coaches gave her was so useful that she considered them her real administrators,

because they were her real support system.

Phase 6: Solving emerging problems. In the middle of the change encompassed

in this study, most of the teachers were beginning to refine the processes and procedures.

Moreover, the facilitated teaching structure was starting to make sense to the teachers.

One teacher summarized this in the following narrative:

> When I started this I wasn't sure that I wanted to do this it was just that the district
> wanted this and was changing over to this and honestly I needed a job and that
> was how this change was put to us and in those words. If you need a job, you need
> to consider it and no one was hiring, but now that I have done it and I am trained
> and everything I really do enjoy it this kind of teaching. Sometimes I feel like I
> am going to pull out my hair, but at the end of the day, I really do enjoy it. I love
> the atmosphere. I love sitting with the child and talking with them like I respect
> them. I love getting to know the child. I feel that I know my children a lot more
> and I feel that I can take my higher children a lot further than before and I can
> help the lower as well because they have a longer time to practice the skills that
> they are not getting. The hard part of this is that they are still going to be tested on
> things that they may not have had. That makes it a little bit tough. I feel like I
> have to throw things at them just so they can have some kind of experience even
> though I know that they are not going to be able to learn it but I really do enjoy
> the teaching now even though I questioned it at first.

The progression of this teacher's change from merely needing a job to analyzing

the key concepts of a learner-focused classroom with reservations concerning the

standards assessments could be echoed by most of the teachers that I interviewed whether

they were more Montessori, standards or balanced in their current practice. The teachers easily saw the need to move higher students on the continuum of learning, and they saw the value in students having the opportunity to practice skills in which they needed remediation. However, most of the teachers shared a dread of the assessment of standards-based objectives. This evolution of questioning to some level of acceptance was repeated by most of the teachers even though they might have individual challenges and concerns.

A surprising thing that emerged from the teachers' account of the change was the fact that many of them relayed that even though there was great freedom of choice for students, they were structured choices and that the system of teaching was more structured than they thought. One teacher said, "I think Montessori is very structured." She went on to say that a "teacher has to be structured in her day because she has to get so much more accomplished. Also she has to get their hands on those materials quickly." In addition to the teacher being organized she relates that "the kids have to be organized and structured too because they are going from one place to another. To me a Montessori teacher she has to get so much more accomplished."

One description that emerged of a Montessori classroom is the idea of *organized chaos.* One teacher articulated, "It is organized chaos because so much is going on in one small space, but everybody knows exactly what they are doing and they all have a plan or they are supposed to have a plan." When over twenty students are following individual plans and working independently, the classroom can look and sound lively, but the teacher recognized quickly that at the center of that chaos is a plan. The teacher has a

plan of lessons that she would like to teach in small groups or one-on-one. The teacher spends most of the day working with students in these groups presenting materials or lessons and recording observations and feedback from the students. The students have an individual work plan written by the teacher that has a menu of materials or works that when practiced will teach the objective. The assistant teacher walks around the room checking for misunderstanding and redirecting behaviors. The students practice works that have been taught to them and record their answers. The teacher or assistant teacher checks their work on the spot or later from reviewing recorded work. The principal described the classroom like this,

> Going into a classroom and seeing everybody is engaged quietly working and two kids are talking about something and no one else is even noticing that they are having a conversation and it is on task. It is just thrilling. In all my years of education, I have never seen that happen.

The principal saw the value of the consultants who were originally hired to stay through the end of October. The principal fought to have them hired until the end of the year, but she was not content just to leave it at that. She was already forming a plan to have continued support for next year. When I arrived at the school, she asked my thoughts about how a teacher mentor could go about training teachers in the place of the coaches. She did not think that the school would have the money to continue to afford the coaches, and she was thinking of changing the role of one of the teachers to that as a part-time coach with a model classroom so that she could go into rooms and help other teachers.

The principal mentioned that in the first year of implementation, although she saw an increase in student engagement and interest as judged by her walkthrough notes and data, the scores for the Montessori teachers collectively went down in the school's MAP testing. When asked why she thought this occurred, she stated that she felt that it was due in part to the implementation dip when one institutes a new program.

The principal continued with her solution oriented approach and looking toward the future of the change by saying,

> Between now, January and the end of the year, the conversation will be on rigor. The majority of the teachers know the regular lessons, but I did not know that you could give three more lessons with this material. When you learn the lessons in the summer, you don't have the ability to learn the lessons much less the extensions because you didn't get taught all of the extensions.

This year had also been a review year for the school with the Advanced Education Department reviewing the school. According to the principal,

> They are recommending that we involve all our stakeholders more the community likes it and it is not a matter of selling it so much anymore like you said I think that we have to do a better job of getting parents in here. We are starting a parenting program in here because I think parents need to know what they don't know.

The principal remarked that Montessori had been instrumental in helping them to accomplish their school improvement goals. The school's goal is that "100% of students would be engaged during the reading and work times 75% of the time." The principal said that she and the assistant principal had been tracking that goal and that they were seeing this goal met. She attributed it to the implementation of the Montessori program.

She saw her job now as one of making sure that the teachers had what they needed and making sure that they used it. She also saw her job as one of training her assistant principal since she was going to retire in two years. She expressed the thought that after she retired, she still wanted to volunteer and help students in the school since she lived only five minutes from the school and that she still expected Montessori to be going strong when she came back to volunteer in the school.

Conclusion

The chronology of this change started with a belief of the leaders and this belief was transferred to the teachers by having them view other schools that implemented this instructional method. These leaders sought a partnership with a local university and contracted the professional development. The early childhood center offered the opportunity of education through the hands-on Montessori approach that the leaders felt might benefit the low socioeconomic student population. I focused this dissertation study on the second wave of the change which was the transition of the traditional primary and elementary school to public Montessori since this is an area that seemed more challenging because of the testing of literacy and other subject material included in a traditional public school. The teachers provided insight as to the change process from their viewpoint and reflected on the internal and external changes made when implementing and balancing two curricula mandates and the role of the administrators and parents in this process.

CHAPTER V

FACILITATORS AND OBSTACLES

The previous chapter described the change in the school as the teachers
transitioned from a traditional school to a public Montessori school. This chapter
analyses how this transition was accomplished or what obstacles stood in the way of this
accomplishment. This chapter explains what happened at this location that facilitated the
change for most of the teachers and points out some of the obstacles that became
apparent while making this transition. These issues had to be understood, minimized, or
overcome if this transition was to become successful. As mentioned in the Cobb study
(2002), not all proposed Montessori schools come to fruition. How did this school
navigate this shift?

Facilitators

Teacher buy-in. The first thing that facilitated this change was that the teachers
understood the need for change. Their principal had communicated to them her belief that
there are advantages in the use of a *hands-on manipulative* approach to increase student
learning. In fact, their school improvement plan called for an increase in student
engagement which the principal measured by the walk through data. Watzlawick,
Weakland and Fisch (1974) asserted that there are two types of change: one is *first order
change*, beliefs and the other is *second order change*, actions or implementation. These
teachers cared about these students and their learning and were already convinced that

more must be done to help these mostly low socioeconomic students. These teachers had *buy in* for the concept of increasing student engagement to increase student learning.

Some of the teachers had children who attended the Early Childhood Center located in the building next door. They had seen student engagement practiced at the school and were aware of the impact of Montessori. Those who did not have children could easily see a model of the program across the street. It was helpful for them to start with a visual model of such a different way to implement instruction.

The second thing that facilitated this change was that teachers would gain from being involved personally and eventually financially in the terms of a raise. Hall and Loucks (1974) expressed that a person involved in change would ask *what is in it for me?* These teachers would obtain a master's degree or thirty plus degree extra money after they finished the training. The local university and the school district provided this opportunity. The school district paid for the master program for every teacher and the university provided the training on-site at the school which was convenient for the teachers. Since Hall and Loucks (1974) say that most people often do not make it past the personal stage of change, this advantage of having an end product for teachers made the change more appealing.

Personally, the teachers expressed that their home support was instrumental during this transition. One teacher said that during this stressful professional time, her family was a support system. "My husband knows that this is on my mind all the time. Everywhere we go I'm usually just thinking and talking about what I can do for my class. And it's been a growing experience for my whole family!" Having the emotional support

of loved ones, the teachers had access to people who provided listening ears and a crying

shoulder for the teachers who at times were challenged by this opportunity for personal

and professional growth.

Beyond the personal support of family and friends during this change, these

teachers were given the resources needed to accomplish the task. Interestingly enough not

all of the resources that mattered to these teachers were typical such as a dollar amount

for supplies. Although they did get the supplies that they needed, which averaged out to

about twenty-five thousand dollars a classroom for the Montessori materials (Kahn,

2013), the teachers involved in the change often cited the emotional support, and the

professional development training and the hired consultants' feedback as major reasons

they were successful accomplishing this transition.

Network of Support

Consultants. Varlea (2012) highlights training that is not included in the

classroom setting as one of the three deadly sins of professional development. As he says,

"professional development works best when it is classroom embedded and modeled, but

that is not the case with most in-service training." At first, the university trainers were

brought in to train teachers in the summer, but the teachers expressed a need for more

help. Learning the materials and this approach to teaching in four weeks in a summer was

convenient, but the teachers discovered they forgot a lot when they tried to implement the

program. In order to have embedded teacher training and solve this problem, the school

district hired on-site Montessori consultants to come every week and train the teachers.

These consultants had a long history of teacher training and also had experience in public

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Montessori education. Previously most of the trainers were private Montessori teachers, so although they were positioned to provide Montessori materials and lesson training, they were not equipped to provide the expertise of the balance between the public and the Montessori demands. Most of the teachers relayed their opinion that the Montessori consultants were "instrumental in helping me teach these things to kind of bridge the gap between where they (the teachers) really should have been when they came here and where they actually were."

These mentoring-type sessions occurred during the day in a space in the school set up with the Montessori materials for a weekly class session sponsored by the university. The space became a reference room as well during the week when the consultants were not on-site, because the teachers could come in and borrow materials and also see the sequence of the materials on the shelves which functioned like a model classroom. The consultants acted like coaches or mentors and started by surveying the teachers and revealing their needs. They re-demonstrated lessons that had been forgotten or clarified connections for the teachers. They even pushed into the classrooms and evaluated students and taught lessons. This is the strongest case for professional classroom development when the experts are on-site and in the teacher's room with their students and can answer their particular questions and address their sets of challenges. Having this type of coaching/mentoring set up allowed the teachers to see two seasoned public Montessori teachers interact in their room and allowed the group of teachers to grasp the concepts more quickly and thoroughly. As one teacher related,

Last year we didn't really have a mentor but this year, we have had the consultants, Mr. and Mrs. Logan, and they will meet with us and having them has been a help…It has been helpful to have the Logans (refers to the retired married consultant couple) this year, but it would have been more helpful last year.

So the first year, the teachers did not have a coach or a mentor, and they wished that they had had one sooner or earlier on in their training. The American Montessori Society recommends that schools have an on-site curriculum coordinator and the opportunity to have two such experienced teacher trainers teach and train for a day and a half every week was instrumental in the teachers coming to terms with this change more quickly.

Research does support on-the-job learning opportunities for teachers. According to Little (1982) and Smylie (1995) professional development that is in the classroom, especially when the emphasis is school based and addresses problems that are collective not just about one classroom, is more effective. When the school hired the consultants originally, it was just for a class and for the beginning of the year, but the principal saw the effect that it was having on the teachers, how they understood the change better, and she asked the superintendent to hire them for the year. Then the teachers had some half day professional development meetings with the Logans during the school day. The Logans brought in the Daily 5 system and now they were learning Daily 5, Montessori and Common Core all in the same year. The administration felt that the teachers needed consultants since there was so much change in this year. The Logans even pulled the assistant teachers for half day professional development to show these paraprofessionals

how to help make materials for the teachers to relieve some of the stress from them. One

teacher recalled,

> There were a couple of different sessions. The one session that I went to was
> labeled how to use the traditional things that you learned in literacy and then
> incorporate the Montessori literacy to make it one smooth program.

The teachers still needed help with the classroom management. This professional

development allowed them to have real time help where and when they needed it.

> The hardest part for me has been the management of it all. Like within the course
> of a day, if I do these lessons that I had planned there is this other part that I didn't
> get to or if I do all these reading groups there are all these other lessons that I did
> not get done. Just trying to balance it where they are getting a good combination
> of it all that I don't feel overwhelmed, because when I feel overwhelmed it shows
> towards the students like I don't have as much –patience or whatever you would
> need to make it through the day. I need to be calm and calmness for me is order or
> a plan. My plan does not always work most days. I don't fulfill all parts of my
> plan and that bothers me when I can't get it all done. That has been something
> that has been a conversation with everybody that is doing Montessori will it get
> better? Does the management of it all get better? Or this is just part of it and this
> is going to be what it is every year? We all have that question still.

Power of the cohort. What did they do until the on-site coordinators were hired?

The teachers responded that they used each other and continued to rely on their cohort to

help each other through the demanding process of having training in the summer and

implementing the training into the fall. They noted that it was helpful to have each other.

"Last year we depended on the other teachers more and other resources more. We talked

with each other. Peers sort of served as mentors. One day we were allowed to go into

each other's classes and that was helpful."

Mullen (2010) noted that doctoral students gained the composure to make it through the doctoral process through the *power of the cohort*. The space to air ideas and the support of someone who is going through the same overwhelming situation makes the shared burden easier for all involved. This change which resulted in a master's degree for most of the teachers and a paradigm shift in teaching could easily be compared to the rigors of the doctoral program and the teachers developed a *foxhole* mentality. The help and support teacher peers provided was emotional as well as academic. As one teacher phrased it, "Between the Montessori teachers, we have gotten to come together and ask 'How does this work for you?' I have felt unity between us."

The teaching cohort supported each other as they were going through this change process together. Having emotional feedback of the support and comfort for each other made the disequilibrium of the change tolerable. As one teacher expressed,

> When we first started, I was overwhelmed. I'd go home and cry, because I knew what I was doing, but I felt so incompetent. I'm not 100 percent confident, but I am more confident in what I'm doing because I know that the kids are getting the information. I've seen them get it. So I only had half the group to redo it. It kind of relieved some of the stress. I see some of the teachers that are starting (the training), and they are frazzled. I so sympathize, "I know what you are feeling it gets better." There are days that we say, "Who cried today?"

Having the academic or *know how* support seemed to be another way that the group achieved the intellectual equilibrium necessary to navigate the change. As relayed by one teacher,

> I can't count the number of times that someone has come to my room and asked if I had this and asked how are we supposed to use it? Because as soon as I got the materials, I started putting them together, but that is just me, I can't do something

during, I have to know it prior to, but there are still things that I am not sure of how to use it, but I have learned a lot with the internet and going to other teachers. Like the other day, we have conjunction cards and in school I learned a few conjunctions, but I did not know all these other conjunctions, but learning all this is the work, the work that comes along with it that at times can become overwhelming. We are teachers. We are not used to not knowing. We are supposed to know, and my students feel like I should know everything about everything. My students say "You don't know?" I say "I don't." My students think that I should know everything, and I have to say "I don't know, but I am going to find out."

Supporting each other to find out how to teach a lesson or how to use a material confirms what Goddard, Goddard and Tschannen-Moran (2007) maintain, which is that when teachers collaborate, they support each other in a positive way for students.

Innovators. There were the individual teachers who were self-motivated, and they seemed to grow because of, or in spite of, the surrounding support. As one teacher remarked, "even during the year when they had no mentor/coach, I got on YouTube and figured out how to teach a particular lesson. I got on Google and researched how different classes do different things." The summer training consisted of a week of math materials, a week of language materials and so on. As one teacher shared, "by the time I and a lot of us started teaching last year we had forgotten what those materials were for; what skills did you teach with them." YouTube became a built-in way to take a refresher course since the time between *learning and doing* left gaps in the first exposure and the change implementation. One teacher remarked that she had been hand-picked by the administration to consider the training, because in her words, "I have always wanted to teach this way, but it was always a challenge, but I think that Montessori makes it easier." There were teachers who would succeed against all odds in this endeavor, because this

way to teach matched their fundamental belief system of instruction. However, it was not easy for them to make this change. As noted by one teacher,

> At the beginning of the year, I felt like I was drowning, and I will be very honest about that and that was part of the reason that it was not successful. I said, "we must regroup." This time I feel that it's going a little bit better.

The success stories in this change were accomplished by these motivated teachers who refused to give up. As one teacher narrated, she came to an understanding of how to teach Montessori this way little by little. She related her slow but steady understanding of this unfamiliar pedagogy,

> I think by degrees I became more aware. I started during the half year, and we weren't really implementing Montessori yet, and I feel like then I started letting go of some things. Then I got better at it the next full year and also having the same kids that I had started with I feel like that was instrumental in helping me last year, because I feel like last year was the smoothest beginning of the year that I had ever had in my 23 years of teaching. The kids knew me. They knew our teaching team. We didn't have that at the beginning of the school year where you have to review for 3 weeks on expectations. It was pretty much the second day of school, we were ready to jump right in and that was a unique feature. I am hoping that next year is going to be like that with these 19 little first graders that I have this year. Next year should be a breeze.

The teachers were working counter intuitively to the way most of them had been teaching before. Even when they had an inclination to teach this way, they still did not have the skill set when they started the program. Their change journeys were very personal and though there was a raise for the master's program at the end of the process, the teachers experienced a very personal character and faith journey which had somewhat to do with professional development and a lot to do with personal development. As one

teacher related, "My changes were that I was more patient with third graders." Patience, perseverance, and soul searching to find the capacity to change the way one has taught for many years were the personal journeys that these teachers expressed in their interviews.

Developing expertise among the panel of teachers was a way that the group could facilitate the change. They built on the strengths of each other and the relationship that had developed with one another. One day, while observing in a classroom, I noticed that the teacher had a list of teacher emails printed on her white board. I knew these teachers were in this cohort, and I asked her why she had these names and emails. She smiled and said "these are my board of directors, if I forget how to do something these are the people that have my back."

Administrative support. Teachers mentioned that the biggest help they received from their administrator was in the form of purchasing or providing time to make materials and partnering with the university to make available professional development on how to use the materials. Moreover, they were grateful for the opportunity to receive graduate credit for the training. Their feeling towards the administration generally was "they make sure we have everything we need. They encourage us to combine both Montessori and Standard Course of Study." In addition, the administrators provided school time to make *gap standards* materials. Gap standards are standards that are not addressed by the Montessori materials and must be purchased or made to meet either the standard objective or a misunderstanding a student may have. Since gap standards are present the encouragement to create lessons or materials that meet these standards is a

built-in feature of most Montessori training programs. One administrator said when she

first saw this feature in the training she thought this added a more arts and craft

component which she thought should not be a part of the training. However, knowing

how to make materials to improve student learning is a powerful skill that can be

transferred into many standard objectives. As one teacher reflected, "The administrators

have been very supportive in encouraging us to use the Montessori Method in creating

materials that meet our current standards." These reasons were cited by teachers as

important to the implementation of this instructional approach.

Moreover, the teachers expressed that the administrator provided emotional

feedback and support. "They fully support all of our efforts and encourage us to combine

our Montessori training with knowledge of the standards." When changing to something

new, the teachers needed patience and feedback from their administrators especially since

they were going through the transition to being a public Montessori school while they

were also transitioning into the first year of Common Core implementation. One teacher

stated,

> They (administrators) have been very understanding that this is a PROCESS, not
> a quick fix. They have provided training and given us time to work as a group.
> We had paid days this summer to work on our progress reports and common
> assessments, to align them with the Common Core.

Since the administrators were learning about Montessori as they led it, the

teachers appreciated having them as a sounding board and both of the administrators

attended some of the training. As one teacher put it, "they, too, are learning along with

us. They see the need for both traditional and Montessori and respect both." This respect

expanded to "allow us to adjust the yearly scope and sequence as needed." The empowerment of teachers to be supported both by example and by taking part in the process gave the teachers the self-efficacy to navigate the instructional choices.

Teachers mentioned the planning time during the school day for team planning was vital to making the change. Having staff development time and planning time was important, because it showed a "willingness to give us (teachers) time to collaborate to discuss concerns and struggles." Collaborative time to work as a cohort and support each other was an important part of this change. "The administrators aided the process of combining Montessori and Common Core Standards by forming teams. These teams got together and wrote up specific plans that described which lessons should be utilized in order to meet standards across the board."

Assistant teachers. Besides the addition of the Mr. and Mrs. Logan, the consultants, the personnel that the teachers most often mentioned next as people who helped them accomplish this change were their assistant teachers. One teacher said "The assistants are huge. The success of this hinges on assistants, and she cares about the students too. I am very fortunate to have her." The teaching assistants helped them make materials and *progress monitor* the student learning. Since this model is one of an independent learning environment, teachers teach with direct instruction and give *lessons* on materials in small group settings while the other students practice with materials. Meanwhile, *the extra pair of hands*, the assistant teachers contributed to the class management and formative instruction. They keep an eye on the students practicing with the materials. They redirect off task behavior. They answered questions that occur when

students are practicing. The teacher assistants were trained by the consultants, and they were cited over and over by the teachers as a feature that made the transition easier, or even as some stated, doable.

Montessori materials support student learning. The Montessori materials are not a network support, but the materials do support learning since they were designed to practice concepts imbedded in the materials. Many materials even have self-correction components included in the materials themselves. As one teacher remarked, "I like that everything my students are working on is appropriate for them based on what they need to learn and practice." She reflected, "no matter a child's ability he or she can be successful in this classroom because as long as the child can sustain their concentration to carry-out lessons, they will learn meaningful concepts and skills." The accomplishment of student mastery is carried out because the student is given the time to practice concepts independently with *control of error,* or answer sheets, using materials that are especially designed to teach the concepts and students are allowed to work with these materials as long as they have had a lesson using the material, and they work constructively with the material. As one teacher phrased it,

> I like that my students have freedom. I like that they can choose the work they want to spend their time on and can make decisions about what they need to practice. I also like that I can meet students exactly where they are—giving them lessons as they need them and skipping lessons of material they have already mastered.

Teachers relayed that the materials themselves are a part of the allure of this method. As explained by one teacher, "I like the Montessori materials, especially the

math, because they allow students to experience math in a visual/tactile manner, which helps them truly understand math concepts." The sensorial approach of moving materials and taking in information visually and tacitly increases a student's ability to form and retain conceptual information. In addition, the progression from concrete to abstract aids the developmental learning of elementary students by both providing a model and then scaffolding that instruction in a way that the model moves from visual and tactile to an abstract understanding of the parts in relationship to the whole.

Teachers liked the fact that knowing Montessori materials and methods gave them another tool in their toolbox concerning instruction. As one teacher described, "The availability of Montessori materials allows me to use different approaches to teach certain skills. However, if Montessori seems to be ineffective, I have the option of taking a more traditional approach and vice versa." The teachers related that having more options for instruction benefit students because education is not a one size fits all students. "I can use the best of both worlds because as we know, one approach is not for every child."

Some teachers saw similarities of Montessori to the new standards approach of Common Core. "The Montessori materials fit in great with the Common Core. I can usually find a way to make it fit together." According to Hufferd-Ackles, Fuson, and Sherin (2004), the best practice for teaching is an instructional approach that treats teachers and students as co-learners and co-teachers encourage students to talk through student learning and understandings. The assertion is that teachers can be facilitators or coaches and this coincides with the Common Core approach.

Obstacles/Problems Identified

The teachers identified obstacles and problems such as: some negative or uninformed reactions of parents and community, standards addressed in state objectives but not in Montessori (gap standards), limited literacy instruction, multi-aged classrooms, teamwork changes and the tension between implementing two very different instructional programs.

Incomplete parent understanding. The parents during this transition time did not always know what their children were doing. Again, the response from parents differed from parent to parent. As one teacher stated, "I've had some parents that have been right behind me helping their children, and then I've had other parents who don't even look at their children's agenda or see what's going on." Some teachers said that they felt that "We would benefit more from more community education. Let people know more about Montessori education. Some people know some things about Montessori, but there is a lot of talk out there. I think that community education would help." One teacher related a story that had been told to her that she felt illustrated the need to have, as she put it, a *community dialogue*.

> In the local True Value Hardware, a person was saying that their child had Miss M. and she was doing "that Montessori," and they were saying "That Montessori, I wouldn't even think about doing that for the whole first three years." The parent told the hardware man that "actually it is the first time that my child has ever been challenged."

The teacher said that "This is what we do in this community, we meet at the ball field and at church and …we talk. Instead of just chiming in and he said there are a lot of good things. The woman appreciated knowing the differences."

The other people that factor into this time of action are the students. In fact, one of the problems with this middle of the year is that they often get new students. So the parents are often just told about the two programs at the desk, and then they have to make a decision. As one teacher recalled,

> "Do you want to be in Montessori or integrated literacy?" I heard a mother talking to her child all the way down the hallway, and she was telling her child that they would love it because there is an extra teacher's aide in there. We haven't talked to the administration about this, but really is that the best way to introduce a student to Montessori? I feel like that maybe being informed in the office about what Montessori is and what it isn't would be helpful.

However, there are parents who had chosen Montessori at first for their child because they liked what they saw at the Early Childhood Center, but teachers didn't know if they would stick with it and at the first/second grade level, a lot of the parents were staying. One teacher said,

> So a lot of the parents that are in the program really do like it and want their child here. What they say when they come in is that they really like how things are hands on and that it looks a lot more fun than when they were in school, but they like that the kids are hands on and doing things and busy. I think that a lot of them appreciate the fact that it's on their level.

Moreover, at the first and second grade level, more parents were choosing the Montessori program than the Integrated Literacy program. "Well most of my class did stay with me this year. I did have one switch out but that was more for special education

to go to self-contained not because there was an issue with the Montessori program."

However, when faced with the first year of formal testing many of the parents opted out

of the program at the third and fourth grade level. One teacher reflected,

> I think that because it is new, a lot of parents tried it last year and then realized
> that maybe it wasn't right for their kid to just start Montessori in third grade. Do
> you know what I mean? If the year wasn't successful for that child in third grade
> then I think parents felt, 'Well let's just go back to traditional for fourth grade.'

However, the transition to Montessori was gradually phasing in at each level and

the third and fourth grade phase-in was just starting that year. Teachers did wonder

though if the parents were not well informed concerning the program and because of this

would the choices flip-flop greatly from year to year. As one teacher reflected,

> The biggest obstacle with me with Montessori is I feel that how quickly the
> parents came on board like yes they had to sign their children up for this
> Montessori class, but because so many of them did not know what it actually was
> I told them when we had our first meeting any time you want to come on in we
> have an open door policy. I want you to see what is happening and how they are
> learning. When the parents came in and they began to see what their children
> could do and how they were surprised at some of the work that the children were
> doing. I think that was a part of what worked and I think if we had closed doors
> that a lot of parents would have opted out.

She went on to relate that parents struggled with the same thing the teachers

struggle with: that the approach was very different. The teachers communicated with the

parents and tried to ease their fears. The teachers determined ways to do homework with

hands-on materials. These things had to be negotiated with teachers and parents. As one

teacher said,

There are parts of the traditional ways that we held on to like homework. Parents want to see homework, because parents want to see some of the work that students are doing. You have to do what it takes to make it peaceful and work and let them know that their children are still learning that this is not a play room. When you can show them results, that is what parents are looking for results.

Literacy instruction and gap standards. The first summer, the teachers in the training program did not know what to do with their literacy materials such as leveled readers and individual book bags for the students. As they were getting rid of other materials in their rooms that they normally used to teach, they did not know if they should get rid of the literacy materials. They were advised to keep the literacy materials. The second summer after the teachers taught or began to teach with Montessori three part cards, a vocabulary system, and grammar materials, all of these teachers, except the three-five year teachers, referred to literacy as a gap standard in the Montessori program. They said to me during a conversation about Montessori and literacy "what Montessori literacy program?" This was a significant change for these teachers. At first they were willing to throw out their literacy program. However, after working with the Montessori language materials for a year, the teachers saw the program as supplemental and not a program capable of sustaining the instruction needed for students to pass the required assessments. They used and appreciated the phonics approach and the language sorting materials, but saw these as supplemental to teaching reading and not adequate to teach literacy.

Some of the first-second grade group of teachers noticed that the younger students were arriving lower in reading levels from the Montessori program than they had seen from students in the past. These teachers remarked concerning this perceived decrease.

The consultants reviewed the Montessori albums used by the university and found some components missing from the language training. The consultants provided these materials and the training for these materials. Moreover, the consultants brought in an independent traditional or standards based structured balanced literacy program called Daily 5/CAFE. These consultants had been trained in this traditional literacy program in their public school system and found it a good fit with Montessori because both programs used a managed independent learning system. Therefore, the collective schedule of the teachers changed to a morning uninterrupted work cycle which was a typical two and half to three hour Montessori cycle, and the afternoon cycle was the traditional school Daily 5 CAFE approach.

Balancing Montessori and standards-based approach. The teachers struggled with the balance between the two curriculums of standards-based and Montessori. The struggle was not just a simple time or materials balance. According to the teachers, the two curricula philosophical beliefs begin at different places. As the teachers tried to strike a balance between what they were learning about a more individualized approach, they struggled with the Montessori beliefs versus the practicality of this practice in a public setting. Some teachers remained firm in their belief that students must be prepared for the universal literacy screener, MAP testing, and they struggled with their belief system of preparing for standards-based testing and the Montessori student individualization. The beliefs or practice tension permeated into all aspects of the change from material making to lesson planning to assessments.

In the eight question open-ended survey, more than half the teachers mentioned the thing that they disliked about teaching in a public Montessori was the implementation of the dual curricula. As one teacher stated, "the elements of the combined approach that I do not like is trying to teach based on the standards and also teaching the outline of the Montessori notebooks. It proves to be challenging to keep up with it all." One teacher stated that to use a dual approach which takes time away from the standards approach makes it more difficult to accomplish the instruction needed for the students to be successful in the standards assessment. "It is very difficult to teach using the Montessori Method when all the students are required to learn the exact same material." The scarcity of instructional time became a difficult challenge to teaching in a dual instructional environment. "The time to do both is almost impossible. I've sacrificed my cultural times to implement Daily 5. I primarily use the Language/Math materials, to be honest."

The teachers understood they needed to balance both sets of materials: standard materials and Montessori materials. One of the eight open survey questions inquired as to how the teachers used the Montessori materials. The responses showed that most of the teachers used the Montessori materials. Three teachers did not use the hands-on materials. Ten teachers use them as they were meant to be used as the main driver of instruction. As stated.

> The Montessori materials are also an important part of our day. For example in math, we are always using the hands on manipulatives to help students increase their concrete understanding of concepts. We commonly use the gold beads, stamp game, bead frame and dot game to practice addition, subtraction, multiplication and division. The chains are also used on a daily basis by students. Montessori math materials are always available to students to use during their

independent work time. In each subject area, Montessori materials are available during work time.

Nearly half of the teachers said they used the materials but they supplemented the materials with purchased or teacher-created materials to address the standard objectives gaps which are not addressed by these materials. One teacher stated that she used the materials to practice teaching concepts rather than as a way to introduce objectives.

During the second year that the teachers were implementing the change to Montessori, they also were in the first year of Common Core Standards implementation. The Common Core Standards was an almost nationwide shift to mutually agreed upon standards in English, Language, Arts and Math. Since teachers faced a change in the standards approach, which is known as Common Core, and the shift to Montessori, they were really struggling. While one teacher said that she was in a Montessori early childhood center with 3-5 year olds so she only used Montessori materials exclusively, nine teachers said that they used the standards materials primarily to teach with because these materials had to meet the new national objectives. As one teacher stated,

> Because I teach in a public school I am obligated to teach according to the Common Core (ELA and Math) Standards. I try to meet my reading standards through guided reading. I pull groups each morning and at least one in the afternoon during *Read to Self*. I have a writing time in the afternoon, after the three-hour work period where all students are writing. I use *Words Their Way* as my spelling program.

Some teachers said that Common Core curriculum weighed heavily in their decision to use standards-based materials. One teacher felt a responsibility to use standards-based materials, because of the end of the year assessments. Nine teachers said

that they made materials or use standards-based materials in a Montessori way. A teacher relayed "I create a lot of shelf material in the Social Studies/science areas. I create 3-part cards and nomenclature cards that help 'fill in' our where Montessori materials lack."

While most of the teachers found the duality of objectives difficult, it is interesting to note that three teachers stated they did not have any difficulties with the dual curricula. "I have not found any elements of the combined approach that I do not like yet." Looking into this carefully, I discovered that two of the teachers who stated this worked with the three, four and five year old students and the teachers of the younger students seemed to have a greater ease with this dual approach because this approach seemed to honor the developmental needs of youngest students. Moreover, the other teacher said, "I am currently in a traditional classroom but I incorporate Montessori methods in both my math and science instruction." This teacher had just started the training and, standing at the beginning of the change, she may not be fully aware of the implications of the change yet.

Material making for gap standards. Several teachers remarked that the constant making of materials to meet the social studies objectives was difficult. As one teach said, "The effort of making so many new materials is hard, because it is so time consuming." Especially the third and fourth grade teachers were overwhelmed with the amount of materials that had to be made to meet the dual standards objectives. One teacher related, "I wish the Montessori materials covered the areas of time and money. These are areas that children really struggle with in my classroom." Having to make materials or purchase materials that cover the curriculum gaps means that teachers are adept at

material making but it also means that they spend a great deal of time constructing these

materials which is a burden to teachers. Some of these more general materials such as

money or time materials can be purchased to relieve the teacher stress, but even then a lot

of the materials still need to be laminated or cut out. However, the State objectives, such

as science or social studies objectives, need to be created and the teachers were weary

from this amount of work.

Moreover, another teacher stated that she even had to make pre-materials to make

Montessori materials more accessible to all of her students.

> It is also difficult to use some of the materials with students when they are not
> ready. I have needed to create, purchase, etc. materials to meet the needs of my
> low performing students, because they are unable to work with the materials that
> were purchased to implement Montessori.

This teacher was acutely aware of the incremental steps needed to step up

instruction using any materials, Montessori or Standards based.

Multi-aged classrooms. While many teachers commented on the advantage of

getting to know their students better because of having them more than one year since the

Montessori model promotes multi-aged classrooms, some teachers stated they disliked

the multi-aged classroom structure, because it was difficult. "At times it is very hard

keeping up with two different grades with two totally different standards." Another

teacher mentioned that meeting the needs of the students at different levels was

demanding. The public assessment component was a part of this conversation. Moreover,

one teacher stated that "sometimes the day can feel a bit fragmented with this approach."

The multiplicity of grade levels, standards and assessments can make the approach feel

like an instructional burden. One teacher stated that each component of Montessori was an adjustment, but she noted the multi-aged group as particularly challenging. She said, "It has been a transition going from traditional to Montessori. For me it has been even harder getting used to more than one grade in the classroom at a time."

Record keeping. Every teacher interviewed reflected that the ability to keep records was the most important and most frustrating part of managing an independent learning environment. When a teacher is using individual work plans for twenty students and writing what they should be doing and keeping track of what they have done, good record keeping system becomes the way to manage this type of instruction. Although there are paper and software systems available for purchase that can help with this management issue, the teacher must first comprehend a way that makes sense to him/her and a way that they can implement effectively. A part of this recordkeeping solution is getting organized. One teacher recognized that early on and said, "… reorganization. It seems that I am more organized than I was last year." Another teacher reflected.

> It has been a big change keeping up with all of that. Finding a way to record what I do with each child and the lessons. Keeping up with each kid. Lots more to keep up with. Recording it all. Keeping up with this is more preparation, but it is worth it in the end. I know at the end of the day each child has gotten something different.

This record keeping and the ability to develop a system that monitors the students and that aligns with the public school objectives is important to maintain the integrity of the structure of the classroom and the school. As one teacher narrated,

Keeping up with what they are supposed to have in the nine weeks. To me personally keeping up with the record keeping and documentation and also managing my time. I feel like I am a new teacher this year, and I don't feel like I have the flow of my day down like I should and I feel like that some of that is because I taught third grade last year. They could do anything. I could send them to do research and it is just different when you have little ones than when you have older ones. I think that I am still adjusting to having little ones. I love them, but it is just different. They are not as independent. They can't do some of the things that older students can do, but I think next year that I will be in a better place with this first and second grade thing down pat.

The balance of the students' ability, the standards objectives and the way to record the learning were crucial to these teachers as they tried to meet the students' needs, the district demands and their own personal standards for teaching.

Summary

In summary, this change was facilitated by the teachers who believed that hands-on learning would result in increased understanding of the concepts and the teachers had a supportive network of administrators, family and friends, assistant teachers, and consultants. However, even though some parents drove this change because their children attended the Early Childhood Center, there still seemed to be a lack of understanding about what Montessori education was among the parents and the community, or at least an incomplete understanding of what it looked like in an elementary setting. Often the parents who seemed to appreciate this instruction for the younger students seemed to not comprehend the different approach when the pedagogy was applied to the elementary years. Moreover, the teachers struggled with standard gaps not addressed by the Montessori materials which they reported included literacy and other standards that were not immediately covered by materials. This brought up the issue of having to make

materials for gap standards such as the state's native Indian tribes. The teachers also saw the multi-aged grades as a foreign concept to them and mentioned the difficulty of record keeping and staying on top of the material making needed to accomplish this instruction. Finally, the teachers discussed the challenge of balancing two curricula.

CHAPTER VI

BALANCING THE TWO APPROACHES

The third research question investigates how the teachers balanced the two approaches. In many school changes, the goal would be to make the change from one program to another program. However, in this school change there was a need for the teachers to understand and implement the new teaching approach which included eight principles, materials and lesson memorization, while also figuring out a way to balance the new information with the on-going standards instruction as well. For these teachers, this involved reflection and making choices or combining materials and methods in a creative and an innovative way. This is a sophisticated change model. How does one change and adapt the change in a way that serves the students' learning on the district and federal mandated assessments and still maintain some integrity of the Montessori approach?

This balance involved a combined approach. However, how to match the pieces of two very different puzzles remains a judgment call both collectively and individually for the administration and the teachers as they worked together. Montessori sources state that the "Montessori teacher must know the district expectations and match them to the Montessori curriculum" (Kahn, 1990). This source also states that Montessori teachers must prepare the students for the tests that they take. Kahn states the difficulty in what he calls the *curriculum mesh* which is the need to find a way to relate the two curriculums

that start at different ends, one beginning with the individual student and their natural growth and development and the other beginning with the objectives that a student must master. Kahn recommends not implementing a dual curriculum or a supplemental curriculum which will not accomplish either goal but instead to know the objectives and the assessment and somehow blend the two in an effective way without diminishing either. The logic of his argument is that to truly create a dual curriculum is time consuming for the teacher and will result in the teacher abandoning this approach and to treat the materials as a supplement or as add-ons. He asserts that this plan diminishes the desired impact of the approach for the student. In both cases, there is an underlying question of which one dominates: either the teacher's time, instructional time or the student's preparation. Moreover, Kahn asserts that it is the leader's job to protect the teacher's time from the district. The assumption is that the teacher instructs with a Montessori approach but makes the students prepared for the objectives and the state and federally mandated tests by giving practice tests. This approach suggests that teachers instruct using a full Montessori program with an eye to what the district objectives require and with an eye to the assessments that the students face. In implementation, this balance of the two may be a bit more complicated than Kahn advocates.

Although this section of the case study may have some overlap with the *how question*, this chapter of the study does approach or address the way these teachers made decisions concerning balance when implementing the two teaching methods.

Traditialsorri

While interviewing a teacher, she mentioned to me that they had coined a new

name for what they called Montessori and traditional education combined. She said,

> We call it Traditialsorri, because it pulls so much from traditional education in
> what we do, because there are things that kids need to know, like tally marks that
> Montessori doesn't cover so we Traditialsorried it and that's what we call it
> around here. We are a Traditialsorri school because there is so much traditional
> that we have to do to meet state requirements that we feel that's what we kinda
> are: traditional and Montessori combined.

Having coined the word, the teachers also said that there is much that is rich in

Montessori but balancing the traditional objectives and the Montessori curriculum

remains a difficult thing to execute. For example one teacher said,

> Like, if I just used the language Montessori materials, and I did not use reading
> groups or literacy groups or some whole group instruction with the language
> concepts, I don't think that my students would get what they need with the cards
> or the materials. The students like to use these materials, but without the other
> teaching, they would not have what they need to do well on the assessments. It is
> like they become dependent on the materials.

For the answer as to how these teachers balanced the two approaches, the

information from the open ended survey questions may give some insight. When asked

how they balance the dual approach, the responses varied. Some teachers admitted that

they do not balance the dual approach.

How did the Teachers Combine the Curriculum?

No balance. One teacher stated, "I am not currently using any Montessori

materials, but I would have to say that the method I use most is teaching three period

lessons." The other main reason cited for not using the materials was that the teacher's placement was not appropriate for using Montessori materials, such as teaching in a middle school algebra class. The teacher did not think that this combined approach was possible.

Supplemental balance. Other teachers used the supplemental approach of beginning with the standards and then supplementing the standards with the Montessori materials. Some began with the Montessori materials and supplemented the *gap standards* with traditional materials, especially in the areas of literacy and math standards, that are included in the Montessori albums or instructional materials. This approach is one way to integrate the two approaches but the distinction is that one starts at one end consistently to combine the two, with one approach always being a dominant player and the other being a bit player.

Schedule balance. Some teachers balance the dual curricula by time slots. They saw the need to schedule a Montessori work time in the morning and standards-based time in the afternoon.

> Generally I separate the two approaches by time of day. We have an uninterrupted three-hour work period set aside during the morning, and I try to be faithful to that time for Montessori work as much as possible. After lunch, we have literacy time set aside, and this has been a good time to work with reading groups and individual readers.

This implementation model recognizes the role of time on instruction as pivotal in producing a meshed curriculum.

Developmental balance. Still other teachers used the materials as a way to compartmentalize the dual goals. These teachers used more abstract workbooks in a section of teaching as well as more concrete Montessori materials to achieve a balance. Some teachers used these materials in combination, such as starting with the concrete Montessori materials and moving to the abstract workbooks, to achieve a program that started with the child's development and ends with a format that is closer to the assessment. One teacher reflected that she begins with the learner and what that learner might need either developmentally or by learning style and then figures out a way to accomplish the objectives.

Integrated balance. "My primary focus is with current standards but teaching it through the Montessori approach." This approach to balancing the two curriculums seeks to replicate the interwoven strengths of both curriculums. As one teacher stated, "I combine both approaches daily to better serve my students. There are some areas of study that the Montessori materials better serve and then some that the Standard Course of Study addresses." This approach is time consuming for the teacher. One teacher even stated that her advice for new teachers coming into this program was to get new scissors since they will be cutting a lot of laminate. She was referring to the amount of material making that the teachers created and laminated for gap standards such as three-part-definition cards to teach content vocabulary.

The way teachers balance these dual mandates can reflect the teachers' beliefs, pragmatic concerns, and value judgments which are imposed or asserted both internally or externally upon the teacher. Phrases like "there is not enough time in the day" and "I

do not feel that I teach either one well" reflect the tension that teachers encounter as they make judgment calls based on beliefs, students' needs, and just the time constraints of the daily grind of teaching. Since these teachers must figure out how to balance these curricula, it is valuable to look at what facilitates and hinders their ability to combine the two approaches.

What Strategies Facilitated the Teachers' Balance?

Alignment. In the summer, before school started, the teachers and the administrator met to align their report cards and pacing guides to reflect Montessori, Common Core and State Essential Standards. From this meeting, the group emerged with a pacing guide and a monthly unit guide that corresponded to their *Curriculum Notebook* for the year. As one teacher noted, "we have aligned our report cards and standards to the Common Core. It is easier for us to be able to know exactly what we need to teach each quarter to each child."

Another teacher reflected that,

> We have a *Curriculum Notebook* that we have to go by. The traditional teachers only use that, but the Montessori teachers use their Montessori teaching albums as well, and for integrated literacy and we look at the standards and what is going to be tested and I just plug it all in. Now for me, I look at my-guided reading groups time and when I pull the small groups I teach a lot of the standards then because we don't have shared reading and I teach it in the small groups…and that is how I have it all integrated.

Teachers plan these alignments together as recalled by one teacher.

> At the beginning of the year, the other teachers went through a sort of year-at-a-glance which was similar planning. What I have found is that where I start the students or where I finish may be different but I still follow the… our school has

common assessments and during conferences the parents come in and review their work plans and work journals. Also the homework somewhat aligns with what we are doing.

The teachers met together for a week during the summer and aligned the standard course of study documents. They set a pacing guide to correlate with the Montessori materials. They came up with a plan for homework which can be a problem when a great portion of the materials used for learning are at school. They had these issues resolved between the first year of beginning to institute the change and the second year when they fully committed to the program integration.

Confidence with experience. Improving the instructional implementation came with practice as the teachers grew in confidence concerning such things as familiarity with the same students (multi-aged grades) and with the Montessori materials, through the creation of enough materials to meet the standards, and by adjusting classroom management to include better routines and structures. A teacher stated,

My second year, I feel more confident this year. My management is better this year. I have better systems in place. Last year everyone was new, but this year, I have a lot of the same kids so the kids were able to jump in better this year.

Another teacher remarked,

My class has a great classroom community, and we kind of know what makes the other person tic. Having materials already made from last year has removed the time pressure to have to create materials. Okay, I am now the Master of Arts and Crafts (referring to material making). I know I have these materials for these kids so I feel more prepared to teach the unit.

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Restructuring the schedule. The teachers experimented with different ways to schedule the Montessori teaching and traditional objectives. By the end of the year, the experimenting phase was replaced for most teachers by a mutually agreed upon schedule of a Montessori work cycle in the morning and a Daily 5 literacy block in the afternoon. However, individual teachers were still tweaking the schedule to achieve the instructional balance needed in the time allowed. As one teacher recalls,

> I balance the Montessori with things that are not truly Montessori like the Daily 5. Then I give guided reading groups on Monday and Tuesday and on Wednesday and Thursday I monitor Montessori lessons. Friday I check notebooks.

Even though the whole school schedule was set, the individual teachers continued to move schedule components around to experiment with ways to accomplish instructions and balance items more efficiently.

Refining classroom management. While managing a student independent learning environment, the teachers became more comfortable with this process and discovered procedures and routines that helped mitigate the classroom management issues that arise. As one teacher recalled,

> They like to help each other so I have a policy of *seeing 3 before you see me*, and they will go and ask each other before they come to me for help. For students who are lower or still confused about something, they can still get help and feel better about the idea or themselves, they can be more confident knowing that someone else is going to be there to help them out.

Using one of the strengths of this program, the teacher utilized a student peer tutor to help with the sometimes overwhelming task of responding to each individual student.

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This allows the teacher to attend to the goals of individualization and objective instruction in a reasonable fashion. Finding ways to accomplish these two goals at once often is determined by good classroom management procedures.

Student accountability. Many of the teachers expressed a disappointment of students' ability to what I call *hide behind the materials*. A student could get out a set of materials and just play with them instead of learning or using the materials correctly. The teachers did realize that students could do the same work over and over or not really pay attention to the materials with an eye for learning. One of the reasons this could happen is because many of the materials had self-correcting pieces included as a learning component. As one teacher summarized,

> How do you bridge that? How do you make them apply what they are learning through the language to their everyday writing? Not just "I'm going to sit here at this mat and get all of these words right. I've got this basket of blends, but yet when I go to write in my writing journal I may be writing some of those words but misspelling them."

In other words, if a material had an answer card included, the student could just use the sheet and not learn the concept from the material or they could sort materials and then forget about applying them in their writing and not transfer the learning. One teacher addressed this problem this way,

> I would reinforce the idea that while you are working, you are supposed to be learning, not just going through the motions. Like when you are matching prefixes with root words, we are supposed to be learning what that means and not just memorizing it. Instilling the idea of ownership with the kids. This isn't just something that I am asking them to do or the school is but that they are going to be better human beings because they know this.

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The idea of ownership and intrinsic motivation are critical concepts to teach students in an independent learning environment as a practical matter of understanding that short cuts only impede one's learning and as a philosophical understanding that even from a young age the student can be responsible for his/her own education. Attaching meaning to learning aids the purpose for the education and is necessary in balancing the two approaches since ultimately the student must get what they need to be successful in their own growth. The rigor of the program is set up by the material making and the lesson given by the teacher. However, the accomplishment of practicing and mastering the understanding must be done by the student. As the teachers grew in their understanding of this change and began to realize this point, they transferred their understanding of this to the students.

To facilitate the transfer of learning to the students, many of the teachers began to conference with students concerning their learning and students charted his/her own accomplishments. As one teacher reflects,

> A big thing that I've been doing is conferences. Every week where we sit down with their work plan and work journals and just talk about the things that they worked on, what areas they made progress in, and what areas they need to focus more on next week. So that we can kind of get a work plan for the next week. That has certainly been helpful.

Hand in hand with making the students responsible for their own learning is the need to do what one teacher coined as *trust but verify*. As one teacher recalls,

> Each week, students are taught new things and I spend pretty much the majority of Wednesday and Thursday and even my assistant goes around and she keeps the children focused on task learning. I try to give them as much freedom as possible

but it is my job and responsibility to make sure that they are working on something that is worthwhile. Basically, I just stay behind them and make sure they are working. After that I tell them that they can take a small break. I try to sustain that type of work ethic in them not only for now but for the future. I even show them that I don't talk to my assistant about something that is not work related. I model behavior. I try to have plenty of work on the shelves for them and plenty of options of things for them to do so that when they are done with one thing they have something else they move to next. I try to get them to understand that we just continue to work and build on what we know. I feel pretty good with it.

Another teacher explained her method of verifying in this interview segment concerning checking work,

Teacher: I can look at the recorded work to see if the student did the work correctly.

Interviewer: So basically you have figured out a way to monitor it all.

Teacher: I have to because I can't get around to every single person.

The writing down of the work that has been sorted helps the student with the structure of writing, but it also serves as a checking component. The students turn in their notebooks at the end of the day, and the teachers check the work that is written to see if the student understood the concept. The teachers used these notebooks to re-teach concepts the next day if they saw the students having difficulty with a concept.

Materials and extensions. As the teachers became more familiar with the materials the second year of implementation, they began to make more connections with the standard objections and the extensions of the Montessori materials. They began to see ways that they could balance the two in a way that accomplished both purposes. In the Montessori albums or their set of materials lesson plans, the end of each lesson includes a

section of ways that a material could be used for other instruction. When the teachers first started learning the materials they could barely remember how to do the regular lesson, but as they got more proficient with the lessons and instruction, they began to see ways in which one material could accomplish several tasks. One teacher summarized it this way, "for instance, you can find an item to teach and with all the extensions you can find in Montessori, there's something to teach everything."

Special education. Another thing that teachers must balance in a public setting is how to accomplish the Individual Education Plans (IEP) for students with accommodations. Students will have these plans because they are classified as Academically Gifted or because they need remediation. The teachers found that the gifted group were able to move ahead and were often aided by this approach to instruction since the work plans were individualized so that they could expand their understanding of subject matter or move ahead to new material. However, remediation required more thought. As one teacher said, "for those children, and there are-six of them (in my class), I met with them every morning. I meet with them and we plan their day together." The teacher went on to say that the emphasis on recordkeeping was helpful in serving these students, but that she must make a conscious effort to make sure that their IEP goals are met in the classroom. The same idea of progress monitoring with Title One students was an item that teachers had to think through and even incorporate on the student's work plan in order to meet the federal and district obligations for these students who required more remediation based on their identified needs.

Incorporate standards. The consultants had years of Montessori and public experience, and they suggested to the teachers that they post the standards they were teaching to the students. They also encouraged the teachers to explain to the students, when giving lessons, what standards the Montessori materials addressed. This serves two purposes: First, the teacher must research and be aware of the objective. Secondly, the students need to make the connection. As one teacher recalled when asked how she balanced the two curricula,

> It's difficult and I don't know if I've found the perfect way to do it. One thing that was suggested to me by our Montessori consultants was to make the standards very visible to the kids. So I have those black charts in the corner of my room and those are sort of the big units going on such as explorer, geometry, and geology. I put up the things that the kids are responsible to know based on state standards. And we talk about them. We say, "Which standard did this lesson teach us?" Before a lesson I will say, "This is the standard the lesson relates to and these are the lessons that will practice that standard." So, I don't know if that's going to solve everything but that's my way of starting to balance that.

She stated that displaying anchor charts of the big ideas and standards had helped her develop a better sense of how things fit together, and she hoped that over time this would translate to a better understanding for her students. She also used standards as titles on tables and rugs when giving a lesson. One teacher included the standards on the students individual work plans to draw awareness to the formal language involved with the objective that the student was mastering. Regardless of how the standards are communicated in the classroom environment, there is a need according to these teachers to include the correlation of the materials to the standards to merge the understanding for the students.

What were the Obstacles to the Teachers' Achieving Balance?

Pacing is difficult to execute. Even though the teachers spent time aligning the

Montessori objectives and the Standards, the teachers recalled they had a hard time

keeping up with the pacing guides. The desire to teach the students based on their prior

knowledge and the need to push them to stay on the pacing guide can create tension with

the teachers. These teachers struggled, because they expressed concern about the tension

between wanting to represent their school and district in a good light or being seen as

competent by their administrator, and giving the student the time to master the objectives.

They felt pulled to move on to the next objective. As one teacher says,

> Pacing is hard like trying to give the kids enough time to practice the work but
> also move them along so that we teach what we are supposed to teach for
> assessments. It is a hard balance to find and also with assessment. Giving
> assessments when the kids are ready or rather than like with me setting the
> deadline even when they are not ready. Sometimes we just have to move on in
> order to cover everything that they are supposed to have in a year.

Balancing the need to stay on mandated guides and pass district assessments,

these teachers faced the challenge of not just quantifying their work by guides and

assessments, but by making judgments and decisions for students. They had to balance

what would actually build the fundamental skills necessary for the students to accomplish

the learning needed against exposure to concepts. As these teachers looked at the case by

case needs, they were also trying to balance this against the benchmarks and mandates of

the district, state and federal accountability measures. One teacher reflected,

> Practically I look at the 9 weeks. I look at the standards. I know these need to be
> taught. Then I need to break this down. I take it through the different steps in

mind. I then make a weekly and daily plan to get you through all the different steps in this quarter. It is so important for the parents to know what your child should know but I think that it is as equally as important for the parent to know that I am going to work with your child where he is and I am going to get him as far as I can based on that. There is no point in me telling you your child is not on grade level. We know now what are we going to do about it. My responsibility is the part about what are we going to do about it.

Most of these teachers felt a great responsibility to balance the objectives they should be teaching with the student in front of them who may have certain skill deficiencies that need to be addressed before the new teaching made sense for them. According to these teachers, the individual view of starting with the student first and the standards based grade level and below grade level competencies can at times interfere with the job at hand which is to educate the students and make them successful. Since there is only so much time in a day, often a teacher has to make a choice between what he/she knows they should be doing concerning instruction and what they are supposed to be doing with that time.

Assessments that do not match Montessori materials. The teachers remarked that another component that made it hard to balance the curricula was the assessments from the district or the state did not match with the Montessori materials. For example, the way the stem questions were worded for math story problems were different than the way the student would learn division on the Montessori division board, and even though the students could calculate in division, they could get confused. This pushed the teachers to make *gap testing* materials the same way they had to make *gap standard* materials. As one explained,

The students need more assessment opportunities and not just with pencil and paper. So we brainstormed this form of like, I don't know if you'd like to see it…rubrics. I make test cards that have questions like the ones that they will see on the test. So that when they have a test it is not the first time that they have seen the question.

So while the teachers were creating instructional materials that match the objectives, they were also making test materials to bridge the Montessori materials and the mandated assessments. Creating rubrics and test cards that could be placed alongside materials on the floor or tables that corresponded to the Montessori materials and also met the state assessments was an obstacle. It was a time consuming process. The teachers felt this strain. As expressed by one teacher,

Many of the Montessori teachers felt that we were expected to teach the regular curriculum as well as Montessori because we had regular curriculum guides with monthly assessments. So we felt like we were expected to do those as well as doing the Montessori which didn't always fit together. The assessment formats didn't fit what we were teaching so it felt like you'd do your Montessori lesson and then have to turn around and teach them the traditional way of doing things so they could do the assessments. Overall, at the end it was a little bit better but in the beginning it was a little sad some days.

The teachers were also adjusting as they went along. As reflected by this statement,

I look at the assessment that is coming up, and I make sure to cover what is going to be on the assessment that we are doing so that they have it. Like this last one, I didn't do such a good job, because they needed graphing. I'll look at the next assessment by the end of the 9 weeks to see what they need to know to make sure lessons get taught on those topics so that the children are aware of them. I'll still kind of follow the regular schedule of things, but I'll make sure that, even if it's out of order, those particular skills are covered through lessons. I'll tie them in there somehow.

Matching the assessments and the pacing guides is an ongoing and imperfect exercise which requires constant updating and reflection. This is a requirement that is not unfamiliar to what all teachers encounter as they teach. However, often there is a district wide effort to match these two components together, but in this case, the teachers must create, or at least reflect concerning these two items. Since the starting points between Montessori and Standards pedagogy begin at different viewpoints, the effort to bridge the two required a great deal of attention from the teachers. As one teacher commented,

> My first year definitely assessment was not done very well. I was more focused on learning the materials and presenting them that I wasn't following up with my students as much. This year I have been really focusing on following up with them I think that the negative affect that had on them was that there wasn't enough accountability, whereas, this year I am trying to make accountability a bigger part of our day.

Summary

Regardless of the way the teachers balanced the two approaches, they all struggled with learning the complex classroom structure, materials, recordkeeping and making the connections to assessments the first year and well into the second year. There was a learning curve involved for the teachers to implement the structure of the classroom environment, achieve a level of comfort with the materials and acquire the knowledge to make judgment calls as how to combine the two instructional methods. These two approaches needed to be combined in a meaningful way that addressed the assessments. Most of the teachers became better at finding ways to do this from the first year to the second year. However, this process took time. Teachers needed time to absorb the complex change and implement it with fidelity and balance.

CHAPTER VII

THE TEACHERS' JOURNEY

The nearly thirty teachers who either started this journey or joined this journey in the second summer have very different and yet very similar tales to tell. As one teacher reflected, "I run a tight ship. I have high expectations, and I run a tight ship so this has been very hard." To take a teacher who is very rigid in his/her approach to teaching and ask him/her to teach in a more facilitative way can be a difficult thing for both the educator and the leader. Even if the teacher were inclined to be more facilitative in his/her approach the teachers often felt overwhelmed as one teacher related,

> I was so used to what I was doing before. I was good at that. But now one year later, I feel more comfortable with it. I am still not at the place that I was at before I started Montessori. Through the year I think that I have grown into what my vision of what a Montessori teacher should be.

This teacher expressed that having a certain image of how a Montessori teacher should teach or act in the classroom is almost a burden. This seems to be a common theme for beginning teachers or teachers changing to a different way of teaching to focus on the image of being *that teacher*. At this point, the teacher's idea of education may parallel the parents' idea of teaching in that the way one is taught is the right way to teach. The image either from observing other Montessori teachers or the image projected from the teacher's past may become the focus of the change instead of the change itself.

However, as the teachers embarked on the change, they began instructing students in a way that they did not completely understand themselves. So their approach to presenting the change to students was as one teacher expressed, "taking it slow at the beginning, and making sure that the students really understood what was expected of them. If you try to change too much or do too much, they didn't really understand. I think when we slow it down, and then the students made better connections." As the school started, the teachers did turn from the incomplete thought of this change in their head, and they began to flesh out this idea in their classroom.

The Focus of Teaching

It was then the teachers turned their focus to the reason for teaching: the students. As the teachers began to manage independent learning classrooms with students in small skill leveled groups and more individualized and prescriptive instruction, the teachers discovered,

> I can take my higher kids higher now versus before. A lot of doors have been opened for them through the independence. This is just the best part for me, it is just being able to take those higher students and just let them go and my personal MAP scores for my children are so much higher. I noticed that on the gifted and talented test if you are a Montessori student you should really do well on this. Just taking those higher kids and teaching them to multiply. I have never taught first graders to multiply. I never taught them to regroup. I taught them to add 3 digit adding but I never taught them to multiply. Then when they get to it on the MAP, they get it because, they have been taught beyond that. They are beyond what they have to learn right now.

The higher students were able to go as far as they needed to go and also the lower students were able to practice the academic skills over and over until they learned to master them. As one teacher experienced,

I know one positive response was this little girl who had never been in Montessori before. She was in a traditional classroom and below grade level, and she is really excelling this year, because she is getting to practice things as much as she wants. She is a really hard worker and her mom said that her whole attitude about school has changed.

Seven of Lillard's (2006) principles look at learning from the viewpoint of the student. Students' free to move, ownership of the learning, interest-based learning, intrinsic motivation, collaborative learning, authentic learning, and the benefit of an orderly environment. One of the eight principles involves the teacher's role in scaffolding learning.

Concerning student freedom to move, one teacher noted,

I like that they get to move about the classroom because that completely makes sense to me. I like that they get to have choice of what they do. I like that it's hands on. I like that they are working at their own pace and that you can kind of know for each child where they are in math or where they are in language and kind of go from there.

One of the things that attract teachers to this type of teaching is that it makes sense to follow the child's development when executing instruction. Teachers understand that young children need to move.

Teachers were favorable about the change to student learning ownership and the impact of this ownership on teaching and planning.

Before every kid was doing the same thing at the same time, but now it is very personal… Even though we are all working on multiplication, I have different groups that are working in different stages of multiplication. Across the board my planning is more complex and more specific.

The connection between student ownership shifted the focus from just a teacher's plan to a work plan for every student. As noted, "students (are) keeping up with their learning and the independence …through the lesson plans and the work plans that we use." Although for a teacher this means writing 20-25 individualized work plans.

The other by-product of student ownership is that students learn from each other and not just from the teacher,

> Because they have to solve problems on their own. If they want to, they can learn more about something, they can with support confer with each other and learn from each other. They can feel free to do so with support. That can happen in a traditional classroom, too.

Although this collaborative learning can occur in traditional classrooms, the focus of a Montessori classroom should be that this approach does occur as a feature of the pedagogy.

Intrinsic motivation to learn is a change that the teachers noted in this transition:

> I guess from my classroom the biggest transition has been shifting a lot of the responsibility for me being responsible for the learning to the students being responsible for the learning and having to make choices. So, that's been the biggest shift. I feel like in the school, we have definitely shifted a lot more towards Montessori principles of intrinsic rewards. Our school is trying to get rid of extrinsic rewards and move towards self-motivation and talking a lot more about peace and character traits.

This teacher made a distinction between classroom shifts versus school wide shifts. The classroom shift is toward choice, but the school-wide shift was toward internal motivation without external rewards. This type of distinction may be logical, because many schools that use a Positive Behavior Intervention System (PBIS) do look at school

wide behavior approaches and universal rules. It is interesting to note that different from a PBIS system which favors external rewards this teacher discussed internal motivation.

Even though most teachers liked the student learning independence shift, almost all of the teachers noted that it was a difficult to implement in the classroom. As one teacher said,

> Turning responsibility over to the children was hard rather than me having the responsibility. Feeling free to let them go ahead and explore was difficult and then research things on their own because usually I would have done things that were more prescribed before.

The Lillard (2006) principles that were not included in the teachers' interviews were interest based learning, authentic learning and the benefit of an orderly environment. This may have been more of a product of where these teachers were in the continuum of the change. At the early phases of this change, these teachers seemed to be focused more on what the students were doing and the structure of the change than interest based learning, authentic learning, and the orderly environment. Also, since I did not interview an early childhood center teacher, I think that it is reasonable that the first through fourth grade teachers may not have discussed the importance of an orderly environment as much since that may be seen as more important to the younger children than the older ones. The lack of discussion on this item may again reflect the early stages of this change and the incomplete understanding of the impact of the environment on learning at the time that I interviewed these teachers. Understandably, they were more focused in this process on what was demanded of them in terms of meeting the instructional expectations.

The role of scaffold learning did not come up as much either and that may have been a combination of the complexity of the change and again the newness of the change. Although some of these teachers had been to the first summer training and then attended the second summer training, a few of these teachers were new this year and had attended only one summer training session. Therefore one teacher remarked, "I was unsure of myself, and I had to keep looking it up in the manual all the time. I know every teacher says that is okay to do, but I feel like I should know what to do and I can look it up, but I just had trouble feeling unsure of what I was doing." Many of the teachers felt unsure of what they were doing at first and at different times along the change continuum which aided them in some cases of turning learning over to the students, but also may explain why they did not feel that they were in the best position yet to scaffold learning.

Reflective Practitioners

For the teachers who really made the journey and put in the time and understood the concepts, they commented that they were better off from the experience. They had become more reflective practitioners because of the opportunity. These teachers stated that they had even become more critical of the components of Montessori, and they began making curriculum balancing decisions based on what Montessori or standards component was best suited to teach what concept. There were also teachers who, because they started later, were still grappling with the same issues that the first group had struggled with and the first group of teachers became mentors to these teachers. There was another group of teachers, who somehow got stuck along the way, and they were still struggling with the very basics of managing this type of classroom. They were resistant to

this change. There were even teachers that confided to me that they would not put their own children in this type of instruction, because they thought that it was messy and didn't work for most students. Surprisingly, one teacher in particular was looked up to by her counterparts as a successful implementer of the program, but privately she didn't think it would last unless the instructional change produced changes in test scores. Moreover, all of the teachers relayed that this change would only become permanent if it either immediately or eventually produced results in terms of increased test scores.

Instructional Implementation Gains According to the Teachers

Fullan (1999) states that what encourages teachers to change are the evidence and/or success that they see in the student's ability to learn or the concrete progress that contribute to a positive learning experience. The teachers that were able to grasp and progress in this transition relayed their proof of progress in the interviews and the reasons that they stayed motivated and engaged.

What wasn't discussed by either Zemelman (1998) or Lillard (2006) but was brought up by every teacher was the opportunity for them to respond to their students in a personal way. According to Manuel and Hughes (2006) "Teaching and learning, at its core, is about relationships and connections between teachers and students: accomplished teachers and new teachers, schools and communities; hopes and their realization; and aspirations and their fulfillment" (p.22) about the relationships. These teachers noted that what they liked most about this change was that they got to know their students better. As one teacher related,

I have always thought I knew (my students) but now working individually and in small groups, I feel that I know more where they are and what they need. I am more in tune with my students. Or I feel like I am. I feel like I have a closer bond with them. I have always felt like I have a close bond with them, but this year it is a stronger feeling of attachment. I don't know if it is keeping them 2 years or that I am just doing so much more with them that makes me feel closer. I don't know which has made the most difference.

Although this teacher did note that the multi-years teaching the same class may contribute to the fact that they know their students better, the teachers pointed out that knowing their students better was the best thing that they had gained from this change. They stated reasons why they felt that they were closer to their students such as "Before the change I used to consider kids but certainly now since I have taught Montessori I listen to them more now." They felt they were better able to serve the needs of their students. "I really like that it is tailored towards each kid and that it is specific towards each kid so that if the kid is ready they can go ahead." One teacher summed it up best when asked what she was most proud of in this change she said, "My kids."

This confirms the assertions by Elmore (2004), Fullan (2010) and Hattie (2012) that when instructional expectations have been set and adults have positive change stories, this can facilitate school change. This change was framed by the teachers from the viewpoint of the students' progress and the students' need for differentiation. This coincides with the thoughts of Dufour and Mattos (2013) that change that centers around the correct endeavor which is student achievement can accomplish that goal.

Almost every teacher mentioned the individualized instruction as a positive feature. "I'm loving the individualized work based on students' needs." Along with this view of individualization, the teachers saw independence as a byproduct of this method.

"Instruction is based on individual needs and students seem to become independent quickly working at their levels." The independence seemed to result in the opportunity for students to *problem solve*. "I can reach all students in some manner. It also provides them with a variety of tools to learn as much as possible as well as teaches them about making choices." One teacher described this change in her classroom as a *breath of fresh air*. She noted the paradox of having so much student individualization which could make teaching very chaotic but found instead the prevailing atmosphere was more laid back. She attributed this calmness to the individualization through choice which led to independence. She noted that "it seems crazy to say that it's a relaxing way to teach students."

Concerns

Teacher evaluation. Balancing the two curriculums was the subject that caused the teachers' great anxiety. They worried about how the balance would affect their teacher evaluations. They made comments about the administration not knowing what they were seeing and how it should be judged. When questioned about this further, the teachers often reflected that they did not know what to think about their own instruction yet, and they projected these feelings toward what their supervisors might think. In this process, they were learning what elements were enough to include into the balance of the dual curriculums and what was too much. For them this challenge was on-going and required trial and error to discern how far to swing to either side to maintain a middle concerning representing both mandates well. As they were balancing this, they would express what they thought their administrators might think of them. The need to change

and yet still be evaluated and judged by others in the change weighed on the teachers' thoughts and actions.

Teamwork change. As the year and a half progressed, the teammates from the first grade and second grade group and the third and fourth teammates mentioned that they did not stay in touch with the cohort as much. The cohort at first consisted of the first/second grade teachers as the majority of the cohort and the third/fourth grade teachers as about a third of the cohort. As the year progressed, these two groups taught in separate parts of the building, and they began to have different group concerns.

> I don't really talk to the other team, but I know that my team has been helpful. Just talking with my teammates, I say this is what I am doing or they say, I tried this worked and this didn't. I need the feedback and our team works well together.

The third and fourth grade team was very busy trying to make materials to match the state's standards for social studies and science. Montessori is an international organization with many vendors for materials, but there are often no vendors for specific state objectives so the teachers filled in the regular materials with their teacher-made materials. They were writing, matching illustrations and making materials on a daily basis. They did share materials among themselves so that they could maximize their time. However, it was still in one teacher's words,

> (Materials are) labor intensive with no down time. When I am outside the classroom, I am making materials and planning. When I am inside a classroom I am monitoring the students. There is no 'let me give you a worksheet and I will check my email.'

The first grade and second grade team had most of their materials made because their grade's gaps standards were often accommodated by the Montessori materials or they were more easily purchased. However, this team was still trying to figure out how to make up the literacy shortfalls they felt had occurred from the total phonics program at the early childhood center. The Logans, the consultants, started a Daily 5 structured literacy program like the one they had been introduced to in their years in public school. The teacher originally thought that they would follow the Montessori language program exclusively. However, now that they understood the Montessori materials and lessons better, they had come to evaluate the strengths and weaknesses of the program and they referred to the language work as supplemental to the objectives that they had to accomplish to meet the assessments and literacy benchmarks that are expected for public elementary students. Since they were required to assess students with running reading records, sight word recognition and the ability to comprehend text, they did not see the Montessori literacy program as a tool that could get them all the way to where they needed to go. The Logans introduced a traditional structure of the Daily 5 which seemed to complement the Montessori classroom structure but was a balanced literacy program.

Change Journey Unfolds

During the middle stage of the change, the teachers and the principal reminded each other about why they started the change, because they were very discouraged at this point. They had been overwhelmed at first, and they expected to work through that. They thought as they got through the first stage of difficulty that the next stage of the change would be easier. However, as they peeled down each difficulty layer by layer, they

discovered that there was yet another layer of difficulty to resolve. What they did not

realize as they were collectively navigating the difficulties is that they were refining their

teaching, overcoming obstacles and becoming accomplished at implementing facilitated

instruction.

The principal mentioned that having the Logans around was helpful, because they

reminded the school faculty of how far they had come. "They have pointed out little

things and big things, and they have always mentioned that it is a continuum." As the

principal said,

> They keep reminding me that my teachers were teachers before they learned
> Montessori. A lot of time private Montessori teachers may not have been teachers
> before they became Montessori teachers, but these teachers have the teaching
> background.

Being teachers, they already had a handle on behavior classroom management.

During the field work of 27 hours in the classrooms of the 29 teachers, I saw well

behaved students. The classrooms were well run and calming places. It was a joy to be in

their classrooms. While being immersed in the change, the teachers were not always the

most objective ones to reflect on their culture, because they could see what needed to be

improved upon since that was their focus. Moreover, having this *tunnel vision or view* is

how they were able to improve. However, they also needed to take a longer look at times

and reflect on their accomplishments. As the principal relayed, "Mr. Logan made the

comment the other day that he would put his child in my school. That is one of the

highest compliments that I have ever been given." Mr. Logan was training teachers in

another state, and he was so impressed with this program that he even sent teachers to observe the mastery level of these teachers.

See and celebrate success. As the teachers were improving, they began celebrating student successes. As one teacher said, "I think that the children are more engaged in learning around the school, you see that kids are more active in what they are doing." Moreover, the teachers at the mid-point of the change began to see some improvements in the instruction they had implemented, and they became more focused on the students and on the progress that the students were making. The teachers started to celebrate successes and then they focused the students on celebrating their successes as well. One teacher did this by taking pictures of the bigger works that the students finished. She had a bulletin board in her room that was covered with pictures taken of the students' completed works, and she also had them sign the picture. She told them they were the rock stars of learning. As one teacher framed it,

> They get to celebrate small successes that they make. Even though they are not on the same level as every other third grader, they can still feel accomplished and successful. Not as labeled as much if they do not reach a certain level by a certain time. Part of it is because of the whole peaceful atmosphere and part of it is, because people understand we are all moving at our own pace, and therefore we are able to celebrate those small successes until we reach those bigger goals.

Another success that the teachers saw was the concentration of the students became longer in order to do the longer works. One of the claims of Montessori education is that with a long sustained period of work, the student would learn to concentrate for longer periods of time. "I observed that most students were able to focus a lot longer. They don't seem to be easily distracted during work time. The hands-on

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approach is definitely beneficial for the children." One teacher reflected, "I have

observed that students who are self-motivated and independent learners really thrive in a

Montessori environment. The individualization is a plus for all involved."

As the teachers became more confident in the change process, they started trying

to add things into their classroom that they felt might improve the class. As one teacher

said,

> Absolutely I have tried to institute a help box, but there are some children that are
> not normalized yet and they have trouble going to a help box, and they don't have
> the patience to wait on me, and I am one person, and I use my assistant a lot.

Instituting a help box in the class to respond to the students' desire for help and

other such creative ideas often come in response to problems but can also be just

interesting additions to the current classroom environment. One teacher wears a necklace

when she is giving lessons, and she takes it off when she is available to just answer

questions. The teachers discovered that as they started learning new things and

questioning the way that they had been doing things before, they started questioning other

things in their school that they had not really thought about before. One teacher stated it

this way,

> Well (this change) it is positive, because it is causing us to look again at what we
> do such as a rewards system and whole school incentives and we can't interfere
> with what the whole school is doing, but we have discussions about why do we
> give them cub cash and different meetings it is good? There is not really a
> solution yet, but it is good to ask to know why. I think we do things a lot just
> because we have always done them. Like assessments we have these common
> assessments and are they working? It is hard for some of the Montessori
> classrooms. We are just rethinking should we be doing this?

How the Teachers' Journey Differed

Some saw positive and some saw negative. When asked to describe how the change to a public Montessori school had been either negative or positive, one teacher might cite something as positive while another teacher cited the same thing as a negative. For example, motivation fit into this category. Many teachers related that the motivation of the students to want to learn went up while some teachers said that they experienced a drop of motivation to learn on the part of some of their students:

> Montessori has allowed students who are motivated to learn, have the ability to focus, and are responsible individuals to experience success with one grade level and above grade level standards. It has allowed those children the opportunity to continue to grow and learn without the restraints of grade level standards/ expectations or the needs of the majority of students within a class.

Having access to independent practice time and student ownership of their learning does bring out the best in some students according to the teachers who filled out the survey; however, the teachers did note that students who were not used to this approach or may have difficulty with such things as time management or concentration may have just the opposite experience. As stated by one teacher, "one concern has been motivation. It is better this year as the students have gotten more adjusted but sometimes if a kid is having an off day, very little will get done."

Another such issue is the issue of self-control which was also viewed both negatively and positively by teachers. Some stated that the opportunity to exercise self-control promotes this concept, but the teachers also stated that for some students this freedom is a burden that they cannot seem to control. As relayed by one teacher, "there is

a lot of opportunity for students to mature in this learning environment but sometimes I think the lack of self-discipline and self-control results in wasted time." Given the longer work cycle which lasts between two to two and a half hours in the morning and in the afternoon, the students have an opportunity to have practice time and small group instruction during this time; however, if a student does not use this long time cycle to their advantage, this could actually put a student behind. As one teacher related, "students seem excited about learning when they have choice. Some students are not self-motivated and therefore may wander the room aimlessly."

Teachers reflected differently. When reflecting on the change and their view of students the teachers had many different things to say. One teacher said that while she was going through the initial process she wished she had been less focused on herself and more focused on her students. When asked what she would do differently if she started over she said that she would say,

> Slow down, it is about the kids. They will lead you in the right direction I guess as far as they will let you know what you need to do for them. Don't put so much pressure on yourself. It is about them and they will tell you what to do.

The teacher's statement reflects a *re-culturing* of the way instruction is implemented and according to Fullan (2007) it is this kind of change that is needed to bring about a course correction for schools that positively affect student learning. As one teacher commented concerning the joys and challenges of letting the students work together,

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I think they just like working together. And so they do everything together. They are very intelligent children and because they work together they finish twice as fast and so then they say I am bored or it wasn't hard enough because you have two brilliant minds so it is not going to take as long as if you did it on your own.

She said that she had to do a regular work plan and then she was also starting to make a free choice work plan for when the students had finished their regular work.

Some teachers still worried that the students were still not making good work choices, and one teacher said that she,

…thinks that sometimes keeping kids choosing the right works is a challenge. Sometimes, kids will pick lessons that aren't really something that they need to be working on. Even though the procedure has been taught: choose the lessons that you have been taught. Sometimes students still will go and still do those things that they and you know will not work for them.

Most of the teachers saw a positive motivation in the choice and freedom options. As one teacher said,

I think that I have a positive attitude towards my teaching. I really enjoy doing the lessons with the kids. It's actually a lot of fun to sit with the kids and show them something new and see them get excited about learning. I feel very positive about every day and I like doing the lessons. I enjoy it. I like seeing the things that they make and how they respond to the lessons.

The teachers saw their positive attitude becoming infectious to the students. However, occasionally they reported missing details that mattered for the students' sake. One such example is one teacher who reported a student doing the same work over and over or not moving on to other materials. The teacher recalled,

I have one little boy, and I have been out a lot, and I discovered that he has done ABC order lesson 9 times he has written the same irregular plural words 10 times. He has been repeating lessons, because I had not gotten to sit down with him. Nobody caught that he was repeating the same thing until I caught it yesterday.

Changes External to Internal

Beyond the internal changes the teachers exhibited, external changes were also visible as they adjusted to the transition from a traditional school to a public Montessori school. As one teacher recalled:

As far as I am concerned, one of the main things that I had to do, because I have been teaching for 23 years was cleaning out my classroom and getting rid of lots of things that I had. I had two file cabinets and we went through my cabinets and we got rid of lots of things that I had for many years. That was kind of tough because you get attached to things. Then aligning Montessori materials with standards that we were required to teach because first and foremost we have to teach and we looked at the standards first and found that Montessori materials that we need to teach those standards.

The teacher reported that clearing away the old, as Bridges (2003) reflected, causes anxiety and stress because "people don't like endings" (p. 23).The external change of clearing away the *stuff* accumulated throughout the years represented a challenge to these teachers, but an even greater obstacle was changing the instructional habits that the teachers had acquired. As Fullan (1993) states "the hardest core to crack is the learning core – changes in instructional practices" (p. 49), and the teachers found that the changes in practices were slow and involved external and internal change. The art of good teaching is complicated and the implementation of a different approach to teaching involved such things as the way the teachers planned and kept records. They were experiencing the growing pains that come with the progress associated with change.

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I really want to get better at doing – I do a lot of individual stuff now, but I really feel like I want to get better at doing smaller group work with them. Right now the small groups that I do are based on standards, because this is a public school and what I want to get better at is picking out individual students based on like needs so that I can better meet their needs.

There were external changes as the teachers' viewpoints began to change, and they found they were measuring their progress by the people that surrounded them, the Integrated Literacy teachers. More than one teacher mentioned that their Integrated Literacy teachers would come into their rooms and shake their head and say, "I couldn't teach this way." However, privately, the Montessori teachers were starting to feel sorry for their Integrated Literacy teaching counterparts, because they found classroom instruction was easier this way, or at least becoming more comfortable. One teacher remarked,

I think at first, just getting myself acclimated with a different way of thinking about education was hard. For example viewing textbooks as a resource not as a teaching guide. My kids now know that they can do research using the textbook, but it is not something that we used as the source of the knowledge like we don't base all our lessons off that.

Another teacher said,

We create a lot of materials based on what our standards say and use the textbook like as a reference. Instead of saying 'okay we are going to study the Ashepoo tribe and look on page 87,' we go in and see what the text says about the tribe, but we also want to learn more than what the text says. Like if a child wants to learn more they use more sources. It was hard to shift my thinking that way. They can use sort cards and research. Also just trusting kids to get the work done can be a challenge.

Now these teachers began to see that to compare sources is a better way to teach and the class need not have learning confined to just pages of a textbook. As the thinking of the teachers was beginning to change, the external implementation of the change began to follow:

> I think about what I am doing more. I think about things in a different way, and just trying to go off of the concrete to abstract I try to think about what the child needs to know or what they do know or don't know and how to get them from that place to where they need to be. I try to figure out what I can do to make things as real to them as possible as tangible to them as possible.

As the teachers started to change they also began to see ways that they could use instruction to the advantage of their students as well. One teacher mentioned,

> So if I sit down to give a lesson to a kid, I am more responsive, and I will go back and think about what is missing. Like place value, if they are doing addition, and I realize what they don't understand is place value. I can go back in that exact moment and give a lesson on place value with them. Because the groups are small or I am checking work and realize that the child does not know this, I can adjust my teaching to meet the need of the student.

The teachers collectively changed in ways that they said would now be a part of their teaching experience. They looked at things differently than they did at the start of the change, and they made a change journey that would stay with them and the school whether or not the Montessori components stayed or left. As one teacher summarized,

> Well, probably I used to reflect on things as a class, rather than the individuals. Like, "did the children understand as a class, did they get it?" Now I am able to reflect, did this child get it or that child get it? I now plan more individually for each child. Before, without looking at my notes or my math chart, I would not know as much about each child. I think now, I know my children better.

Now the teachers talked about the change differently. At first, when the teachers repeated the positive points concerning Montessori pedagogy, they almost said the same thing word for word as if they were repeating the school party line, but now most of the teachers believed what they were saying, and the remarks they made became more specific and more personal about what they liked about the program. For example, a teacher recalled what she liked most about the curriculum,

> It would be the math because the math allows me to take children further than I did before using a math journal or 1.1 today and 1.2 tomorrow. Wherever you want to go I can take you there it empowers my students, because they were so excited about learning multiplication the first nine weeks. Whereas, normally in a first grade class you are learning multiplication at the end of the year and it is at the beginning, and the way it is taught the process is better. Multiplication is just multiple adding and this is all happening within this year or within the couple of years that they are with you. This way they really get it.

Another teacher mentioned,

> I know where you were yesterday and where you need to go next week, but in a traditional setting, I am going to teach what the curriculum says teach or what the math journal says teach, and I don't know how many times you would go out of that or have times to go outside of that, but because it is built into the Montessori materials wherever you are that is what we work on and it doesn't really hold you back. You know I don't get parents saying my child isn't challenged there is no way that you could say that.

Institutionalized Change

During a point in the year, the primary principal called all the Montessori teachers together and asked them a question, "Where are your students academically?" The teachers went back to their rooms and pulled out their recordkeeping systems and specifically answered that question student by student.

I got some of the best examples (of teacher recordkeeping). One teacher had this hard thing kind of like a 3 ring binder and she had two clips on the end and labels. She had a tri-colored pen and she wrote down what each kid did and at the end of the week she put on the front of end folder and she had four folders for four quarters and she will see for the four quarters that progress. She just takes the weekly label off and sticks it to the folder. Another teacher has taken larger index cards and she made them into a mini-flip chart and I was really impressed with her system and she wrote notes about the conversations that she had with students. I was really impressed with that. So I thought this was like a formative assessment for me so I went and asked my Integrated Literacy teachers for what they used and they said "well, I didn't bring it in today." My only assumption about that is that they don't write it down. In the end, the fact that Montessori is so rich with descriptive feedback, and they had to figure out how to capture it. I am amazed.

The principal had the Integrated Literacy teachers go back and look at ways that they could improve their note taking. At that point, the principal institutionalized the recordkeeping and the change of rich descriptive feedback became the norm for the school. Now the change to a public Montessori became different. Instead of just being the new kid on the block, these teachers were setting the standard in this particular area of recordkeeping and student awareness for the school.

Change in its Complexity

Instituting the change individually can lend insight into the collective change and the complexity of the change. To illustrate this concept, the twelve teachers' interview answers were compared and the words that were in common were struck out and the words that were not in common were analyzed to see if there was a pattern or if there was any insight into the six categories that emerged: *more Montessori more Standards*, *more balanced*, *more Montessori than rated*, *more Standards than rated* and *more balanced than rated*. In addition, the teachers could each be considered individual case studies within a larger case study as their reflection and rating of themselves and the comparison

of their classroom observations provide opportunity to examine the individuals along the
continuum of the change process.

Table 3. Comparison Between Statements Made by all Teachers Interviewed

Interview Identifier	Distinguishing Statement
Montessori 1	Believed in being more responsive to the individual
Montessori 5	Believed in equity and choices
Standards 1	Believed in the value of standard-based education
Standards 4	Likes Montessori but believed in her responsibility to teach standards
Balanced 1	Capable of seeing both sides of the approaches
Balanced 3	Runs a tight ship but saw the value of Montessori
More Montessori Than Rated 1	Liked that Montessori was an easier way to teach once set up in the classroom
More Montessori Than Rated 2	Believer in Montessori but wanted to be an effective teacher which meant teaching standards
More Standard Than Rated 2	Liked gradual change and was a literacy expert
More Standard Than Rated 3	Likes Montessori, but has seen things come and go

More Balanced Than Rated 1	Became balanced through material making because this approach was making sense
More Balanced Than Rated 2	Became balanced through material making and because this approach aided creating community

In capturing a phrase that summarized their differences, I hoped to reflect an attitude or a disposition that may summarize a category on the change continuum.

Montessori self-rated or observed rated. Each of the two teachers that were self-rated and their practice reflected their pro-Montessori practice asserted that their beliefs had a part in their consistent viewpoint. Montessori Teacher 1 was predisposed to an individualized approach to instruction and student learning. In her words, she was "more responsive to the individual." She represented the core group of the teachers that were chosen initially for the program, because they already had a belief system or an instructional practice that were in line with this change. For them, this change was a natural fit. However, this type of teacher may struggle with the balance of the dual nature of this change, because the individual approach may polarize them to an extreme on the continuum. Montessori Teacher 2 reflected that the equitable choices were attractive to her, because she saw the view of the individual student as one of a diverse approach to learning. She happened to be the only African American teacher, and she communicated that she felt that freedom of choice was a powerful component of this teaching method.

The *More Montessori than Rated* teachers displayed a tendency to be more practical about their instructional approach. One teacher expressed that it is an easier

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approach to teach once it was set up in the classroom so she rated herself lower on the Montessori rating, but according to her field observation, she had made more change progress than she reported. The other *More Montessori than Rated* teacher stated that she felt the need to be an effective teacher so she taught more Montessori as revealed by her observation, but her was firm in her belief that she had a responsibility to teach the Standards. This sense of responsibility to the Standards, especially the assessments, may have affected this teacher's self-rating since her rating and field observation did not match.

Standards self-rated or observed rated. The two self-rated Standards teachers also had a belief viewpoint of their practice. Standards Teacher1's belief system was that of a traditional teacher with almost 30 years of teaching using the Standards approach. Her years of experience were her reason to have difficulty with this approach. However, there were several teachers who had twenty plus years of experience that navigated the change. She asserted that she could not learn. Standards Teacher 2's belief in being responsible to teach the standards came from the assessments that the students would face. Very much like the *More Montessori than Rated* B teacher, she felt responsible for the standards and the assessments attached to them. Unlike the *more Montessori* rated teacher, she did not believe as much in the student-centered approach. She believed in beginning with the standards versus the student.

The two *More Standards than they Rated themselves* teachers stated that they had difficulty with wholesale change versus gradual change or either they were jaded by seeing too much change and had a difficult time getting on board with yet another

change. These teachers reflect the difficulties of implementing change because of having seen too much change. This reflects that the process of change and the change continuum can be a factor in the change regardless of the content of the change.

Balance rated or observed rated. Teacher 1 saw both the standard approach and the Montessori approach as truly valuable and took the best from both as exhibited by self-reflection and her instructional practice in the classroom. This teacher had a strong teaching literacy background and combined this with her appreciation of the parts of the Montessori approach that could best serve her students. This mix of the two approaches resulted in a teacher who became a leader in this new blended approach. She was one of the teachers who immediately saw problems in the literacy instruction from the Early Childhood Center. Teacher 2 was the biggest surprise of the study for me. She was the most critical of the approach initially. She asked very good questions and seemed to be a difficult teacher to change, but her desire to meet the needs of her students drove her questions and served her in combining the approaches. This is sophisticated change, and she listened and understood the change in light of what it could provide for her students. Walking into her room for the first time, I encountered an amazing blend of firmness, but freedom. This teacher understood the parts of the change that would serve her students best and blended these elements in a positive way that resulted in a standards-Montessori class that maximized the instructional time and capitalized on student independence but still prepared students for the future assessments.

The teachers that exhibited balance in their class, even though they did not think so, both expressed a practical way of achieving that result. One teacher achieved this by

writing and creating the state essential standards in a Montessori format. She and a few

other colleagues took the textbook's social studies and science objectives and made them

into Montessori 3-part cards which are used to introduce vocabulary. The teacher made

work to meet her standards' requirement in a Montessori way. In doing this, she

established a balanced approach through materials taught to the students and made

available for student practice. The other teacher had a strong inclination toward

classroom community building, and she used this to create a class that balanced the two

approaches through the peaceful education approach which is also a Montessori

curriculum component. She had a sense of responsibility to prepare her students for

future testing but more importantly for future living as people who are competent citizens

in their community.

Beliefs and Actions versus Action that Become Beliefs

Timberley and Parr (2005) say that the essence of change falls into three areas:

beliefs and values, knowledge and skills and outcomes. The teachers who displayed

Montessori, Standards or a Balance in their classroom instruction matched their reflection

and their practice. These teachers could be classified as people whose beliefs and actions

are aligned. The way they rated themselves was reflected in the outcomes of their

classrooms and their beliefs, knowledge and instructional product were aligned.

However, the mostly Montessori, mostly Standards and mostly Balance group may

reflect Fullan's (2007) assertion that behaviors and emotions change before beliefs. He

says that as a teacher practices a change that the change may then become a belief. It is

possible that the teachers who do not match may be in the process of action that could

result in beliefs. This is a possible explanation especially when considering as the teacher who reflected that are making materials was changing her beliefs.

There is clear evidence from the teachers' words that they were either inclined to change because of their beliefs and actions, they were moving towards a change in beliefs because of their actions or they were stuck where they were because of past beliefs and actions. These twelve teachers are examples of twelve possible ways to view this change. These are statements that I have heard from teachers making and trying to make this transition to public Montessori instruction.

CHAPTER VIII

CONCLUSIONS, SUMMARY AND INSIGHTS

When looking at change through the eyes of the change implementers, the teachers, one sees a different perspective of change, Montessori-based and standard-based education. This last chapter is a summary of the case study findings. There is an amendment to the concept map based on the observed features that aided in the accomplishment of the transition to a public Montessori school. Looking at the impact of the teachers' words and their responses to incorporating Montessori methods and approaches in a public setting provides insights into ways that the two different viewpoints of education can be defined, addressed and combined.

Concept Map Changes

Although there are particular steps that enabled this change to occur, the main reasons it was successful were not driven by Montessori or Standards but rather based on relationships. First, the relationship of the educators with each other, as well as the trust built between the leader and the teachers contributed to the constant feedback between the implementers of the change and the leader. This two-way communication resulted in key readjustments during the process (e.g., bringing the consultants on board). The principal had a reputation of caring for the students in this mostly low socio-economic county. The principal saw Montessori as an expensive education that was often available only to students from wealthier counties in her area. She wanted to bring Montessori and

the ability to learn with hands-on manipulatives to her economically poorer students, and she believed that this pairing would result in increased student learning.

Secondly, the journey for these teachers was consistently about student learning. They remarked that the opportunity to teach in smaller groups allowed them to know their students better. By being closer to them physically, through small group instruction and individualized conferencing, they were able to access more cognitive information about student learning. Moreover, since the students had more experience with the materials initially, the teachers learned from the students. They had to rely on the students and that resulted in co-learning even between the teachers and the students. The teachers found themselves in a true facilitative situation where they took a back seat and what the students were learning took a front seat.

The lesson that I learned about leadership from this case study is that the leader must have a vision--but also that the leader must love what the teachers love. These teachers loved these students and that made all the difference. They cared about the relationship with their students and accomplishing the mission of their teaching. They placed their experience with the students above all else when making decisions.

According to Bolman and Deal (1984), leaders tend to rely on the *structural and human resource frames* in leadership most. The principal involved in this transition to Montessori mainly used the *human resource frame* to accomplish this change because the people working as a unit were instrumental to accomplishing this change. Moreover, Walters (2012) states that a two-way system of communication best facilitates change. The principal in this change communicated the expectations of the *top-down* change, but

she did it in a way that kept the teachers involved and she listened to their concerns. Walters (2012) states this approach as "one vision many eyes" (p. 24). Using this approach, the principal encouraged teacher ownership of the change. Since she was willing to listen and respond so easily to the teachers, instead of seeing the compartmentalization of the different bubbles concerning the change that I expected on my beginning concept map, I saw one force moving toward change. Even though this was a *top down* change, the principal took every opportunity to distribute leadership and decision making among the teachers (Spillane, Haverson & Diamond, 2003).

The teachers took ownership of this change, even critiquing the established early childhood center's literacy program. In doing this, they could be considered as *tempered radical*s, because they became *bottom up* leaders. Kezar and Lester (2011) say that the distributive leader and the *tempered radicals* can accomplish much for change in schools when they work together. When people work together to implement a vision in this way the change can be embedded in the culture of the organization so that it becomes automatic (Swaffield & MacBeath, 2006). These changes may not yet be embedded, but the two-way communication system that has been established between the principal and the teacher leaders of this beginning change may lead to a lasting change.

In addition to the leader and teacher exchange, Nancy McCormick Rambaugh (2007), the person who launched the American revival of Montessori in the sixties and the first person to establish Montessori in a public setting, noted that the Montessori change agent is crucial to the establishment of a public Montessori model. As she states,

Cooperation between the principal of the Montessori school and the Montessori "interfacer" is essential. The person managing the interface must move the principles of Montessori forward into the reality of the public school, carrying the principles along, not losing or altering them, but translating them into viable practice. The task of the interfacer is recreative. Like an actor, the interfacer must recreate the text in the reality of the present moment. Such a task requires flexibility, imagination, and humor, particularly in the first year of the school's operation. It requires the skills of anyone brokering change and a sensitivity to the needs of the client, in this case, public education. (Rambasch, 2007, p.31)

This was the type of communication and relationship that I saw from the principal, the university leader, the teacher implementers and the consultants. The consultants were most like the interfacers. However, the university had provided the district with the consultants and the rest of the trainers, therefore I felt the need to change the conceptual map based on what I saw throughout the study (see Figure 2). In the beginning, the conceptual map had different bubbles for leadership, teachers and the university. I changed this to one bubble for all. I did not originally include the parents in this change, because I knew the history of this school to be one of a car school. The parents were the silent partners in this change since they had the power to influence the distribution of Montessori and standards-based classrooms by which type of class they chose. So when I changed the concept map, I included the teachers, leadership, consultants, university partners and the parents together. I came to view them all as interwoven in this change process. Therefore, I changed my concept map to reflect the dynamics that I witnessed.
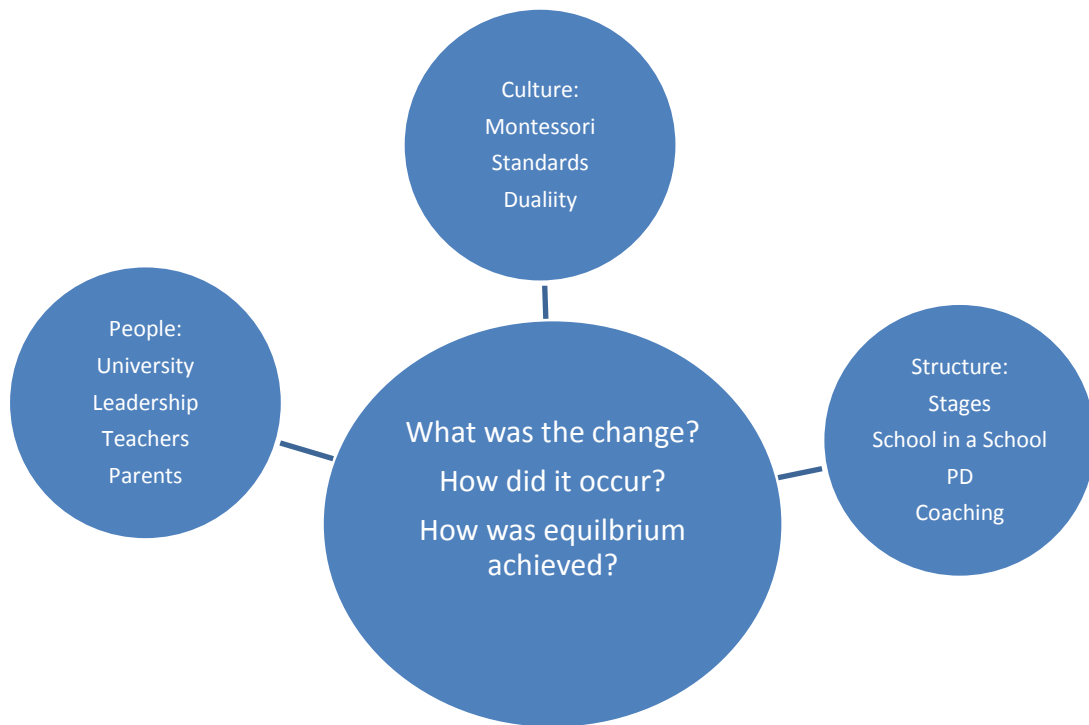
Figure 2. The Changed Conceptual Framework Based on Results of This Study

Education in the Margin

From Boutique To Big Box: A Case Study About Teacher Change Transitioning To A Public Montessori School, seemed like an accurate title when I was writing this dissertation proposal, since as a public Montessori teacher, I had felt very much on the margin of mainstream education. Unlike the group of teachers in this case study who had support from the district, the group of initial teachers who established a public Montessori educational system in my district over twenty years ago felt very David against the Goliath system of public school. Even though at the time, before the re-norming of the *No Child Left Behind* testing in our state, our test scores were often better

than some of our public school counterparts. There were years when our school had 100% of the students passing as proficient on End of the Grade tests. However, even with accomplishments like this, statements were made to Montessori teachers indicating that our approach may not continue at our school. When our school building was remodeled, the additions and considerations did not include Montessori-prepared environment components since the district facilitators of this project said that they must consider that Montessori may not last. As a teacher, I felt very disposable. Teachers were even told by our administrator not to ask questions in district meetings that might draw attention to our Montessoriness. As Nancy McCormick Rambusch (2007) stated, "Montessori is a guest in the home of public education, but not yet a member of the family" (p. 31).

From Kirkpatrick's day in 1915 until now, Montessori education has typically been implemented in America in the margins. Although even in this narrow lane, this pedagogy has exercised some influence. As stated by Whitescarver (2008),

> Throughout its history, Montessori education has managed to exert a strong influence on the American educational establishment even while remaining on the margins of that establishment. Elements found today in many elementary classrooms—mixed-age grouping (looping), individualized instruction, manipulative materials, child-sized furnishings—all originate in principles developed by Maria Montessori and practices that have been elaborated by Montessorians over the course of the past hundred years. (p. 2573)

Bilingual Curriculum Implementers: How to Operate in the Margin

The tensions caused by the different starting places for each of the two approaches: 1) Standards-based learning which promotes benchmarks and accountability

and 2) Montessori's approach of personalized, developmentally considered instruction contrast two very different ways to view education. Whitescarver (2008) states,

> Influencing American schools while firmly entrenched on the margins is an irony rooted in what we characterize as clash of worldviews. Tensions between cohesion and pluralism, tradition and innovation, radicalism and liberalism play themselves out over the course of a century of social reform, political upheaval, and educational practice. (p. 2573)

As the teachers in this study faced these tensions, they were charged with finding ways to reconcile these conflicting worldviews. Kise (2006) says that when we frame teacher change around student learning, we have a common ground that is not threatening and opens opportunities for positive change. She suggests that when approaching teachers to make a change, having a student-centered framework is essential because teachers' beliefs reflect their identity. As these teachers showed, they cared about the relationship with their students and accomplishing the mission of their teaching. However, when approaching these two worldviews with a student-centered reference and passion, the teachers were still pragmatic in their ultimate evaluation of what would cause the change to stay--such as the positive growth in tests scores. Having been educators in a public system before they started the change, they knew that to be in a system of education such as a public school, they had to meet the expectations of the state, district and local demands. Their jobs were on the line if they did not work within the system in which they were employed, but their morals were on the line if they did not work on behalf of the students whom they served. This involved some reflection to meet, at times, these two very different mandates and caused these teachers to be creative and solution oriented.

They came up with creative ways to balance these two approaches such as schedule adjustments, a new literacy structure that allowed more freedom, and a recordkeeping system that tracked the evidence of student objective learning. As the consultants reflected to me, "Balancing the two approaches is a matter of *what and how*. *What* does the district want us to do, and then *how* can we do it in a way that maximizes the precepts of the Montessori approach that we hold so dear, such as student centered learning" (Consultants, 2012, Personal communication).

Whether the group of teachers have support from the district or local leaders, like the teachers in this case study, or whether they do not have the wholehearted support from the leaders, such as in the case of my district, teachers in a public Montessori school must run every decision through a new world lens of what is best for the students, and what they are required to do. These teachers did not believe accountability to be unimportant, but they expressed that often accountability was defined in the wrong way. The teacher who stated that the thing she was most proud of was her kids, which sounds warm and fuzzy, was the hardest one on herself when assessing her ability to stay on top of the demands for her students. Whereas Kahn stated that Montessori teachers should run essentially a private Montessori program inside a public school, and it was the administrator's responsibility to keep the district demands off the back of the teachers, these teachers saw that finding a way to blend the two mandates was an exchange of communication, problem solving, and creativity. In the end, they even saw the value of standards and Montessori as in the case of blending the literacy program with ideas from

both approaches. For example, they used the traditional Daily 5 Balanced Literacy structure and the Montessori word work.

To achieve a balance between these dual mandates is not an easy task, and it requires a reflective teacher who is capable of *cherry picking* the better of two very different approaches to create a new kind of instructional practice. The way these teachers were able to combine these two methods of teaching in such a short time period was due to their understanding of teaching, their belief in student learning, and the responsibility they felt to prepare their students for the future. This in essence is a newly created worldview that is guided by a moral compass of putting student learning first and yet acknowledging the best practice of both Montessori and traditional education with a pragmatic approach of implementation.

As a National Board Certified public Montessori teacher and Montessori teacher trainer, I found that the best way for me to accomplish the dual mandate was first to know both sides intimately. Public Montessori teachers need to stay current in what is going on in the educational field in America, because they are immersed in the influence of it on their practice. I believe that these two worldviews essentially create a bilingual curriculum speaker, and as a bilingual speaker, Montessori teachers need to be fluent in both approaches so that they can code-switch when needed. An example of this would be when, as a Montessori teacher, I was in a meeting that occurred because our district was using a new mandatory reading program that was implementing a *canned* program which prescribed what students did minute by minute, was scripted, and quite teacher centric. This program would have completely destroyed any time that the students needed to

work independently with materials and ran counter-intuitively to making the learning personalized. Therefore, a group of principals and teachers met with our district supervisor concerning how to honor the Montessori principles and still be respectful to the district that gave us the building and students. When I prepared for the meeting, I prepared an example of how the lesson plans and individual student work plans would look and brought them with me to the meeting. I stated that we could not accomplish the Montessori mandate within this given program, but we could organize our instruction in a way that would accomplish both goals if we were given flexibility with certain components of the program. After the curriculum team examined the prepared examples, they signed off on a plan called a flexibility guide, and this became the policy for the whole district.

The lessons learned from this experience were that in order to go to bat for Montessori within a district, the leaders/teachers needed to know both sides very well. As a teacher in my district, I often knew what the district was doing better than the district implementers. I did not seek this as a matter of pride but as a matter of survival for the public Montessori program. When determining how to manage the *what* that the district asked me to accomplish, I had to know the concept well enough to adapt it to the blend of pragmatic and principled approach that was also expressed by these teachers.

Learning to do this type of analyzing results in an expert reflective practitioner and is a by-product of constantly comparing the two approaches. When my district needed teachers to write Common Core units, I was invited to write curriculum units and present Common Core content in the district. The evolution of the status of public

Montessori teachers in our district went from being one of not talking in meetings to being asked to present, because the margin again had something to say to the mainstream.

In the case study, the teachers had a great deal of cooperation from the beginning from their district leaders, but what if this is not the case or leadership changes? In the case of my district, the right to be heard was earned by understanding both sides and proving that the public Montessori pedagogy is a viable option to increase students' achievement. In my district this was accomplished by communicating through code switching the components of the method that seemed unfamiliar to the district, demonstrating classroom practice that was viewed as best practice and through test scores that very often exceeded the county's proficiency and growth scores. These two different approaches can be balanced and blended if the teacher, who is the editor, can see the value of each. My district's change in support was accomplished over time and ended up in one that exhibited trust and communication.

The down side of spending a lot of time learning standards-based education and improved preparation for standardized testing was that at times I found that I was giving more time to instruction that was focused on Standards objectives than to attending to the individual student's learning. I did this for good reasons such as to make sure that our students did well, and we as a school had that kind of cultural collateral with the district. However, I had periods of my teaching that I found myself pushing so hard to prove the value of public Montessori that when I looked up, I was doing all the work. I was becoming more teacher-centric and the Montessori materials were sitting on a shelf gathering dust. That is why I came up with the rating idea of checking in on whether I

was balanced or leaning too far to the standards-based approach. As a Montessori teacher, sometimes I found that I was spending so much time watering down Montessori and compromising on some elements of Montessori that at some point, the ideals that I was defending did not really exist in my classroom practice. Therefore, to rate oneself periodically when one is in public Montessori is a valuable exercise. It is also valuable to continue to rely on one's cohort of public Montessori educators to see where one lies on this continuum. The power of the cohort and professional development can refresh and encourage our practice.

Although there is danger in compromise, the American Montessori Society was begun by Nancy McCormick Rambasch who founded this organization to address some issues that she saw concerning reconciling American educational culture and Montessori pedagogy. The Association of Montessori International (AMI) is the worldwide group of Montessori methods. This group is thought to be closer to the original Montessori practices. McCormick Rambusch saw a need for Montessori to adapt itself to the American culture of learning. She saw a need to adapt Montessori training to include American elements such as literacy and math extensions which added cultural appeal to Montessori teacher training. One example of this is sorting material that teach long vowel sounds and r affected vowels. These teaching materials were not in Montessori's original methods, because they are not in the Italian language.

The tension at the heart of this compromise is the tension between Montessori's desire to keep her method and precepts pure, because teachers had to be directly trained to teach this method. They were trained by her or someone she had trained. This

requirement kept the movement small and also encouraged the system of instruction to maintain a very identifiable presence to her original concepts over a hundred years later. This speaks to the scale of Montessori which addresses, "the tension between preserving the purity of the method and promoting widespread dispersion (which) caused considerable conflicts between Montessori and her American supporters" (Rambasch, 2007, p, 30). It is this scale component that is examined in this case study, because replicating Montessori education on a bigger scale was a focus of this school change. Could Montessori pedagogy be replicated to impact American education on a larger scale?

> The most striking difference between the private and the public Montessori school is a matter of scale the difference between two teachers and twenty, twenty children and two hundred. One cannot upscale a small enterprise by simply enlarging it. Every scale has its own integrity. As enterprises become larger, they necessarily become more complex. Using as a polar pair the single private Montessori preschool class and the Montessori public school, the contrasts and operational differences introduced by the enlarged and complexified scale may become more apparent. (Rambasch, year?, p. 30)

The issue of scale is important because with this type of complexity comes issues, such as master schedules. The logistics of providing all students with playground time and a turn to eat lunch in the cafeteria are examples of how scale can affect education. In our state, we have legislation mandates governing recess time and free and reduced lunches. When the organization is bigger, the logistics become more complicated. Accomplishing both the logistics implementation and the philosophical intent can become more difficult in a larger school setting.

How do we Start and Maintain a Big Box Public Montessori School?

To begin the school, we examine below the components of this case study that went well and allowed this change to occur:

The first step, you have a vision. The superintendent began this transition concerned about finding a way to increase high school graduation rates by starting with the youngest student and creating a way to reach them sooner--as young as three years of age. The superintendent saw this implementation as an opportunity to engage students in learning, and she hoped that this engagement would transfer into a better learning opportunity through the school experience for these students.

Secondly, you need someone to push the vision into practice. The change was accomplished through what I call the *vision implementer*, the principal of the school of first and second graders. This principal had been with the superintendent as an assistant administrator before she became the principal, and she had a relationship with the superintendent and also with the teachers, two of whom had been in her class in high school. She translated her vision in the school. She saw the engagement and the opportunity for students to have access to instruction that was often available only to parents who could afford private school as an amazing opportunity for these students. She built on her strength of relationships, worked alongside the teachers learning about Montessori, encouraged them to take risks, and she provided resources. She advocated for them both in supplies and as an emotional supporter. She could be described as a *warm demander* in that she was constantly in the classrooms taking notes about what the teachers were doing, and she was gauging their ability to make this transition. She

expected a lot from the teachers, but she gave a lot to this process as well. She showed

me her walkthrough notebook, and she had a tab for every teacher. She wrote anecdotal

notes for every teacher concerning what they were doing well and in what areas they

needed support. She was their chief cheerleader and their harshest critic at the same time.

Moreover, she was involved in the process and problem solving all along the way. She

involved the teachers in district meetings and even had the teachers attend these with her.

She asked their advice and listened to all the teachers when they critiqued her as well.

She saw this change as a legacy as she was soon to retire.

Third, you need knowledge resources and an incentive to motivate teachers to

pursue Montessori training and certification. A partner with a university creates a

personal reason, such as a master's degree, to entice teachers to put in the work of

training in the Montessori pedagogy. This partnership brought in the teacher trainers and

created the opportunity for the teachers to get a master's degree or thirty plus money,

both of which were an instrumental part in creating this change. Many teachers stated that

the combination of having the training brought on site and the personal gain of obtaining

a master's degree or thirty plus money was a factor in their decision to stay in this rather

demanding program. The Superintendent stated,

> The collaboration between the teachers, district, and the university played a huge
> role in the transition. Moreover, training is the key implementation and the
> university provided that training in our district.

Fourth, you have teachers visit Montessori schools to clearly see what it looks like

in practice. The teachers involved in the initial change were asked to visit other

Montessori schools, both public and private. This was done so that the teachers could develop a vision of what a Montessori classroom is like from the ground level. The engagement of students in learning was a part of this change that was attractive to the superintendent and the principal, and they needed the teachers to embrace and begin to understand the level of engagement and involvement they wanted to see in the classrooms at the school. In order to duplicate the philosophy of individualized student instruction and managing an independent learning environment, the teachers would need to view it first.

Fifth, you need widespread involvement of people at different stages of the change process. First there were innovators, who by their practice and philosophy of teaching indicated that they had an inclination towards Montessori teaching. Secondly, as Watt (2002) states, there must be the reluctant teachers who questioned the process along the way and often brought up the most salient points concerning the obstacles to change. While the innovators led the way, the *teachers who were not sure but cared for the students* were important critics to stabilize the change. However, some teachers did not make the journey. One teacher retired at the end of the year. There was even an element of teachers whom I call *sleepers*. They said that the change was great in front of the group, but admitted to me that they did what they wanted when no one was around. One teacher even said she would not put her own children in this program.

Sixth, you need ongoing embedded professional development, sometimes stimulated by those external to the process. The overall effectiveness of the teachers to make this much change in such a short time frame was due to the consultants. The

embedded teacher training was found to be more effective. Since these consultants had the perfect combination of more than 20 years in a public Montessori school, they were instrumental in leading the complex change from traditional education to public Montessori. They were also change agents in the true sense of the word as they worked alongside the principals in problem solving the literacy issues by bringing in the Daily 5 Balanced Literacy program. One such example of problem solving was changing from the training from summer and week end to embedded consultant classroom training approach for both the teachers and the assistant teachers.

The seventh element you need is to effectively balance the public mandates and Montessori philosophy in a way that is respectful of Montessori and still meets the objectives requested by the district. The balance has begun in this school, but it is still on-going. Although most teachers showed tremendous change towards the goal of implementing public Montessori instruction, some teachers still had reservations. Some teachers became very Montessori to the point they were almost hostile toward the public aspects and some teachers found a balanced position. The importance of continuing this complicated change and yet balancing it within the confines of the district, state and federal demands of assessments and objectives will determine where the final transition of this public Montessori school will fall.

Moreover, parent education, even with the model of the early childhood center across the street, still seemed to be incomplete in its understanding. Solving the problem of the car community and the scheduling of meaningful parent education is still an on-going problem that needs to be solved. Since most parents are not educated this way,

making sure the communication of the Montessori precepts are articulated and understood among parents is important to long range success since historically in America parents have been the main influencers driving Montessori education (Rambasch, 2007).

In order to establish a school that results in active student learning, below are some pragmatic suggestions learned from this study and my experience that apply to beginning and maintaining a public Montessori blended program:

Table 4. Recipe for Disaster and Blueprint for Success

People/Component	Recipe for Disaster	Blueprint for Success
Leaders (Superintendent, Magnate Coordinator, Principal)	• No knowledge of Montessori • Unwilling to learn • Unwilling to listen to Montessori experts	• Some or no knowledge of Montessori • Willing to learn • Willing to listen to Montessori experts • Willing to go see successful Montessori programs in action • Willing to give staff access to successful Montessori programs
Teachers	• No formal training in Montessori methods and materials • Insistence upon being the "Sage on the stage" • Viewing lessons only once (which is typical of many Montessori teacher training) • No hands-on practice with lessons • Summer training and week-end training as isolated and not	• Embedded training from an experienced public Montessori educator • Training that includes the ability to review lessons again and again. • Cohort learning • Prepared environment which includes hands-on learning that aids in conceptual understanding • Guide on the side philosophy

	embedded in the classroom • Training that is about the parts and the materials and not about the whole	
Parents	• Ignorant about the approach • Apathetically making choice decisions with no informational understanding of the method	• Communicate with teachers re: their child's progress as they understand the mastery learning continuum
Materials	• Inadequately supplied rooms without all the Montessori materials	• Adequately supplied rooms with a compliment of Montessori materials
Multi-age classrooms	• Decides that multi-aged classrooms are not worth the bother	• Decides multi-aged classrooms provide a social construct for fostering leaders and developing student role models
Pedagogy	• Pedagogy that begins with benchmarks and standards and does not consider students	• Pedagogy that begins with student learning and considers appropriate ways to balance Standards
Balancing two methods	• Stay dogmatic about Standards or Montessori and do not attempt to learn anything new	• See the best practice in each pedagogy and seek to personalize the objectives that students must learn to master
Montessori flexibility guide	• Remain inflexible about either Standards or Montessori and do not consider the needs of the population that you serve or the assessments they face	• Be flexible based on the population that you serve and the assessments that they must face • Consider the *what* and the *how* of a blended approach
Consultant(s)/Trainer(s)	• Use only private Montessori consultants	• Seek experienced public Montessori trainers to help with implementation of public Montessori education
Model classroom(s)	• Do not consider establishing model	• Establish at least one model classroom at every

	classrooms	educational level
Montessori albums	• Do not alter albums • Stay with status quo	• Evaluate Montessori albums by current practices such as Depth of Knowledge and the new Bloom's taxonomy • Line up the Albums with Common Core assessments
Instructional time	• Segmented with many interruptions	• Facilitate long blocks of time for learning while maintaining a sense of urgency concerning the value of every instructional minute
Teacher record keeping	• Wing it day by day • Only rely on the initial Montessori training	• Encourage teacher objective recordkeeping and long and short range goal planning • Encourage parent/teacher communication of work and the student's progress
Student record keeping	• Students do not graph or track their own mastery	• Encourage student recordkeeping and ownership of their progress

What Montessori Components to Preserve: a Best Practice Conversation

> Montessori education combines freedom with responsibility, a more active role for the children in their own learning, high standards of academic excellence, social awareness and moral development, and a vision of humanity and its accomplishments that inspires children to take their place in their communities, when the time comes, as responsible, contributing adults. (Lillard, 2005, p. xxi)

The description of Montessori could be considered to be a definition of what is needed to produce a twenty-first century learner. For all of its history, Montessori pedagogy is as relevant today and is as fresh as current research. What makes it so compelling? 1) Personalized student learning. Learning is examined from an individual standpoint and the opportunity to honor the uniqueness of each student. Today in

traditional education, this would be called differentiation or personalized learning. 2)

Developmentally influenced teaching. Recognizing and responding to the developmental

influences on learning such as asking the 6-9 year old bigger questions. Teaching with

comprehensive questions is current in the Common Core instruction. Montessori called it

Cosmic Education and recommended this approach to meet the needs of students since

developmentally elementary-aged students have a tendency to ask big questions.

Common Core calls it asking essential questions and teaching to an Enduring

Understanding. 3) The power of student choice in learning. Considering choice as a

motivating factor in learning is reflected in current *flow* or motivational studies. In

traditional education, it is called choice menus. 4) Students learning from students. The

purpose of organizing classrooms through flexible age grouping is to encourage peer

learning. Traditional education tends to call this approach cooperative learning. 5)

Students learn better through hands on instruction. Instruction that considers the

education of the senses can be paralleled in the learning modality of the student. 6)

Students learn better when subject matter is integrated. Instruction that is integrated in a

bigger way that is trans-disciplinary seeks not just knowledge, but solutions, to the

world's big challenges. This begins in the Montessori Method in a concrete way of caring

for the classroom environment and then grows into care for the world. 7) Students learn

better through games. Many of the Montessori lessons use the word "game" in the name

of the lesson, such as "The Stamp Game" and "The Bank Game," and learning through

playing games was an applied component. Traditional education values the organization

of learning through game playing as well. 8) Students learn when they are viewed

through a holistic lens. Maslow's Hierarchy of Needs (1943) parallels the desire to look at student learning through meeting physical needs and proceeds up the Hierarchy of Needs to self-esteem and to self-actualization. The emphasis of Montessori is one of students constructing their own learning through hands-on work. 9) Conceptual learning is built into the materials and provides not just learning for the minute, but a comprehensive framework on which to scaffold future learning. 10) Students learn better if they can learn from their mistakes. The self-correcting features of the materials correlate to a student owning their learning by monitoring their progress.

These features of Montessori pedagogy correlate to today's best practice in American schooling and accomplish good results for students.

What can we Learn about Teachers' Ability to Change?

This study looked at the possibility of taking a complex educational change, such as transitioning to a public Montessori school, and examined how the main players involved in the change act individually and collectively. Between leadership, teacher beliefs and practice, parent choice, structures and cultural interplay, there was a continuum of implementation in this innovative approach. The teachers in this study are examined collectively as a group and as individuals with different attitudes toward this change.

The global view of the change in the process sought to conceptualize the aspects of change by breaking out the role of leadership, teachers, structures and culture to analyze the part played by each in this event. Initially the compartmentalizing of the different pillars in this innovation seemed logical. However, as the study continued the

compartmentalizing of the four elements seemed more difficult, especially when it became increasingly difficult to separate the role of leadership and teachers. The leadership and the teachers seemed to have such an open communication system and trust relationship that the two began to work together as a team versus separate components. Moreover, because the principal and the teachers were so interactive in their feedback, both positive and negative, the structure and culture seemed more interactive as well. The individual strands of the rope that seemed so reasonable at the beginning of the study were definitely wound into a single wider and thicker rope at the end of the study. This interaction resulted in this particular group of people being able to mostly implement a very complicated educational change. The evidence of the success is indicated by the institutionalizing of the record keeping system and the creation of materials that delivered objectives in a Montessori, or in their words, a *traditialassori* way. This study suggests these two evidences are ways this type of change could be measured or could be considered as important features when repeating or generalizing this change.

Individually, the teachers were at different points on the change continuum. The self-reflection question in the survey, where the teachers rate themselves, presented the opportunity to look at the inside-outside process a teacher goes through when changing instructional practice. Some teacher's self-rated opinion reflected their classroom practice while others did not. This presented the opportunity to examine their words and beliefs against these categories. Comparing beliefs and practice are difficult to do because, as indicated in this study, sometimes the person's actions and words do not line up and the reasoning can be complex. However, having the opportunity to reflect on change and

where one lies on a continuum is an important component of change and should at least be considered as a professional development component when one is changing from one way of teaching to another. In addition, the field rating form could be used as a walk-through instrument for schools that are making this same type of transition. However, the elements considered in the field rating system, the materials, student engagement and teacher instruction, could be extended to include an emphasis on rigor, by using a measure such as a Depth of Knowledge chart, and analyze the level of task difficulty. With the new Common Core Standards, there is a need to include the level of instructional rigor and apply that to the combination of methods to guarantee that the combination of the two approaches still accomplishes the higher level of thinking required in today's informational world.

Future Implications

Future implications of study could include developing an instrument that measures two changes at once, or the process of folding one change into the other, and developing a classroom instructional implementation indicator. This would give us insight into how to monitor the teachers' progress on a change continuum. Such an instrument might explore patterns when comparing change with the teachers' reflection over time. For example, if we asked these teachers at different points in a timeline of change, would their ratio of Montessori/Standards change? Would a pattern differ from beginning a program or would it stay the same over time?

The study could be helpful to other magnet schools as well since they tend to have a set of standards, as well as a theme. This is a dual mandate. Although this project

examines the dual purpose of a public Montessori school from the perspective of the teachers and triangulates the words of the teachers from the surveys with a field work rating system, would a tool like this be helpful for other magnet schools?

Surveying other magnet teachers and inquiring as to how they are able to combine the two approaches of standards and their magnet themes may provide insight into the ability to implement standards and magnet themes. This could provide insight into the upcoming Common Core Curriculum shifts in language arts and practices in math as well as the new way to view trans-disciplinary curriculum integration. As stated by the Department of Education,

> All magnet schools must maintain the theme with integrity and successful magnets align their theme with the district and state standards while articulating their innovative approach to curriculum" and "ensure that their innovative curricula comply with externally imposed standards, priorities, or mandates, whether from the district, state, or federal government these profiled schools demonstrate that a skillful, thoughtful, and committed staff can meet this challenge with success and integrity. (Wes Ed for the US Dept. of Ed., 2008, p. 36).

Generalizing from this study by combining magnet themes and standards and transferring the ideas gained from the different ways to combine the Montessori and standards may provide value to the results of this case study beyond the study itself. Moreover, the ideas about teacher change and the example and cooperation of the leaders with the educators in the study may suggest ways in which adults can collaborate for the sake of student learning whether that learning begins with the standard objectives or with the learner.

Silences

  In any research study, it is important to listen to the silences: the things that are not there as one might expect. In this study, there seemed to be two silences, or at least question marks. One of the silences, or at least an inconclusive piece, was the lack of research that definitely confirms that Montessori is or is not effective. Many of the studies about the effectiveness of Montessori education are insider studies like this one. As a Montessori teacher and a teacher trainer, I am considered an insider, and the insiders often insist that the method is effective under conventional research methods, but often what is measured is small or slanted towards a Montessori bias or published in the peer reviewed Montessori Life publication. What is silent is the final word concerning the effectiveness or ineffectiveness of Montessori education. The American Montessori Society is aware of the lack of research and has taken steps to encourage Montessori research. They have supported Montessori research in non-Montessori publications and have even supported this effort by providing a statistician to help teachers and researchers who may not have that proficiency. Addressing the effectiveness of Montessori is a matter of education for Montessori people as well as non-Montessori people. The Montessori people need to be aware of the importance of how to research and why research is important. Sometimes there is an attitude that as a Montessori person, *I know what I do works, and therefore I do not have to prove it*. For non-Montessori people, they often do not understand *the whats and the whys* of what they are seeing and that can cause arriving at correct conclusions more difficult. Montessori research is not definitive

because of small samples, difficulty in getting like samples, and the particular subject of the research tests.

The second silence in the literature is the lack of magnet school literature on combining dual approaches. When reviewing both the Department of Education and Magnet websites, I did not discover more than a line or two about this tension and this subject matter. This seems odd considering the amount of time that balancing two mandates took in terms of teacher time and teacher attention. Either (a) there must be themes that are easier to integrate than this program, (b) there has not been any attention paid to this topic, or (c) other programs have pre-navigated the obstacles and combined their program in a more *prepackaged* way. This is a silence that needs to be explored.

Surprises

The surprises in this study involved teacher motivation for change. For the most part, the teachers focused their energies on the students' ability to learn as paramount to everything else. This may seem obvious but when a great deal of effort is spent in education reform on many other objectives and motivations, this seems both reasonable and extraordinary at the same time. For these teachers the relationship with the students was not addressed in literature as a motivating factor and yet the proof of the effectiveness of this program for the teachers was their ability to get to know their students better. In fact, these teachers would pay more attention to this than any research. Fullan (2002) says for teachers change is about the day--getting through it--but these teachers proved that their day involved accomplishing their goals for these students.

Another surprise was a specific teacher who became a model of how to incorporate both approaches. When she first showed up in teacher training classes, she was almost antagonistic about the program. When I first stepped foot in her room during the field observation almost a year later, I saw a teacher who had created a peaceful and productive classroom, which, considering her negative response and questions, seemed odd. However, she said that the longer she worked with the students and the approach, the better she was able to incorporate the two methods together. She taught me not to judge those teachers who question and push and criticize because that might be their learning style.

I enjoyed viewing the incredible change journey by the teachers who, for the most part, made the intense trip of almost two years to arrive at an understanding of combining both standards and student-centered learning as exhibited by their teacher-created materials and their ability to develop an individualized record keeping system. This system tracked students and allowed these educators to be more responsive to their students as individuals. When asked what she was most proud of concerning this change, the superintendent said that she was most proud of the teachers who stepped outside their comfort zone.

In addition to these surprises, I think the biggest surprise for me personally was how closely these teachers' comments mirrored my own thoughts about education. I have thought many of the same things that they said out loud. As a researcher, I wanted to let the data reveal itself, but as a public Montessori teacher, I was floored that teachers think similarly. I, too, love that I get to know my students better by using a Montessori

approach. I, too, agree with these teachers about the strengths and weaknesses of this combined program. Often during this study, I felt that these teachers had zipped inside my head to discover my own thoughts. I continued to check and recheck my data because as a researcher, this made me uncomfortable. However, upon further reflection, I came to realize that experienced teachers who care about their students can come to the same conclusions.

Rebranding Montessori

Could this Boutique pedagogy be generalized to a Big Box setting? This study showed that there was movement towards an outcome that mostly supported this dual pedagogy approach. This group of teachers was able to earn a master's degree and receive a raise for the work that they did during their Montessori training. These teachers had motivated leaders at central office, the principal's office, and from the local university. The teachers were, for the most part, motivated to try anything that would facilitate learning for the students from this primarily lower income area. The parents received free Montessori education for their children beginning at three years of age, and then the parents were allowed to choose from either an Integrated Literacy or a Montessori class for the upper grade levels. Under these circumstances, it seemed that if the test scores were good, then Montessori had a chance of making national change. However, as I was finishing writing this dissertation, Scott Thomas, the Executive Director of the Magnet Schools of America, attended a meeting in my county, and in that meeting was asked what magnet programs are decreasing in popularity. Mr. Thomas said that the Montessori program has seen some down-turn in popularity. Does this mean that

the program will continue the path of boutique education or will the emphasis on student ownership of learning and conceptual based instruction find a new niche in the newly instituted Common Core standards? Mr. Scott suggested that Montessori rebrand itself. From a marketing standpoint, he suggested combining Montessori with STEM, such as the program that St. Catherine University is beginning by offering teacher training in STEM Montessori. This will result in a boost for Montessori because STEM is popular and compatible with the hands-on philosophy.

From a pedagogy standpoint, the Common Core national standards offer an historical opportunity for Montessori to shine, because teaching through essential questions to arrive at enduring understandings through hands-on conceptual learning could have been written by Maria Montessori herself. Moreover, with only one set of standards to align nationwide, the problem of matching Montessori materials with standards seems less daunting than aligning it with fifty sets of state standards. From a replication standpoint, he suggested that Montessori use current educational language, such as personalized learning, to make the teaching practice updated to current educational trends to inform the public and educators concerning their pedagogy.

Moreover, as a Montessori public educator, I think that it is time to look at updating the Montessori albums in a way that reflects current science understandings and extends the knowledge of alignment to include the "next steps" type of mentality such as how to extend the materials learning to rigorous student learning. This could be done simply by extending the thinking of the works with an eye to conceptual assessment.

All Things being Equal They are Not: Test Results

All of the teachers interviewed indicated that the biggest determining factor of this program's longevity would be the test scores. The first year that the program was partially implemented the principal indicated that there was a dip in the scores. She described this dip as an *implementation dip* that she expected would turn around. The test results from this year as analyzed by the principal proved to show that the two groups of teachers, Montessori and Integrated Literacy, were similar in the results they produced.

In her words, "The data graphs that I sent you include a methods comparison. It seems that both methods are neck and neck. I am encouraged by this" (Principal, 2013, Personal Communication). The graphs and chart indicated that in the first full year of implementation there was in essence no significant difference in the test scores between the scores of the Montessori-taught students and the Integrated Literacy-taught students. This is a score to score comparison and compares the scores of each method. It would seem logical that after only one full year of implementation that having both groups of teachers reporting the same results may indicate that this trend could continue or may even be improved upon as the teachers become more familiar with the method. This speaks to the quality of teachers before they started the training and implementation of this method and to their ability to adapt and combine two approaches in the most positive way for the benefit of the students. The thing not mentioned in these test scores is that if Montessori after eighteen months can be essentially equal in the state assessments, there are areas where according to these teachers, the method outshined traditional education. Therefore, the "even" tests results are not necessarily even. These teachers consistently

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stated that they saw an increase in engagement, motivation and student ownership of learning in most of their students because of this method of teaching. Therefore, if all test scores are equal, the affective advantages of Montessori which were not measured, give Montessori a slight edge.
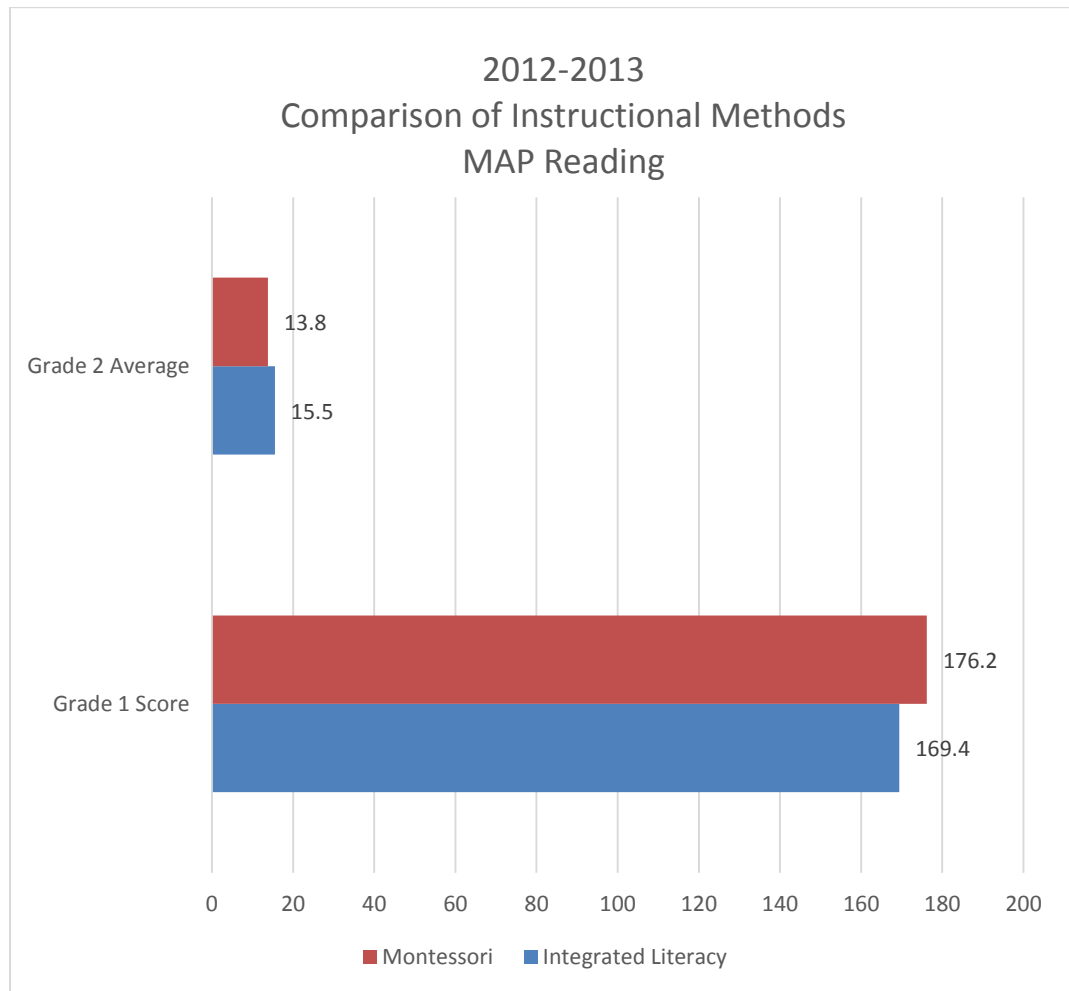

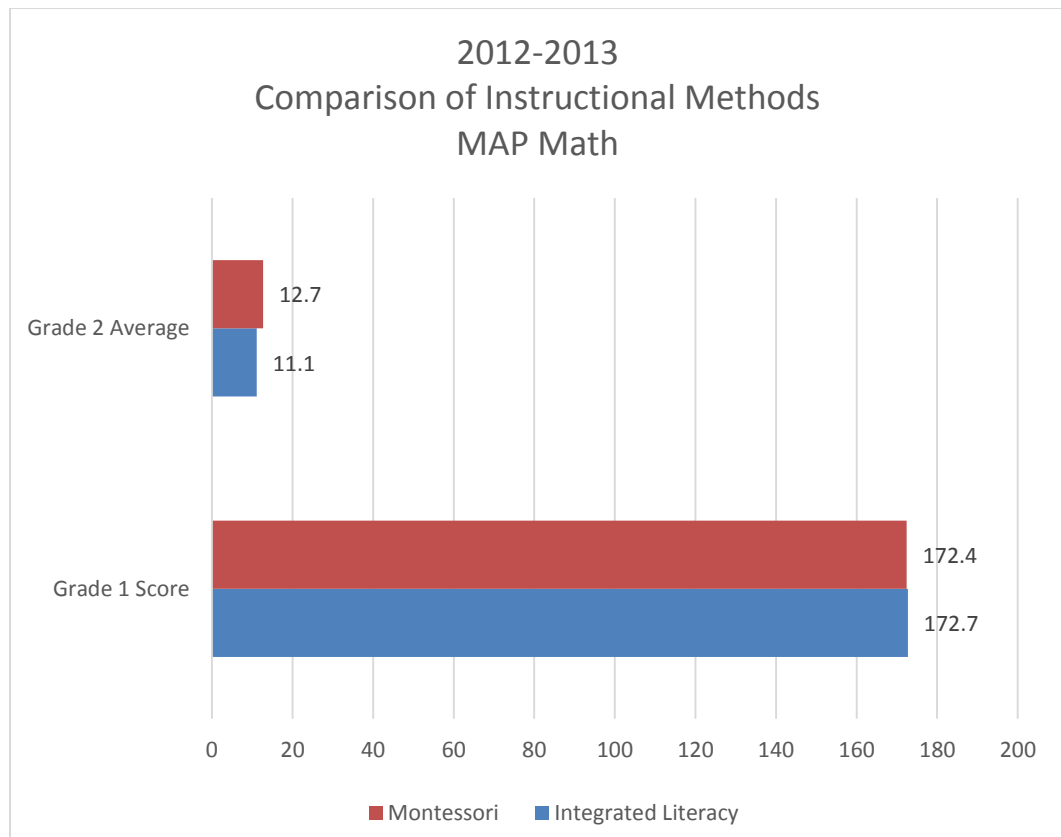Figure 3. 2012-2013 Comparison of Instructional Methods MAP Reading

Figure 4. 2012-2013 Comparison of Instructional Methods MAP Math

Conclusion

In America, we are teaching students to be prepared for a future in an informational age, while we the parents and teachers were taught in a factory-trained system of education. This approach is not sufficient to educate our children for the future. Interestingly enough, in order to accomplish this task, we have an unexpected ally from the past: the Montessori pedagogy. As we reach back to Montessori to move our students forward to the future of education and twenty-first century preparedness, we discover that this marginal approach still has components that inform current best practice. In addition, the mainstream has valuable lessons to teach Montessorians, such as how to

communicate or rebrand their message to be understood, especially considering the new

Common Core Standards, with the emphasis on conceptual understanding and student

ownership of information. Taking the best of both approaches can transform teacher

practice and benefit student learning.

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PERMISSION FORM

Project Title: From Boutique to Big Box: Case Study Concerning the School Cultural
Changes Involved while Transitioning to a Public Montessori Elementary School
Project Investigator: Teresa Van Acker
Participant's Name:_____

As a participant in this research, you are entitled to know the nature of our
research. You are free to decline to participate, and you are free to stop the
interview or withdraw from the study at any time. There is no penalty for
withdrawing your participation. You are free to ask any questions at any time
about the nature of the research and the methods we are using. Your suggestions
and concerns are important to us. Please feel free to contact me at any time with
questions.

What is the study about?
The purpose of this study will be to examine what can be learned about whole
school change to, and implementation of, Montessori education in one large
elementary school.

Why are you asking me?
We are asking you to participate as a teacher, administrator, student or
district/university leader to provide us with both information concerning your own
experiences with the changes you have experience while this school has
transitioned to a public Montessori school.

What will you ask me to do if I agree to be in the study?
If you agree to participate in the research study you will be observed in your
regular classroom. You will also participate in an interview lasting from thirty to
forty-five minutes and will be asked to use email as a communication device as
desired for immediate sharing of successes, failures, issues and/or concerns. The
research study duration will be from June to October 2012.

Is there any audio/video recording?
The interviews will be audio-taped and then transcribed. The tapes will be
transcribed by the researchers and no one but the researchers will hear the
conversations recorded. Your name will be protected by using a pseudonym. No
video recording will be done for this study.

What are the dangers to me?
The Institutional Review Board at the University of North Carolina at Greensboro has determined that participation in this study poses minimal risks to participants. You may miss planning time for interviews and may have to complete job related duties in the evening on your own time. I will work with you to carefully schedule interview time which will minimize loss of your planning period time.
If you have any concerns about your rights or how you are being treated please contact Eric Allen in the Office of Research and Compliance at UNCG at (336) 256-1482. Questions about this project or your benefits or risks associated with being in this study can be answered by Dr. Rick Reitzug, UNCG faculty principal investigator who may be contacted at (336) 334-3460 or ucreitzu@uncg.edu.

Are there any benefits to me for taking part in this research study?
You may benefit from: helping future generations of teachers; and gaining personal reflective insights into the reform effort.

Are there any benefits to society as a result of me taking part in this research?
Educators, ourselves included, will become more aware and better informed as to the factors how change occurs when a traditional school shifts to a public Montessori school.

Will I get paid for being in the study? Will it cost me anything?
There are no costs to you or payments made for participating in this study.

How will you keep my information confidential?
All information obtained in this study is strictly confidential unless disclosure is required by law. The researchers shall safeguard all written information as well as audio tapes by keeping these items in locked cabinets or desks. Any discussions related to observations, interviews, and findings will be limited to the doctoral advisor setting at UNC- Greensboro. Pseudonyms will also be used in order not to reveal the identity of any research participants or their respective school. The UNCG faculty principal investigator, Dr. Rick Reitzug, will maintain an original copy of the consent forms in a locked filing cabinet on the UNCG campus. After five years, all audio tapes shall be deleted and then crushed. Likewise, all written documents related to this study, including consent forms, will be shredded. Electronic files shall be permanently deleted from the hard drive and recycle bin.

What if I want to leave the study?
You have the right to refuse to participate or to withdraw at any time, without

penalty. If you do withdraw, it will not affect you in any way. If you choose to withdraw, you may request that any of your data which has been collected be destroyed.

What about new information/changes in the study?
If significant new information relating to the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you.

Voluntary Consent by Participant:
By signing this consent form you are agreeing that you read, or it has been read to you, and you fully understand the contents of this document and are openly willing to consent to take part in this study. All of your questions concerning this study have been answered. By signing this form, you are agreeing that you are 18 years of age or older and are agreeing to participate in this study described to you. If you are younger than 18 years old that a parent or guardian has been informed of this form and both the student and the parent have agreed to participate.

Signature: _____

Date: _____

Signature: _____

Date: _____

APPENDIX B

SURVEY FOR THE PUBLIC MONTESSORI BALANCED MANDATE

1. How do you utilize the Montessori methods/materials?

2. How do you utilize the Standard Course of Study?

3. How do you combine both approaches?

4. What are elements of this combined approach that you did like and why?

5. What are elements of this combined approach that you did not like and why?

6. How did the administrators aid this process?

7. What did you observe concerning the positive or negative affect this approach has on students?

8. If you were to rate yourself with a percentage on the balance of time and effort between the two curriculum what would you say is the ratio of time and effort spent on Montessori versus the Standards? (ie, 50-50, 30-70, 0-100)

APPENDIX C

CLASSROOM FIELD WORK RATING SYSTEM

1-never, 2-occasinally - 3-sometimes- 4-often -5-always

1. I saw Montessori materials being displayed in the room. 1   2   3   4   5

2. I saw Standards materials being displayed in the room. 1   2   3   4   5

3. I saw Montessori materials being taught by teacher. 1   2   3   4   5

4. I saw Standards being taught by teacher. 1   2   3   4   5

5. I saw Montessori materials being used by student. 1   2   3   4   5

6. I saw Standards studied by a student. 1   2   3   4   5

7. I saw correctly implemented Montessori materials in the class. 1   2   3   4   5

8. I saw correctly implemented Standards studied/taught in the class. 1   2   3   4   5