

A MONTESSORI READING INTERVENTION FOR
NONLITERATE FIRST GRADE CHILDREN

By

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CHAPTER ONE

Introduction

I sat on the floor with “Jacob” while the rest of the first-grade students read leveled beginning phonics books in the reading area. Assessments and observation indicated Jacob was a nonliterate pre-reader, and in need of a lot of extra help. In front of us, his iPad spelled out the word *hat*. For several minutes we had been working on the letter sounds for *h*, *a*, and *t*. I pointed to each letter on the screen. We ran our hands down our arms to try to make the sounds and say them together. I asked if writing the word might help him read it. We got some materials from the shelf, spelled out the word, and walked along next to the letters. We pointed to each letter on the wall chart and said the word next to it. I wondered if I had a sound sort worksheet that might help. Jacob was still unable to make the sounds in consistently in the right order and smoothly blend them together into a word. I glanced at my Montessori albums, which contain an entire elementary curriculum, hundreds of lessons. I thought about looking at the scope and sequence from the district on my laptop. Finally I said, “Hat. This word is hat.” Jacob mumbled “Hat” and pushed the iPad onto the floor. We were both frustrated, and nobody was learning to read. I put the materials back on the shelf, and Jacob chose another work.

That evening, I wondered if I was doing him a disservice by using the district-issued iPad program. Should I have exclusively used the Montessori materials on the shelf? Perhaps it would have been better to just send him to do letter sound games with an educational assistant. Or, maybe I should have had him try reading with a parent

volunteer in the hallway. I knew that Jacob was in need of a more effective intervention, and I knew I wanted it to be effective, in line with current best practices, and true to the Montessori method. I knew there had to be a better way.

Research Topic

I am examining the impact of reading interventions for students in a Montessori classroom. I will explore which interventions might be integrated into the curriculum to address the specific needs of children in first grade. This capstone will seek to address the question, *How could traditional literacy interventions be integrated into an authentic Montessori classroom in order to help public Montessori teachers address the specific needs of nonliterate first grade students?*

Overview

This chapter will explore a series of topics related to the conception, development, and execution of this research topic and project. Next, I will describe the circumstances that led me to this topic and project. This information will be presented in under the subheading Development of the Topic. The subsection Significance of the Research will explore the personal and pedagogical significance of the research topic. This will be explored in much more depth in Chapter Two (Literature Review) as well as the Chapter Three (Project Description). The subsection Framework and Rationale will delve into both the context and rationale for the research topic I chose. The penultimate subsection will be Personal Context. This subsection will help to explain in depth my current teaching context, which provides a lens through which the reader will gain a great

appreciation for the background, motivation, and inspiration behind this project. Finally, I will briefly outline the rest of this paper in the subsection entitled Summary. This will also include a preview of chapters following this one.

Development of the Topic

As a public Montessori teacher, I occupy a unique space. Conventional public school communities consider public Montessori programs to be strange or exotic. Private Montessori schools often assume public Montessori programs are watered-down or inauthentic, using unflattering terms like *Montessomething* or *Montessortof*. Public Montessori teachers walk a delicate balance beam of adhering to Montessori curriculum and philosophy while observing state and national standards and expectations.

The challenge for me was to find a way to have a reading intervention that would help students like the three in my class. I wanted to be sure that it would follow best practices common to traditional education as well as Montessori. I wanted to find a way to be sure that it could be implemented by an instructor with or without Montessori training.

Throughout my Montessori training in Europe, I pictured myself as a guide of Upper Elementary students, or ages nine to twelve. The more advanced arithmetic, deeper scientific exploration, greater focus on history, and blooming personalities of older students drew me to this age. Most important to me was that I did not want to teach children to read. As a child of two Montessori teachers and an avid and lifelong reader, I rarely recall struggling to sound out or comprehend a word. To me, the idea of having to

teach a child something as natural as reading seemed an incredibly laborious and burdensome undertaking.

After having attained my Montessori certification, I returned to the United States to pursue my initial teaching licensure. Even before completing my initial licensure, I was offered a position teaching at a public, urban, Montessori school. The position was everything I had hoped for, with one exception. It would be a Lower Elementary classroom, ages six to nine. I took the job even though I knew that there would be the very distinct possibility that my students might not know how to read.

Throughout my first years of teaching, though, I have grown to love working with the younger children. Witnessing the joy of discovery and guiding a child through his or her first academic travails is priceless. However, I quickly realized that assuming that all of my first-graders would be reading on day one was unreasonable.

I started the year with three out of my seven first-grade students being non-readers. Not only were they non-reading students, none of the three of them knew all of their letter sounds. The inability to read or write even simple phonetic words put them at a distinct disadvantage in every subject, as they were unable to figure out names of shape labels in geometry, three-part cards for science work, or even read jobs during cleanup time. One of them was unable to consistently write his name.

Alongside this considerable difficulty, there was a clash of curricula in our classroom. While I tried to work with these students using Montessori materials and a Montessori approach, the special education team, parent volunteer, media specialist, and educational assistant working with the students each had their own approach to helping

the students. All three students would become easily frustrated and act out behaviorally. It was through this lens that I began to explore returning to school to get my Master's degree.

In order to address the questions raised, I am exploring the topic, *How could traditional literacy interventions be integrated into an authentic Montessori classroom in order to help public Montessori teachers address the specific needs of nonliterate first grade students?*

Significance of the Research

Montessori education is increasingly sought-after by families in the United States, which has about 4,000 Montessori schools in existence, with about 10% of those being public or charter Montessori schools (Lillard, 2012). At the same time, there is a notable and continual increase in the numbers of students arriving to school with attention disorders, autism spectrum disorders, sensory needs, and other learning difficulties (Cossentino, 2010). Therefore it is reasonable to assume that there are other teachers in the same situation as I am, and there will be more students coming into first grade in the future who lack basic phonics and/or reading acumen.

In the course of my research, I have discovered that the literature relating to authentic Montessori methods and instruction, Montessori literacy curriculum, traditional reading interventions, school readiness and teacher challenges is extensive and provides a wealth of information regarding each subtopic. However, there does not appear to be a large amount of information relating to the intersection of Montessori literacy curriculum

and traditional reading interventions. For these reasons, I believe the significance and urgency of this project is great.

Framework and Rationale

This project is being developed using the Understanding by Design (UbD) framework (Wiggins, 2011). The UbD design process will be further explored in Chapter Three (Project Description). Alongside UbD, this project is being planned and implemented through the lens of purposeful and authentic Montessori curriculum. The concepts of authenticity regarding Montessori classroom, curriculum, and teachers will be examined in much greater detail in Chapter Two: Literature Review.

Personal Context

I am currently the lead teacher (guide) in a first-through-third-grade public Montessori classroom. My classroom is made up of eight first-grade students, nine second-grade students, and eight third-grade students. The racial makeup of the school is 51% White, 22% African-American, 7% Asian, 7% Hispanic, and 13% students of two or more races. My school is one of 30 pre-K-through-fifth-grade schools in the district, although there are also four pre-K-through-eighth-grade schools in the district. I am in a Midwestern school district in a diverse urban setting. In my district, approximately 34% of students are English language learners, 15% of students require special education services, and 70% of students are eligible for free or reduced-price lunch.

Within my classroom, I strive to provide an authentic Montessori environment, including a three-hour work period in the morning, collaborative work among students

and between grades, and a student-centered and growth mindset-oriented prepared environment. As much as possible, I seek to encourage healthy, independent work choices based upon intrinsic motivation. I aim to foster a love of learning in each child and a caring, compassionate classroom community.

This personal / professional information should help illuminate the context in which I will explore which interventions might be integrated into the curriculum to address the specific needs of children in first grade.

Summary

In this chapter I explored and clarified the research question, *How could traditional literacy interventions be integrated into an authentic Montessori classroom in order to help public Montessori teachers address the specific needs of nonliterate first grade students?* Next, I described the circumstances and life events that first suggested and then confirmed that this topic is the one on which I should focus the project. I explored the personal and pedagogical significance of the research topic, which will be explored in much more depth in the second chapter (Literature Review) as well as the third chapter (Project Description). I delved into both the context and rationale for the research topic I chose. Again, this information is more deeply examined in both the second and third chapters. I explained in depth my current situation, providing an overview of the background, motivation, and the impetus behind this project.

The next chapter is the Literature Review. In this second chapter, there are five main themes identified that will be explored. In order, the themes are: authentic Montessori, Montessori literacy curriculum, traditional reading interventions, the Five

Pillars of literacy instruction, and school readiness and teacher challenges. Each of these themes will be broken down into relevant subsections in order to be fully explored.

Chapter Three, the Project Description, will begin with a detailed overview of the entire project. In addition to this overview of the project, this chapter will examine the research paradigm, choice of method, the intended audience, a detailed description of the project, as well as a timeline for completion.

Chapter Four, the Conclusions chapter, will contain description and explanation related to the conclusions I make about my capstone project. This chapter will contain a section that answers the question, where from here, which is my personal plan to use my project in the future and the plan to get there.

CHAPTER TWO

Literature Review

Overview

I am examining the impact of reading interventions for students in a Montessori classroom. The aim of this capstone is to explore which interventions might be integrated into the curriculum to address the specific needs of children in first grade by addressing this question: *How could traditional literacy interventions be integrated into an authentic Montessori classroom in order to help public Montessori teachers address the specific needs of nonliterate first grade students?*

There are five themes identified that will be explored in this literature review. In order, these are: authentic Montessori, Montessori literacy curriculum, traditional reading interventions, the Five Pillars of literacy instruction, and school readiness and teacher challenges. Each of these themes will be broken down into relevant subsections in order to be fully explored.

Authentic Montessori

Every Montessori school struggles with the concept of authenticity. This means the degree to which the curriculum within the school is “truly Montessori”, or in other words, the degree of fidelity to the method of education innovated by Dr. Maria Montessori (Ungerer, 2014). Most Montessori schools make public the advanced training

of their teachers or accreditation from AMI (Association Montessori International) or AMS (American Montessori Society).

Authenticity

The most important part of building an authentic Montessori classroom is a highly-trained and certified teacher, or guide (Morrison, 1991). Other principles central to Montessori theory include respect for the child, acknowledgement of sensitive periods and an effort to present appropriate content with these sensitive periods in mind, a meticulously prepared environment, the use of sensory materials, a recognition of the importance of self-education for the child, mixed-age grouping, and self-pacing (Morrison, 1991).

Although multiage grouping, hands-on Montessori materials, and a prepared environment are also important, the teacher's preparedness is crucial in order for the other pieces of the classroom to be considered authentic (Huxel, 2013). Alongside a fully trained and accredited teacher, several conditions must be met to be considered an authentic Montessori school. These include mixed-age groupings, a full complement of Montessori materials, uninterrupted periods of independent work, and an approach to learning that places the child's development at the forefront (Ungerer, 2014).

The Guide or Teacher

The Montessori teacher is often known in authentic Montessori circles as a "guide". Although many schools profess a degree of Montessori authenticity, or use manipulative materials, a true Montessori curriculum is not possible without a teacher

who has been trained at an accredited Montessori training center. The way in which a Montessori-trained guide conducts himself or herself can be regarded as the deciding factor whether a school is authentic Montessori or not (Huxel, 2013). Montessori teachers are called guides because they are purposeful in creating a student-directed learning space. Maria Montessori, the architect and namesake of the Montessori method, initially called this the “method of non-intervention” (Montessori, 1969, p. 127). Montessori theory holds that education cannot be imposed upon a child by his or her teacher, but instead it is a natural process spontaneously carried out by the individual child (Montessori, 1969).

Independent Work and Normalization

According to Montessori theory, all humans are born to work. If presented with a work that attracts his or her attention, and given the opportunity, a child will begin to work independently and advance his or her own learning, and receive great pleasure from that work. The work will be repeated often and with maximum effort, without an outer aim -- only to satisfy an inner curiosity (Montessori, 1969). Children in Montessori schools often go through a type of gradual transformation, after which they are described as “normalized” - the supposition being that all children are capable of these “normal” traits (Montessori, 1969). The four characteristics that children exhibit are the love of work, focus and concentration, self-discipline, and social ability.

Montessori suggested that all four of these characteristics must be present in order to say that a child has reached normalization, even if the characteristics appear briefly (Montessori 1969).

Maria Montessori wrote about her initial discovery of normalized children that she encountered in her first schools in *The Absorbent Mind* (1969):

The children of our schools revealed that the real aim of all children was constancy at work, and this had never been seen before. Neither had spontaneity in the choice of work, without the guide of a teacher, ever been seen before. The children, following some inner guide, occupied themselves in work (different for each) that gave them calm serenity and joy. (p. 144)

In other words, normalization requires that children be presented with tasks that they can work on independently. It is the job of the guide, therefore, to introduce interesting work in an environment that he or she has diligently prepared for this purpose.

Montessori Literacy Curriculum

In addition to specific language lessons and materials laid out by Maria Montessori and subsequent Montessorians, Montessori curriculum contains many specific recommendations or beliefs relating to literacy. Language is considered one of the most important elements of education by Montessorians, and one of the most important human accomplishments (Wolf, 2004). So important, in fact, that Wolf writes, “Because language, both oral and written, is so basic to our lives as human beings, it deserves very special respect and attention from our Montessori tradition (p.36).

Early Preparation

Preparation for handwriting takes place early in Montessori education, with materials designed as an early preparation for writing in the form of large arm movements, manual dexterity, finger movements, lightness of touch, and formation of shapes being introduced to the child as early as three years old (Goldsbrough, 1995). These works may serve as a direct or indirect preparation.

At the same time, children in a Montessori classroom are introduced to purposeful listening through sensorial work, including sound boxes, bells, the Silence Game, and other activities, all of which help children develop the skill to analyze sounds, which is important for word building (Wolf, 2004, p. 38).

Writing Before Reading

Montessori literacy curriculum includes the expectations that writing should precede reading. Montessori suggested that writing is the expressive form of language, and thus naturally develops first, and is followed only later by reading, which is the receptive form of language (Goldsbrough, 1995). According to Montessori,

“Writing develops easily and spontaneously in a little child in the same way as speech, which is also a motor translation of sounds that have been heard. Reading on the other hand, forms a part of an abstract intellectual culture. It interprets ideas acquired by graphic symbols and is acquired only later” (1967, p. 199).

Montessori also wrote that writing serves as an important preparation for reading (1967, p. 248).

Although writing is generally taught first, the writing process is inseparable from reading (Goldsbrough, 1995). It is important to note that following the child means that if a child wishes to begin working on reading activities before having mastered writing, then the guide should be prepared to present reading materials (Goldsbrough, 1995). Writing is regarded as an essential part of literacy, with many Montessori materials having been designed specifically for teaching writing and reading alongside each other (Woods, 2002).

Phonetics in Montessori

Children in a Montessori classrooms are traditionally introduced to the letters by sound instead of by letter names (Soundy, 2003). In order to facilitate the understanding of phonics, the sounds of the letter should be taught with an attention to as pure a sound as possible - for example, the letter M says “*mm*” with lips together instead of “*muh*.” In this way, a child can place the materials with sounds for “*m*” “*a*” and “*t*” and has the possibility to self-teach on his or her own how to spell mat (Goldsbrough, 1995).

According to Montessori theory, this “magic of spontaneous reading” creates great joy of discovery for the child, where he or she suddenly discovers within himself or herself the ability to read small phonetic words. This is usually done first with a set of phonetic words and matching pictures, like pig, tap, bus, fox, and so on (Goldsborough, 1995). Maria Montessori wrote about children in some of the first Montessori schools

who, through this spontaneous explosion into writing, were able to teach themselves how to read without any instruction from a teacher (Montessori, 1969).

Montessori theory suggests introducing sight words and non-phonetic spelling words by using those same materials and gradually introducing new materials -- for example, using a miniature farm, a student can participate in an activity labeling hen, pig, and horse, the child can read hen and pig, then deduce that the written card *horse* must match with the toy horse and thus begin to learn some of the rules of non-phonetic spelling. Montessori called this learning by deduction (Goldsborough, 1995). Puzzle words (non-phonetic words) are introduced only after the student has mastered phonetics.

A criticism of the strong emphasis on phonetics in Montessori curriculum is that Maria Montessori developed her teaching theories for the Italian language which is completely phonetic, whereas English is not phonetic due to inherited and borrowed words from many different languages (Wolf, 2004). However, 87% of the syllables in the English language are phonetic, and only 13% of the syllables in English are non-phonetic - so the Montessori theory of phonics-based instruction can still be applied successfully (Wolf, 2004). Sight-reading, or look-and-say instruction, is discouraged in Montessori theory, as this can lead to children being dependent upon someone telling them the word, taking away the joy of discovery (Goldsborough, 1995). Sight-reading has been linked to adults who are unable to sound out words. Instead, these readers tend to guess the entire word rather than attempt to sound it out (Wolf, 2004). If they are to learn to decode the written English language, children need to first be able to decipher the phonemes, or

individual sounds that make up the language, otherwise they will not be successful readers (Lyon, 1998).

Sensitive Periods

Another essential tenet of Montessori curriculum is that children go through waxing and waning planes of development and “sensitive periods”. These are phases in every child’s development during which a child's interests are focused on developing a particular skill or knowledge area. The sensitive period for writing is during the three to six year age range, but it ends at around the age of six, after which children are still able to learn to write, but without enthusiasm (Montessori, 1969). It is during this time that a Montessori guide should help a child to discover writing and reading (Soundy, 2003). This idea that younger children are in a sensitive period for language and thus are more receptive to literacy teaching has been reinforced by Lerkkanen et al. in a study of children in non-Montessori settings (Lerkkanen, 2016). Cossentino also endorsed the belief that implementing a literacy intervention at precisely this time is exactly what a Montessori teachers needs to do in order to “follow the child” (p. 44).

The National Reading Panel, a panel formed by Congress in 1997 for the purpose of researching and reporting on effective reading habits, found that phonics instruction has significantly more impact upon children who are still in grades K-One (Cassidy, 2010). This supports and reinforces Maria Montessori’s theory of the importance of the sensitive periods.

Other Considerations Regarding Montessori Theory

Other elements of Montessori theory include that children work best with hands-on materials. In fact, Maria Montessori said that the hands are “the instrument of human intelligence” (1967, p. 22). It is for this reason that hands-on materials are vital to Montessori curriculum.

A Montessori guide or teacher should follow the interests of the child, rather than presenting a set curriculum according to a timetable set outside the classroom. This is one of the guiding principles of Montessori curriculum - to follow the child (Morrison, 1991). Non-Montessori research has confirmed that child-centered teaching is especially meaningful to children who are lacking in pre-reading skills (Lerikkanen, 2016).

Montessori schools that wish to stay as authentic to the Montessori method as possible benefit from early literacy intervention. Montessori curriculum is by nature differentiated for different learning methods and reliant on observation as a formative assessment, and these pedagogical practices naturally fit in with early literacy interventions (Cossentino, 2010). Cossentino believed that introducing a child to writing and reading early enough to appeal to the child’s sensitive period for language development is important from a Montessori perspective. Cossentino (2010) added:

Montessori schools that organize themselves around early intervention commit to two key goals. The first is to focus intensively on children in the first plane of development. The second is to establish and follow a structured process for responding to all children's needs in a rational and individualized manner. Both commitments maximize the natural strengths

of Montessori pedagogy. Both commitments also push teachers to stretch their analytic and diagnostic skills to build bridges between the prepared environment and the wider educational community. (p.42)

Additionally, Cossentino believed that implementing a literacy intervention at precisely this time is exactly what Montessori teachers need to do to in order to “follow the child.” (p. 44).

Montessori lessons are often given following a format known as a three-period lesson. These lessons, as laid out by Maria Montessori herself, are presented in the format below:

1. Naming - the introductory period
 - a. “This letter makes the sound in tap. *t*.”
2. Associating and recognizing - the identification period
 - a. “Which of these letters makes the first sound in tap? *t*?”
3. Remembering and recalling - the cognition period
 - a. “What sound does this letter make?”

(Montessori, 1967)

Traditional Reading Interventions

I will use the term “traditional” in this study to mean any school that is not a Montessori school, i.e. a mainstream public, private, or charter school that is also not Waldorf, Progressive, Carden, Environmental Learning, Online Learning, and so on.

Traditional schools use reading interventions that focus on current best practices and the latest up-to-date research. These traditional interventions are more likely the ones

that would be offered to mainstream students in Saint Paul Public Schools, or other traditional school districts.

Identification

The first step in a reading intervention is to identify a child who needs help. CBM (Curriculum Based Measurement) and other direct assessments are most accurate in finding those children who need help (Good, 1998). A CBM or other assessment tool is vital, not least because teachers must be sure that they are identifying students because of an academic problem and not an emotional or behavioral disorder (Fuchs, 2006).

Children must be identified as being in need of intervention early enough to make a difference. By the beginning of second grade, students are already at an incredible disadvantage compared to their peers, so for these children an early identification followed by an effective intervention must take place while students are still young (Good, 1998). It appears that as children grow older, reading interventions may be less effective and it may be more difficult to get children back onto the right track (Bingham, 2013). However, Bingham found that some skills have a longer shelf life and can be taught later as well:

Unconstrained skills, such as vocabulary and comprehension, have a longer, if not infinite, mastery-level trajectory and appear more challenging to change in preschool... Results from this study suggest that children receiving [Early Reading First] programming as preschoolers were able to maintain such developmental learning trajectories into kindergarten and 1st grade. (p. 442)

In other words, students who come successfully through an intervention and have mastered initial reading skills can continue to build upon that foundation even after the very early “strike while the iron is hot” phase.

Elements of Reading Interventions

Effective reading instruction has several elements that have been shown to produce desired results. These are: phonemic awareness and the teaching of phonics, decoding and word studies, including the learning of a sight vocabulary, language development, to include vocabulary development, the explicit teaching of comprehension strategies, meaningful writing experiences, the development of fluent reading by reading and rereading familiar texts, a wide-range of reading materials, and opportunities for both guided and independent reading (NEPS, 2012). These many elements can also be grouped into four main areas: phonological awareness; alphabetic understanding; phonological recoding; and accuracy and fluency with connected text (Good, 1998). For struggling readers, those most in need of an intervention, it is phonics which is the most important (NEPS, 2012). Research has shown that effective phonics instruction follow a sequence going from the simple to the complex, with early skills leading logically to more advanced skills and building upon the previous skills (OTL, 2018). Phonics instruction is of particular importance as 87% of the syllables in the English language are phonetic, and since only 13% of syllables in English thus require a non-phonetic teaching approach (Wolf, 2004).

Additionally, many traditional reading interventions stress the importance of participating in small-group or even one-on-one instruction. Research indicates that groups larger than four or five begin to lose effectiveness (NEPS, 2012).

Studies have also shown that interventions that make use of culturally relevant reading material have been shown to help students who are considered the most at-risk -- including students who have both behavioral and academic problems -- and the resource challenges that often present themselves in classrooms that serve these populations (Council, 2016).

Many traditional educators suggest that a well-trained teacher is vital to the success of a reading intervention. This includes high initial education as well as continuing and improving professional development, combined with positive relationships with his or her students (NEPS, 2012). Successful interventions are applied by teachers who are experts in intervention, with experience to know which intervention to apply and for how long, and with the ability to accurately measure the success of the intervention or simultaneous interventions (Fuchs, p. 95).

Traditional reading interventions are dependent upon diligence in record keeping. This assists not only with monitoring progress, but also for identifying those children with special needs (Fuchs, 2006). Additionally, teachers use the data they collect as a formative assessment to inform their continuing instruction and placement arrangements (Fuchs, 2006).

Reading interventions are often intended to be a short and relatively intense period of focused direct literacy instruction. Reading Recovery, for instance, is intended

to have a student working one-on-one with a teacher in half-hour sessions for 12 to 20 weeks (Lewis, 2018). Long term interventions have actually been found to be less effective than short interventions, with six to 12 week blocks found to be more effective (NEPS, 2012).

Reading interventions are reliant upon and supported by measurable data that reinforce the idea that a reading intervention works to identify and address reading deficits in younger students. When implemented authentically and at the right time, interventions like Reading Recovery can demonstrate dramatic and measurable success in fundamental reading or literacy skills (Duff, 2012). Reading Recovery, for instance, has helped more than 2.3 million students to realize gains in fluency, comprehension, and other forms of literacy (Reading Recovery Council of North America, 2017). In one study, 75% of students reached grade-level proficiency and graduated out of the program (Reading Recovery Council of North America, 2017). Early Reading First (ERF), which is the largest U.S.-funded early literacy intervention program, boasts measurable data that shows children considered “at risk” in kindergarten to be not at risk by the end of first grade (Bingham, 2013).

The Five Pillars of Reading Instruction

The Five Pillars of Reading Instruction are a set of areas associated with reading instruction which are receiving considerable attention (Cassidy, 2010). These Five Pillars are considered the basic components of any mainstream educational reading program (Anderson, 2009).

In 1997, Congress authorized a panel to be formed, known as the National Reading Panel, or NRP, whose task was to assess the current knowledge on the effectiveness of different approaches to teaching reading (Cassidy, 2010). The NRP determined that there are five areas which are of utmost importance to reading. These are:

1. Phonemic awareness
2. Phonics
3. Fluency
4. Vocabulary
5. Comprehension

(Cassidy, 2010, p. 644)

The NRP found that phonemic awareness instruction was most effective when instructors focused on only one or two skills instead of teaching a broader range at the same time (Cassidy, 2010). Phonics was considered very important and one of the more popular findings of the NRP, in part because of the ease of teaching and assessing the correspondence between sounds and symbols (Cassidy, 2010). It is important to keep in mind, however, that the development of phonics skills depends on the development of phoneme awareness (Lyon, 2004).

School Readiness and Teacher Challenges

It is worth exploring the challenges that a first grade public Montessori teacher might very well face. I believe that because of the ongoing mental health crisis in public schools, the struggle to adequately fund public schools, high-stakes testing with

increasing frequency and at a younger age, as well as full-time pre-K beginning at my school next year, these challenges will only increase for teachers like me.

Increase in At-Risk Students

Teachers in Montessori schools, as is mirrored in traditional schools, are dealing with a continuing increase in the numbers of students arriving with attention disorders, autism spectrum disorders, sensory needs, and other learning difficulties (Cossentino, 2010). Additionally, Montessori programs are often chosen by families whose children are behind academically or emotionally because of the perceived benefits of Montessori education vs. a traditional program (Cossentino, 2010).

Predictors of Success

Children's literacy skills in preschool are one of the predictors of future school success that are considered the most essential. Children who begin school with limited literacy skills often have great difficulty in catching up with their peers throughout the elementary years (Bingham, 2013). Children who, from as early as birth, have interesting experiences with reading and books demonstrate marked advantages in vocabulary development and literacy concepts (Lyon, 1998).

There are some signs pointing to the idea that children who have been in a more child-centered pre-k, kindergarten, Montessori Children's House, or pre-school will arrive slightly better prepared than their peers (Lerkkanen, 2016). It is also worth noting that Lerkkanen found that the greater the literacy deficit of the student, the more likely traditional teachers were to use child-centered teaching practices (Lerkkanen, 2016).

Lerkkanen also posited that a predictor of academic literacy preparedness in the classroom is parental education. This can have a significant influence on a child's literacy as he or she arrives to first grade, regardless of the child's experience in kindergarten or children's house (Lerkkanen, 2016). This reinforces and goes hand-in-hand with Montessori theory, in which an environment in which books are valued and presented with frequency, and wherein young children are given ample opportunity to interact with books, is considered an important indirect preparation for reading (Goldsbrough, 1995).

A study by Ansari suggested that some children arriving in first grade from a Montessori kindergarten or pre-k program -- specifically Latino children for whom the emphasis on phonics may connect more with their native language -- will receive greater benefit from Montessori literacy and its approach to literacy with a focus on phonetics (Ansari, 2014). These students scored above national averages after only one year of Montessori curriculum (Ansari, 2014).

Predictors of Difficulty

Students who have behavior problems combined with reading problems are the most at-risk in our school system. Additionally, this considerable risk is aggravated even more when children are minority and/or low income students (Council, 2016).

As we have just seen, however, by the end of first grade and beginning of second grade, students on low developmental reading trajectories face nearly insurmountable obstacles to catching up with their peers. The answer lies in the early identification of children with deficits in crucial

early literacy skills and enhancing their acquisition of those skills. (Good, 1998)

In the past, a love of reading was often fed by linguistic exploration at home, but in recent years it is increasingly replaced by fascination with electronics and television, as fewer families engage in singing, reading, storytelling, and rhymes together at home (Wolf, 2004).

Lyon (1998) suggested that the consequences for a nonliterate student are quite dire, even to the level of a public health emergency, writing “If a youngster does not learn to read in our [literacy](#)-driven society, hope for a fulfilling, productive life diminishes.” (Lyon, 1998).

The same study cited earlier by Lerkkanen et al. indicated that not all children will necessarily benefit more from Montessori education than their peers in traditional kindergarten and pre-k programs. Black children did not benefit as much as their Latino peers, although they nonetheless did show gains in literacy skills (Ansari, 2014).

Curricular Expectations

An additional teacher challenge is that of a curriculum or scope and sequence that is required by an administration or district. Every teacher in a public school setting is expected to follow the district guidelines regarding literacy instruction. The Saint Paul Public Schools Office of Teaching and Learning (OTL) have come out with a phonics scope and sequence which all teachers within the district, including Montessori teachers, are expected to follow (OTL, 2018). The Office of Teaching and Learning suggests that short vowels and consonants should be taught in this order:

m, a, s, p, t, i, n, b, c, o, f, h, d, r, g, e, l, k, u, w, j, x, v, qu, y, z

(OTL, 2018)

These should be followed by short vowel words with single consonants:

a, i, o, u, e

(OTL, 2018)

Once letter sounds have been mastered, Saint Paul Public Schools dictates that word-reading phonics instruction should be taught in a specific order:

1. Short vowel VC and CVC words (it, cat)
2. Short vowel words with blends and digraphs (shot)
3. Long vowel CVCe words (cape)
4. Long vowel words with vowel digraphs (rain)

(OTL, 2018)

This may present a challenge to public Montessori teachers who wish to allow a child to explore reading material on his or her own. However, this could also be relatively easily folded in to a Montessori teacher's own scope and sequence as he or she prepares the reading material described in the topic Montessori Literacy Curriculum above.

The Saint Paul Public Schools Office of Teaching and Learning suggests that teachers use the Guided Reading instructional approach, which OTL educators believe serves students with a natural progression of basic letter sounds, short vowels, final e, long vowels, r-controlled vowels, and so on (OTL, 2018).

These particular curricular expectations have been of great import in the construction of the project for this capstone, as it is the district in which the project is to

be deployed. However, an instructor in another district may wish to examine his or her district or administrative curricular expectations and adjust the project accordingly.

Summary

The literature relating to authentic Montessori, Montessori literacy curriculum, traditional reading interventions, school readiness and teacher challenges is extensive and provides a wealth of information regarding each subtopic. However, there does not appear to be a sufficient amount of research relating to the intersection of Montessori literacy curriculum and traditional reading interventions. In order to find out how traditional (non-Montessori) literacy interventions might be integrated into an authentic Montessori classroom in the context of Montessori curriculum in order to help Montessori teachers address the specific needs of nonliterate first grade students in public Montessori classrooms, I propose to create an intervention focused on teaching the phonetic sounds of all letters, as a preparation to phonetic reading. The next chapter, Chapter Three, will present the project that has been conceived of as a means to answer the question *How could traditional literacy interventions be integrated into an authentic Montessori classroom in order to help public Montessori teachers address the specific needs of nonliterate first grade students?*

CHAPTER THREE

Project Description

Overview

I am examining the impact of reading interventions for students in a Montessori classroom. The aim of this capstone is to explore which interventions might be integrated into the curriculum to address the specific needs of children in first grade by addressing this question: *How could traditional literacy interventions be integrated into an authentic Montessori classroom in order to help public Montessori teachers address the specific needs of nonliterate first grade students?*

As explored in the Literature Review (Chapter Two), the literature relating to authentic Montessori, Montessori literacy curriculum, traditional reading interventions, school readiness and teacher challenges is extensive and provides a wealth of information regarding each subtopic. However, the intersection of Montessori literacy curriculum and traditional reading interventions does not appear to be well-developed. In order to find out how traditional (non-Montessori) literacy interventions might be integrated into an authentic Montessori classroom, this project aims to create an intervention focused on teaching the phonetic sounds of all letters, as a preparation to phonetic reading.

These phonics lessons are presented using an authentic Montessori material, sandpaper letters, in a Montessori manner. The sounds should be taught in the order

suggested by Saint Paul Public Schools, and the project is written in such a way that a non-Montessorian can teach the sounds, using the materials appropriately. This will enable the intervention to be taught by a Montessori-trained classroom guide as well as by a reading tutor, paraprofessional, teacher's aide, educational assistant, or parent volunteer. There is an accompanying Nearpod curriculum where children can practice if they do not have access to the materials. There is a deeper explanation of the Nearpod platform under the subheading "Nearpod" further in this chapter.

In addition to this overview of the project, this chapter will examine the research paradigm, choice of method, the intended audience, a detailed description of the project, as well as a timeline for completion.

It is worth explaining, in order to fully understand the project, what the sandpaper letters are. Sandpaper letters are flat wooden cards, either square or rectangular depending on the height of the letter, with an image of a letter on each card. Vowels are affixed on a background of blue and the consonants on a light pink field. The shapes of the letters themselves are created out of sandpaper, and the child traces the sandpaper as a physical and stereognostic interaction with each letter, and as a direct preparation for writing and reading.

Understanding by Design Research Paradigm

This lessons in this project were developed using the Understanding by Design (UbD) framework (Wiggins, 2011). Alongside UbD, this project was being planned and implemented through the lens of purposeful and authentic Montessori curriculum.

Stage 1 - Desired Result

The goal of this capstone is to address the question: *How could traditional literacy interventions be integrated into an authentic Montessori classroom in order to help public Montessori teachers address the specific needs of nonliterate first grade students?* With this in mind, the desired result is that students will demonstrate appropriate grade-level grasp of all English language letter sounds (phonics), and an ability to write and read simple phonetic words.

Stage 2 - Evidence

Students will be able to read and write simple phonetic words with an instructor, who may be a Montessori-trained classroom guide, a reading tutor, paraprofessional, teacher's aide, educational assistant, or parent volunteer.

Stage 3 - Learning Plan

Students will participate in a Montessori-informed reading intervention with an instructor. This intervention will include an instructor-guided introduction to letter sounds with Montessori materials and independent practice. Formative and summative assessments will consist of writing and reading simple phonetic words with an instructor.

Intended Audience

This project is intended for use by Montessori teachers in a public school setting. It is anticipated that this project may be appropriate for private-school or home-school Montessorians as well. Additionally, as Montessori teaching and student-directed

practices continue to gain distinction in other traditional educational settings, this intervention may be useful by traditional first-grade teachers as well.

The instructor will provide one-on-one intervention instruction with a student, or in a small group of up to five students. Research indicates that groups larger than four or five begin to lose effectiveness (NEPS, 2012).

The phonetic sounds in this project are assumed to be pronounced with a United States Midwestern accent. The words and pictures that accompany each letter were deliberately chosen with an eye for racial and cultural equity, and have avoided Eurocentric cliches.

Project Description

The project is a written intervention using a series of lesson plans assembled in a binder along with pictures of common objects that match each sound. Along with this binder, the instructor requires a set of sandpaper letters. The entire project is available in electronic format for ease of transportation and sharing.

Lessons

There are 14 lessons suggested for the intervention, broken into two seven-lesson phases. Each lesson can occur as often as once every day or as far apart as twice weekly, and should not exceed half an hour per lesson. It is vital that the intervention is not stretched out too long, as long-term interventions have been found to be less effective than short interventions, with six to 12-week blocks found to be most effective (NEPS, 2012).

The instructor is expected to present three or four sounds during each lesson. Any more than this, and there is a danger of confusing the child or a loss of confidence.

Each lesson is scaffolded in a gradual release arrangement, which has been used successfully in the Reading Recovery method (Lewis, 2018). This scaffolding is accomplished by dividing each lesson into three periods. These three periods mirror the traditional three-period lesson which is central to Montessori instruction. These three periods are:

1. Naming - the introductory period
2. Associating and recognizing - the identification period
3. Remembering and recalling - the cognition period

(Montessori, 1967)

After the first phase, in which the instructor has completed all seven lessons using initial sounds, he or she should complete the second phase, in which all seven lessons are repeated, this time focusing on each sound as the middle or ending sound of a word. The chart list below may help to clarify the sequence of teaching throughout the project:

- | |
|---|
| <ul style="list-style-type: none"> ➤ Phase One: Beginning Sounds <ul style="list-style-type: none"> ○ Lesson One: m, a, s, p <ul style="list-style-type: none"> ■ 1st Period: Introduction ■ 2nd Period: Identification ■ 3rd Period: Cognition ○ Lesson Two: t, i, n, b ... ➤ Phase Two: Middle / Ending Sounds <ul style="list-style-type: none"> ○ Lesson One: m, a, s, p <ul style="list-style-type: none"> ■ 1st Period: Introduction ■ 2nd Period: Identification ■ 3rd Period: Cognition |
|---|

<ul style="list-style-type: none"> ○ Lesson Two: t, i, n, b ...

A complete chart showing all lessons is located in the appendix: Table 1.

Upon completion of all 14 lessons, there is an option to continue working with individual students, small groups, or integrating the rest of the class in large group lessons. There is more information on this opportunity under the subheading Next Steps below. A complete list of the letter sounds and their order is presented under the subheading Sequence of Letters.

Identification and Differentiation

Before beginning the intervention, it is important to start with an assessment to be sure that this is an appropriate intervention for the child's situation. A CBM (Curriculum Based Measurement) such as the Formative Assessment System for Teachers (FAST™) by Fastbridge Learning would be an appropriate method to measure whether the student is in need of phonetic intervention.

If a student already knows some of the sounds, it is advisable to skip the first period and begin at the second period (see below). In this case, it is also encouraged that instructors begin with the sounds the child already knows. Thus the child has a chance to show his or her prior knowledge, build confidence, and perhaps build enthusiasm.

First Period: Introduction

The first period of each lesson is the introduction of the sounds to the student. Sounds will be taught using the sandpaper letters. The instructor will present each sound

as well as the accompanying sandpaper letter and picture. Each sound will be introduced by first saying the word represented in the picture, then tracing the sandpaper letter and saying just the sound of the letter.

Second Period: Identification

In the second period of the lesson, the instructor and the student work together to recall the sounds. During this phase, the instructor asks the child questions such as, “Where is the letter that says *s*?” or “Which one of these makes the sound *p*?” The child demonstrates his or her understanding by making the sound while simultaneously tracing the sandpaper letter.

Third Period: Cognition

The third period of the lesson is practice. The student works under supervision of the instructor, alone, or with other students on matching the sounds from the sandpaper letters while placing the sandpaper letter next to the correct accompanying picture. The student at this point has the option to use a Nearpod lesson if he or she does not have access to the sandpaper letters.

Nearpod

A Nearpod lesson accompanies the physical binder. Nearpod is an online teaching platform which allows an instructor to create an interactive slideshow including images, sounds, videos, and also accepts student input. A Nearpod lesson accompanies each

subset of letters, and can be used with the instructor and student(s) or, after an introduction, by the student(s) without the help of an instructor.

Pictures

Each word has a picture that is used to illustrate the sound being highlighted. This picture was chosen to represent a completely phonetic word and one that uses the correct phoneme. The words and pictures have been deliberately chosen with an eye for racial and cultural equity, and purposefully avoid Eurocentric bias. Additionally, words have been deliberately chosen to use letters that have been already introduced, when possible.

Sequence of Letters

The sequence of letters taught follows SPPS recommendations. The truncated table below shows the sequence of letters recommended by SPPS and the word that will be spoken and represented by the instructor. The instructor is expected to present three or four sounds during each lesson. An example of the sequence is shown below.

Lesson	Letter	Initial	Middle / Ending
Lesson 1	m	<u>m</u> ap	am <u>u</u>
	a	<u>a</u> m	sa <u>t</u>
	s	sa <u>t</u>	bu <u>s</u>
	p	<u>p</u> ass	ma <u>p</u>

A complete copy of this chart showing all lessons is located in the appendix: Table 2.

Timeline

The goal for this project was to be able to begin an intervention in the beginning of the 2019-2020 school year. The project had to be ready to implement as soon as a CBM or other direct assessment had identified a child in need of intervention. In the district in which this project was implemented, a FAST assessment [Formative Assessment System for Teachers] is mandated within the first month of school in the fall.

It was vital to have the project ready for implementation early because it is critical to identify students needing additional help as soon as possible in order to reach them while they are still in their sensitive period for language (Soundy, 2003). Additionally, it is vital to begin an intervention as soon as possible, so that the child has a better chance to catch up with his or her peers (Bingham, 2013).

Next Steps

After completing the seven lessons, it would be advisable for the classroom teacher to shift the focus to phonemic awareness. The same materials could be used, but the guide in this case would present a picture and ask questions like “Map. Where was the *p* sound, at the beginning or the end? Fat. Where is the *f* sound, beginning or end?” The instructor can also begin making words in series, where one letter changes but the rest of the word stays the same, while the child reads them: “Rat. Hat. Bat. Cat.”

Additionally, the teacher should continue to present pictures and matching sounds for the rest of the sandpaper letters. Blends and phonemes like *er*, *sh*, or even *-ight* can be taught as a single sound and are available on a sandpaper letter card. All 44 phonemes

could easily be taught in this manner, whether in a large group, small group, or one-on-one.

Summary

This project was conceived because the intersection of Montessori literacy curriculum and traditional reading interventions does not appear to be well-developed. In order to address the question: *How could traditional literacy interventions be integrated into an authentic Montessori classroom in order to help public Montessori teachers address the specific needs of nonliterate first grade students*, this project endeavored to create an intervention focused on teaching the phonetic sounds of all letters, as a preparation to phonetic reading.

This lessons in project were developed using the Understanding by Design (UbD) framework through the lens of purposeful and authentic Montessori curriculum. This project is intended for use by Montessori teachers in a public school setting, although it could be useful for private-school or home-school Montessorians or traditional first-grade teachers.

The project is recommended to be taught in 14 lessons, with each lesson broken down into three periods. These three periods are introduction, identification, and cognition. The first seven lessons will highlight beginning sounds, like *m* in map, and the last seven lessons will highlight ending sounds and middle sounds, like *g* in bag or *e* in pet.

The goal was to finish this project and be ready to begin implementing it as an intervention in the classroom in the fall of the 2019-2020 school year. Upon completion

of the intervention, there is the option to continue with the next steps, which include a renewed emphasis on phonemic awareness or a shift toward blends and phonemes using the same paradigm.

The next chapter is Chapter Four, Conclusions. This chapter will contain descriptions and explanations related to the conclusions made about this capstone project. This chapter will contain a section of future steps, which is my personal plan to use my project in the future and the plan to get there.

CHAPTER FOUR

Conclusion

Overview

I examined the impact of reading interventions for students in a Montessori classroom. The aim of this capstone was to explore which interventions might be integrated into the curriculum to address the specific needs of children in first grade by addressing this question: *How could traditional literacy interventions be integrated into an authentic Montessori classroom in order to help public Montessori teachers address the specific needs of nonliterate first grade students?*

This chapter will explore my findings throughout the capstone process as a researcher, writer, and learner. Following that, I will briefly reevaluate the literature review, examining what parts of Chapter Two proved to be most important for the capstone project and why. Then, I will discuss the implications and limitations of my project. After that, I will recommend future similar and related projects, as well as reflect upon how this project benefits the teaching profession as a whole. Finally, I will conclude with a summary of this chapter.

Findings and Major Learnings

Personal Journey as a Researcher

As I was planning and beginning the project, I was receiving a great deal of incredibly productive and useful suggestions from my colleagues and peers on the direction of my project. I am humbly thankful for all of their contributions. However, I realized that for the project to continue to completion, I had to discard or disregard some of those suggestions and proposals. This decision to winnow out some of the recommendations was difficult, but important in order to maintain a narrow focus in order to have the project completed in time for the beginning of the 2019-2020 school year. I will explore some of these ideas under the subheading Future Recommendations and Next Steps.

One of the major discoveries that I made during the formation of this project was the difficulty in finding completely phonetic words for some of the letter sounds. I had initially planned to have letter sounds only in the beginning and end of words, but abandoned that in the early planning stage. Instead, I began to search for words containing those letter sounds in the middle or the end. This allowed me to find words for each of the sounds that I wished to highlight.

Another finding that I made during the planning of this project was the application for sandpaper letters, *Intro to Letters*, by the developer Montessorium. Although I felt that this app may confuse children by teaching letter names instead of only the phonetic sounds, I was impressed by the vivid representations of the sandpaper

letters, the apparent commitment to the Montessori method, and the ease of use. The discovery of this app was somewhat disheartening, as I considered whether it was worth it to continue with the Nearpod lessons that I was making. However, I decided that as interesting and useful as Intro to Letters is, the Nearpod lessons I created are still valuable as a third stage in each lesson.

Personal journey as a writer

I have been in school for more than half of my life. During that time, I have written essays, research papers, and even articles published in newspapers overseas. However, this capstone was an entirely different type of writing. It took a substantial effort to make sure that my writing was not only factual, informative, interesting, and useful, but also conformed to the standards required by APA and my institution, Hamline University. I have rarely needed to edit my writing as often as I have for this capstone. It has been a humbling journey from conception through countless hours spent rewriting, reimagining, editing again and again, and then moving on to the next section before returning only to rewrite the same passage again. As a writer, I am extremely proud of this capstone and regard it as one of the most difficult yet satisfying pieces of writing I've undertaken.

Professional journey as a teacher

As a teacher, I am constantly trying to hone my craft. The writing of this capstone, and the creation of this project, forced me to spend a large amount of time researching best practices for teaching reading as well as digging deep into Montessori

language instruction and Montessori theory. This saturation of information felt refreshing and reinvigorating, and I feel as if I have been able to use the researching and writing process like an intense professional development course. Whether or not I am using my project at the time, I feel that my preparation and instruction will be much more well-informed upon my return to the classroom this fall and beyond.

I feel that teachers need to innovate. We should always be thinking of new ways to approach a topic, interesting assignments to give, or new ways to connect with the students and families in our schools and classrooms. However, we also need to honor and learn from the vast amount of knowledge from educators that have come before us. This project has convinced me of both of these elements. As a Montessorian, I must continue to strive for authenticity including respect for the child, acknowledgement of sensitive periods and an effort to present appropriate content with these sensitive periods in mind, a meticulously prepared environment, the use of sensory materials, a recognition of the importance of self-education for the child, mixed-age grouping, and self-pacing (Morrison, 1991). At the same time, I must continue to innovate, to generate new and interesting ways to reach each child, and to always push myself and my students to take what we have and to do more with it.

Reevaluation of Literature Review

In the literature review, there were five themes identified that were explored. In order, these were: authentic Montessori, Montessori literacy curriculum, traditional reading interventions, the Five Pillars of literacy instruction, and school readiness and teacher challenges. Each of these themes was broken down into relevant subsections in

order to be fully explored. After having researched and created the literature review, it is worth reexamining each topic in light of the project.

Authentic Montessori

The literature reviewed for this capstone seemed to suggest that teacher preparedness is crucial -- in fact, the most important part of building an authentic Montessori classroom is a highly-trained and certified teacher, or guide (Morrison, 1991). As an AMI (Association Montessori International) trained guide, I felt vindicated and encouraged that I need not worry about whether every single thing I do is authentically Montessori, as long as I am able to provide mixed-age groupings, a full complement of Montessori materials, uninterrupted periods of independent work, and an approach to learning that places the child's development at the forefront (Ungerer, 2014).

Montessori Literacy Curriculum

My biggest takeaway from the Montessori portion of the literature review is that writing should precede reading (Montessori, 1967). Too often, it feels like the spotlight we place upon reading tends to outshine writing. This is something that was stressed in my Montessori training but that had been forgotten. This information will help to inform my teaching with all the students in my classroom.

Since children in Montessori classrooms are traditionally introduced to the letters by sound instead of by letter names (Soundy, 2003), I tried to specifically avoid referring to the letter names in the project and the accompanying Nearpod lesson.

As the sensitive period for writing is during the three to six year age range, (Montessori, 1969), I wanted to be sure to emphasize that this is a reading intervention for first grade students.

Traditional Reading Interventions

The first step in a reading intervention is to identify a child who needs help. CBM (Curriculum Based Measurement) and other direct assessments are most accurate in finding those children who need help (Good, 1998). For this reason, I plan to apply a CBM or other assessment as soon as possible at the beginning of the year.

The elements of traditional reading interventions can be grouped into four main areas: phonological awareness; alphabetic understanding; phonological recoding; and accuracy and fluency with connected text (Good, 1998). For struggling readers, those most in need of an intervention, it is phonics which is the most important (NEPS, 2012). For this reason, I decided to focus upon the very earliest phonetic sounds in my project.

I specifically crafted the project to be administered to small groups of children, as my literature review indicated that groups larger than four or five begin to lose effectiveness (NEPS, 2012).

The Five Pillars of Reading Instruction

The NRP determined that there are five areas which are of utmost importance to reading - phonemic awareness, phonics, fluency, vocabulary, and comprehension (Cassidy, 2010). Phonics was considered very important and one of the more popular findings of the NRP, in part because of the ease of teaching and assessing the

correspondence between sounds and symbols (Cassidy, 2010). These are also findings that influenced the direction of the project, and the reason I decided to focus on the pure phoneme that the letter is supposed to make rather than other sounds that each letter makes.

The NRP found that phonemic awareness instruction was most effective when instructors focused on only one or two skills instead of teaching a broader range at the same time (Cassidy, 2010).

School Readiness and Teacher Challenges

I put forth this project at a time when teachers are experiencing a continual increase in the numbers of students arriving with attention disorders, autism spectrum disorders, sensory needs, and other learning difficulties, given that Montessori programs are often chosen by families whose children are behind academically or emotionally because of the perceived benefits of Montessori education vs. a traditional program (Cossentino, 2010). The project will be able to be implemented with many of these students as well as traditional students.

Implications

It is difficult, if not impossible, to find an intervention that checks every box. I have tried to create an intervention that is as true to Montessori philosophy as possible, while simultaneously using current best practices regarding traditional reading interventions. The creation of this project has made clear some interesting implications, three of which I have decided to highlight.

The first is that for all the differences, decades-old Montessori theory and current education theory reinforce and honor most of the same ideas. For instance, the three-period lesson format (Montessori, 1967) is almost exactly the same as the gradual release arrangement used in Reading Recovery (Lewis, 2018). A second example is the almost universal idea that children need a reading intervention applied as soon as identification is complete, whether to catch a child still in the sensitive period for reading and writing (Montessori, 1969) or simply because research indicates that reading interventions lose efficacy if applied to older students (NEPS, 2012).

Another implication is the value in sharing teaching techniques and lessons. Throughout the completion of this capstone paper and project, I have had many discussions with colleagues and peers who have asked to be included in the process and to receive a copy of the project when completed. Teachers are hungry for tools to help them within the classroom, and most spend considerable effort trying to find varied ways to help their students and improve their effectiveness within the classroom.

A final implication is the realization, in the crafting of this intervention, that this project may not be effective for some students. I realized that each student has a different style of learning, and some may not have the patience and interest required for this intervention. As a Montessori teacher, it is my job to follow the child. In this case, that means that I will present this intervention, and if it proves ineffective for a particular child, I will swallow my pride and shift tactics, but I feel better equipped all the same, especially in light of the amount of research I have accomplished regarding different reading interventions.

Limitations

One limitation was finding a website from which to download free and licensed pictures to use in my project. Eventually, I was able to use the internet site pixabay.com, which allows user-contributed images to be downloaded free of charge as long as they will not be used for commercial uses.

A second limitation was in the creation of the Nearpod lesson. Initially, I had underestimated the time it would take to craft each Nearpod lesson. I was able to complete the first lesson, however, and will be able to complete each additional lesson using that template at a much faster pace. I anticipate that all Nearpod lessons will be completed by winter break 2019.

Finally, a Montessori-trained guide, during his or her training, traditionally compiles several expansive collections of lesson plans, philosophy, and training for use of the Montessori materials, referred to as albums. These albums are generally self-written and unpublished, meant more as a classroom handbook or reference. Although my own albums contain an entire Montessori curriculum from a well-respected Montessori training center in Italy, including literacy for grades one through three, I was unable to use that material in the writing of this capstone or the creation of this project due to the restrictions placed upon me by APA and my institution. Although this was frustrating, it did allow me to cast a much wider research net, which led to a more diverse and informed literature review.

Future Recommendations and Next Steps

The next logical step after implementing this intervention with incoming nonliterate first grade students will be to document the results. I hope that this documentation will provide confirmation that this project has been successfully planned in such a way as to achieve the desired result; that students will be able to demonstrate appropriate grade-level grasp of all English language letter sounds (phonics), and an ability to write and read simple phonetic words. These results will allow me to adjust any facets of the project that I feel need recalibration.

One of the recommendations shared with me is that after completing the seven lessons, it should be advisable for the classroom teacher to shift the focus to phonemic awareness. The same materials could be used, but the guide in this case would present a picture and ask questions like “Map. Where was the *p* sound, at the beginning or the end? Fat. Where is the *f* sound, beginning or end?” The instructor could also begin making words in series, where one letter changes but the rest of the word stays the same, while the child reads them: “Rat. Hat. Bat. Cat.”

Additionally, the teacher could continue to present pictures and matching sounds for the rest of the sandpaper letters. Blends and phonemes like *er*, *sh*, or even *-ight* could be taught as a single sound and are available on a sandpaper letter card. All 44 phonemes could easily be taught in this manner, whether in a large group, small group, or one-on-one.

Communication of Results and Benefits to Profession

This intervention was designed by me in part to be easily transferable. I plan to have an electronic version of the project as well as a physical copy that I can easily share with colleagues. I feel that in order to be considered truly successful, this intervention will have to have proven itself in several classrooms, not just my own. Thus the documentation of results will have to be shared amongst my immediate Montessori community and the larger Montessori community. These results will, I am confident, serve not only the students who will benefit from the increased focus on letter sounds, but will simultaneously further Montessori theory and interests in the larger educational community.

I believe that any teacher must continue to push the envelope of his or her profession. The benefit to the teaching profession will not only be felt within the classroom in which the intervention is held, it will also serve to bridge some of the gaps that I discussed between public Montessori classrooms, private Montessori classrooms, and public and traditional schools.

Summary

This chapter shed light on my findings throughout the capstone process as a researcher, writer, and learner. It took a second look at the literature review, examining what parts of Chapter Two proved to be most important for the capstone project and why. Then, it evaluated the implications and limitations of my project. After that, I

recommended future similar and related projects, as well as reflected upon how this project benefits the teaching profession as a whole.

The aim of this capstone project was to examine the impact of reading interventions for students in a Montessori classroom, while endeavoring to explore which interventions might be integrated into the curriculum to address the specific needs of children in first grade by addressing this question: *How could traditional literacy interventions be integrated into an authentic Montessori classroom in order to help public Montessori teachers address the specific needs of nonliterate first grade students?*

Closure

I am just finishing a lesson at the platform with the third graders. After checking that each student has the assignment written down correctly, I send them back to begin working. I stand up, take a deep breath and a sip of coffee, and go over to stand by the window, my favorite spot to get a good view of the whole classroom. I look around the room, observing each small group of students. My eye falls upon “Jacob” in the reading area, working his way through a Bob Book (phonetic reader). His brows knit, his lips move, he touches the pages a few times, and eventually he gets up, smiling, inks the stamp, and puts another star on the chart taped to the wall. He’s finished his ninth primary phonetic reading book. Filled with a passionate excitement for his newfound confidence in reading, Jacob puts the book away and takes out the next one.

I am enthusiastically hopeful that the scenario just described will actually take place. I am confident, after reviewing the literature and using that information to carefully craft a series of lessons, that this capstone project will help to address the needs

of nonliterate first grade students like Jacob, in regard to the question, *How could traditional literacy interventions be integrated into an authentic Montessori classroom in order to help public Montessori teachers address the specific needs of nonliterate first grade students?*

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APPENDIX

Table 1: Sequence of Lesson

- Phase One: Beginning Sounds
 - Lesson One: m, a, s, p
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition
 - Lesson Two: t, i, n, b
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition
 - Lesson Three: c, o, f, h
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition
 - Lesson Four: d, r, g, e
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition
 - Lesson Five: l, k, u, w
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition
 - Lesson Six: j, x, v
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition
 - Lesson Seven: q, y, z
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition
- Phase Two: Middle / Ending Sounds
 - Lesson Eight: m, a, s, p
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition
 - Lesson Nine: t, i, n, b
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition

- Lesson Ten: c, o, f, h
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition
- Lesson Eleven: d, r, g, e
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition
- Lesson Twelve: l, k, u, w
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition
- Lesson Thirteen: j, x, v
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition
- Lesson Fourteen: q, y, z
 - 1st Period: Introduction
 - 2nd Period: Identification
 - 3rd Period: Cognition

Table 2: Sequence of Letters

Lesson	Letter	Initial	Middle / Ending	Lesson	Letter	Initial	Middle / Ending
Lesson 1 / Lesson 8	m	<u>m</u> ap	g <u>m</u>	Lesson 2 / Lesson 9	t	<u>t</u> ap	sa <u>t</u>
	a	<u>a</u> nt	sa <u>t</u>		i	<u>i</u> t	si <u>p</u>
	s	<u>s</u> at	bu <u>s</u>		n	<u>n</u> ip	bi <u>n</u>
	p	<u>p</u> ass	ma <u>p</u>		b	<u>b</u> at	we <u>b</u>
Lesson 3/ Lesson 10	c	<u>c</u> at	mu <u>sic</u>	Lesson 4/ Lesson 11	d	<u>d</u> ot	sa <u>d</u>
	o	<u>o</u> ff	ho <u>t</u>		r	<u>r</u> at	ar <u>t</u>
	f	<u>f</u> in	off <u>i</u>		g	<u>g</u> as	ba <u>g</u>
	h	<u>h</u> at	aha <u>h</u>		e	<u>e</u> gg	pe <u>t</u>
Lesson 5/ Lesson 12	l	<u>l</u> id	pa <u>l</u>	Lesson 6/ Lesson 13	j	<u>j</u> et	ban <u>j</u> o

	k	<u>k</u> id	pin <u>k</u>		x	<u>x</u> ylophone	bo <u>x</u>
	u	<u>u</u> p	cu <u>p</u>		v	<u>v</u> an	mag <u>l</u> ey
	w	<u>w</u> et	co <u>w</u>				
Lesson 7/ Lesson 14	qu	<u>qu</u> ilt	a <u>qu</u> a				
	y	<u>y</u> am	da <u>y</u>				
	z	<u>z</u> ip	qu <u>iz</u>				