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A Visual Phonics Curriculum Resource for First Grade Teachers of Struggling Readers

Fiona McGraw

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**A Visual Phonics Curriculum Resource for First Grade Teachers
of Struggling Readers**

by

Fiona McGraw

A capstone project submitted in partial fulfillment of the requirements for the degree of
Master of Arts in Education.

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Capstone Project Facilitator: Julia Reimer

Content Expert: Sarah Davidson

Peer Reviewer: Alison Sasada and Julie Reissner

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CHAPTER ONE

Introduction

Overview

The topic of my research is focused around the question: What tools and strategies can educators use to help meet the needs of all students when teaching phonemic awareness in a general education classroom? This question came to me during my eight years teaching early elementary education. During this time, I came to firmly believe in the importance of early literacy instruction. My research question came about through my encounters with students who struggled with literacy instruction; specifically phonemic awareness. I have felt I was not doing enough to tailor my instruction to these students and that I did not have enough knowledge of methodologies to cater to their needs. My capstone thesis will address the question, *Can a small group visual phonics curriculum help to improve reading achievement?* During my capstone research, I plan to align multisensory kinesthetic techniques with brain-based instruction to address the learning styles of all students. I want to dive deeper into the multisensory instruction and focus on kinesthetic approaches.

This chapter will start off with a background of my personal experiences with literacy followed by my experiences and concerns teaching literacy to young children. I feel it is important to understand my experiences with literacy in order to understand how I came to my research question. For that reason, the first part of this chapter will touch upon my personal experience with literacy. The second part will then flow into my professional experiences in teaching literacy in early elementary. The third part of this

chapter will touch upon my concerns with literacy instruction. The last part of this chapter will then dive into my goal for this research tied along with current research that is being done and the rationale behind it all.

Personal Experience with Literacy

I don't recall struggling to read at a young age. In fact, I was quite eager to learn. I became excited when I was able to go to the library for the first time and pick out a book that I could read on my own. In the classroom, reading was almost always done as a whole group, reading out of a textbook. This usually involved one student reading aloud while everyone else followed along. I remember waving my hand eagerly to be called on by the teacher to read the next section of text. I think that for most of us adults, we don't remember learning how to read unless it was met with difficulty. It is hard to conceptualize and explain because it's something that has become natural over the years to me; especially as native English speaker. With the English language, there are so many rules and exceptions to the rules that it seems impossible to know everything, let alone teach someone else. The way letter sounds are strung together to create words in the English language often just doesn't make sense. Yet, understanding the complex linguistic tasks involved is crucial to succeed as successful teachers of literacy. To many, reading can seem like a natural process but it is anything but that.

Professional Experience Teaching Literacy

My first six years of teaching were based in early childhood education classrooms, specifically preschool and kindergarten. At that time I was working in a private preschool setting that had their own state certified instructional material for their

teachers. I found this instructional material and guidelines to be tailored correctly toward their target audience and instructed beginning literacy skills that were appropriate for age and development. Students would work on letter recognition, letter-sound relationships and sight word recognition. It was wonderful to be there at the foundation of their reading development. As an educator of these students, I understood the importance of these basic literacy skills as they were the building blocks for reading development. I also understood that for those students who didn't develop these skills early on, there could be lifelong reading difficulties. When confronted with those few students, I never felt I had the proper tools or training to assist them and help them overcome any literacy difficulties they may encounter.

I remember one student I had during my 4th year teaching kindergarten. He exhibited signs that he was unable to remember his letters consistently. I would work with him one-on-one, teaching him one letter of the alphabet each week. We would work on letter recognition, letter-sound relationships and writing the letter out. No matter how many times we practiced he was unable to remember the letters from one day to the next. I felt helpless as his teachers. I was unfamiliar with literacy interventions at the time. I attempted to consult fellow teachers but their suggestions were ineffective and non-research based. Also, being such an early age, he did not qualify for testing of a learning disability. This was the first time in my teaching career I really felt lost and I still think about that student to this day.

For the past three years, I have taught reading readiness and phonics in small groups to struggling readers in the first grade. I love teaching these students because they

are so excited when those “light bulb” moments happen for the first time such as successfully decoding an unknown word or reading a sentence entirely on their own. However, I have also witnessed far too often the anxiety and fear that comes over some children as they are called to read aloud. I observed my students eager to read yet struggling to sound out each word correctly and tears forming in their eyes.

This was only made more prominent when those struggling readers were also English language learners. They would confuse the letter sounds of the English language to that of their native language. These problems were demonstrated through slow reading, word omission and reading/letter sound inaccuracy. These students would then begin to lose focus, lose confidence, and show increased frustration in the reading process.

This past academic year was met with many academic challenges in the classroom. I had a high percentage of students in my classroom that were English language learners and/or had IEPs (individual education plan) centered around reading and writing. With such a high number of my students with academic needs I felt overwhelmed and underprepared. This became especially evident when after the first semester of school, I received a new student with a different set of needs. She was an English language learner who was also a selective mute. Her previous school had not done any academic testing on her because of her lack of speech and unclear communication. I had no idea what she knew or where her struggles lay. It took several months of working with speech therapists, reading interventionists and special education teachers to determine that she did not have any phonological awareness of English letters and was unable to identify the first 100 Fry sight words found in most first grade texts. I

didn't know how to teach a student who was not just starting from ground zero in reading but was also an English language learner and was unable to communicate with me. Everyday was spent researching intervention ideas and methods to use in my general education classroom.

What I found was most effective was loosely based off of kinesthetic instruction. However, I was unfamiliar with the term of this methodology at the time. I was teaching vowel sounds in a small group instruction with other struggling readers and I would demonstrate mouth movements to go along with each short/long vowel sound. She would mimic these mouth movements without making a sound, then point to or write the vowel that made that sound. This strategy not only helped her recognize those different vowels but helped out my other students as well. I started using this strategy with all of my struggling readers. They became more engaged, loved the hand/mouth movements and remembered them whenever we would review letter sounds. If this can work for a student who is mute, a student who is struggling, an English language learner, then why can't it work for all students?

My Concerns

Without literacy, we cannot begin to explore other avenues of education as it is ingrained in all subject areas and the world we live in. Our world relies on literacy and the future of our students relies on gaining a firm grasp of basic literacy skills at a young age. Children who are behind in reading at the end of first grade continue to be behind throughout their schooling

(Cihon et al., 2008). I want to give my students the tools they need to become proficient decoders and readers and to continue to do so as they advance academically. At the base of these skills is phonics. Without phonics, reading is virtually impossible. When you have a basic grasp on the concepts of phonics, it gives you the tools to have success with reading and writing.

My concerns lie on the basis that through my teaching career, I have felt that a direct approach to phonics instruction is not enough for struggling readers. I never received any training on differentiated instruction. I want to change that. I want to find creative and effective ways to teach my students the literacy tools they need to be successful readers. It doesn't have to be hard. In fact, it can be fun and engaging for teachers and students. I believe that using creative teaching methods can dramatically improve language skills and academic outcomes.

Rationale

My goal for this project is to create a visual phonics curriculum that can improve phonological awareness of struggling readers within a first grade classroom. I am hoping this research will result in providing my students with some tools they can utilize throughout their academic careers to become successful readers.

Phonics instruction can take on different forms from traditional verbal and visual methods to multisensory approaches that emphasize hands-on activities (Rule, 2006). A direct and explicit approach to phonics instruction relies heavily on recognizing correct letter sounds and the ability to orally segment words. This is not always an effective approach for children who cannot break off the beginning/ending sound or who don't

understand what is meant by the term “sound”. The theory behind this research is based upon multisensory strategies. These strategies use direct instruction involving visual, auditory, tactile and kinesthetic sensory systems to learn about the layers of language (Carreker & Birsh, 2011). It is my belief that this type of instruction conducted in a small group setting is required to support the needs of struggling readers. It has been shown that phonemic awareness skills were improved for students who were taught with a multi-sensory approach compared to their peers in a control group. The students had performed better on phonological awareness tests, decoding of new or unfamiliar words and in reading comprehension (Joshi, 2002). When readers have a better understanding of sound, letter and spelling patterns, reading fluency increases.

In addition, decoding instructions focused on phonics can yield better results in reading proficiency (Magpuri-Lavell, 2014). It was discovered that, during a National Assessment of Educational Process (NAEP) reading and math assessment conducted nationwide in 2014, two-thirds of eighth grade students failed to reach grade level proficiencies in both reading and math. Brain friendly instruction can counteract these results by tapping into the developmental pathways of young children and help them learn new concepts.

I want to look more into one aspect of visual instruction that directly correlates to my past experiences as mentioned previously. This type of instruction can engage students' sensory pathways because it allows the brain to blend mind and body with no separation. It entails incorporating actions, movements and hand signals to go along with letter names and sound correspondence (Berkness, 2016). This type of visual phonics

instruction uses hand shape and mouth shape cues that can be tied kinesthetically to the production of English language sounds. The written symbol of the letter is also associated with the hand shapes and movements. This instruction can be brought into the classroom during any literacy activity where sound/letter awareness connections are being taught. This method of being able to help students see and feel these phonological concepts can help to establish, enhance or reinforce phonological awareness (Gardner et al., 2013).

Notwithstanding the thinking behind my research question, it is imperative to understand who will benefit from it all. It is my intention that this project will benefit all language teachers and learners. I want to give fellow literacy teachers more tools to use in the classroom when they encounter struggling readers because traditional approaches are not always effective. There is limited research on how to use kinesthetic for phonics instruction. I want to expand on that research to create a curriculum that it will give me, and others, the tools needed to be effective literacy instructors. I am hopeful that these strategies can be manipulated across grade levels as well to suit the needs of both the instructor and the student. And lets not forget who this is all for in the end: the students. Adding a visual approach to structured phonics instruction might have the possibility of increasing a students phonemic awareness by helping them engage a different part of the brain to allow more connections to be made and maybe even have fun in the process.

Summary

My research question evolved based on experiences and struggles I faced as a kindergarten and first grade teacher of struggling readers. My role as an early elementary teacher is vital as it pertains to literacy. These early years of schooling form the building

blocks of reading and literacy. I no longer want to see my students struggle in this area. I want them to learn and thrive. Having an understanding of effective teaching approaches from which we can learn these building blocks, as well as a toolbox with a variety of ways to present content to students, is valuable for increasing the accessibility of learning experiences for all students. One of these building blocks is the knowledge of phonemic awareness. There has been a lot of research as to the effectiveness of different approaches used to teach letter sound fluency. However, there is limited research on the use of visual instruction to teach phonemic awareness. I want to use what I have learned this past year and dive more into the theories and practices of visual instruction. It is my hope that this type of instruction will meet the needs of my struggling students in a fun and engaging way.

Throughout the rest of this project, you will learn more about my curriculum development and methodologies. Chapter Two will cover the research on my topic. This research will touch upon characteristics of strong phonics instruction, theories around multi-sensory instruction and the use of visuals in phonics instruction. Chapter Three will dive into the methodology behind creating a curriculum centered around my research question. I will use my research to outline the curriculum model and how it can be implemented in a general education classroom. Chapter Four will reflect on my process through the creation of the capstone project and discuss possible challenges and limitations.

CHAPTER TWO

Literature Review

Introduction

The spotlight on literacy and literacy instruction is becoming more intense over the years. The No Child Left Behind (NCLB) Act of 2001 legislation began this movement and led to changes within multiple aspects of education including literacy (Carreker & Birsh, 2011). Using research-based information, each change since the beginning of the NCLB Act has been an attempt to bring the best teaching practices into schools along with high standards for instruction. Along with these changes were also changes in states' licensures for teaching through professional development in alternative methods of effective instruction. In turn, teachers who have a wide range of experiences increase the chance of success in all of their students. But what about those teachers who do not have a wide range of experiences? What are the chances for success with their students if those teachers do not have the proper tools and or training to ensure success in all of their students? We must first remember that teachers rarely remember how they learned to read and so it can seem almost like a natural act. Though it is anything but that. Reading and writing is something that must be acquired with instruction and teachers must seek out new and innovative methods of instruction in order to meet the success of all students. These methods need to be research based and include that nature of instruction in order to meet the needs for differentiated instruction. By doing so, teachers are able to increase the chances of success; especially when working with students who are identified as at risk of failing to learn to read (Carreker & Birsh, 2011).

In Chapter One, I established my experience with learning and teaching literacy in an early elementary classroom. The context for the study was introduced as well as my background and role as the action researcher. The chapter concluded with the statement of my research question. In Chapter Two, I will provide a review of the literature in relation to the research question: *Can a small group visual phonics curriculum help to improve reading achievement?* Areas that will be reviewed include defining phonemic awareness, a look into the multisensory approach for instruction, and defining visual phonics instruction and how it is implemented in the classroom. The last section will discuss how visual phonics relates to kinesthetics and multisensory instruction as an effective approach to teaching phonological awareness.

The purpose of this study is to demonstrate how visual phonics can be implemented into a phonics curriculum in order to support struggling first-grade readers. In this chapter, I review the literature relevant to supporting kinesthetic phonics instruction in a general education classroom. I begin with a definition of phonemic awareness and different instructional approaches. This will go into depth as the research explores the effectiveness of teaching phonics through a multisensory approach versus other traditional approaches. Next, I will review literature that addresses one aspect of multisensory instruction, kinesthetics, and the benefits it affords to phonological awareness in a diverse group of students. Lastly, I will explore research that demonstrates effective assessments on phonological awareness and how this data can be used to guide small group kinesthetic instruction.

Phonological Awareness

Phonological Awareness is the ability to segment and manipulate sounds in the oral language. This ability to manipulate sounds in a spoken language has been demonstrated through years of research to correlate to later success in reading and spelling (Carreker & Birsch, 2011). This correlation has been the driving force behind my research question: can phonological awareness help struggling readers? The first section will go over the definition of phonemic awareness as well as other early literacy definitions needed for comprehension of this study. The next section will discuss the importance of phonemic awareness in early literacy. The literature will dive into the role it plays in learning to read and the importance of phonological awareness as it pertains to students who demonstrate difficulties in reading.

Definition

According to Carreker & Birsch (2011), reading development depends on acquiring phonemic awareness and other phonological processes. Phonological awareness is defined as the individual's understanding of sound structures within words. This is the understanding that words are made up of phonemes (speech sounds) and the ability to segment or blend the phonemes within words. To learn to read, children must be able to pay attention to the sequence of sounds or phonemes in words and manipulate these sounds. When an individual is able to understand that words can be divided into a sequence of phonemes this is termed phonological awareness. This skill develops from first being able to identify beginning and ending sounds in words to being able to discern syllables in a word. Another step of phonological awareness is being able to segment

syllables into onset and rime. For example: in the word *dog*, /d/ is the onset and /og/ is the rime (Carreker & Birsch, 2011).

It is important to note that phonemic awareness is a sub-skill within phonological awareness. The ability to segment words into phonemes is phonemic awareness. In other words, it is the ability to hear sounds in words and isolate those sounds from one another. Both encompass the ability to intentionally think about language skills and both are strongly related to literacy development and can be promoted in the classroom through several methods which will be discussed later in this chapter (Rasinski & Padak, 2013).

One must also recognize that phonological awareness is different from phonics. Phonological awareness involves having skills that allows an individual to work with sounds of a spoken language. Phonics is the relationship between sounds and text of a written language and the methods of teaching this within an alphabetic writing system (Chard & Dickson, 1999).

Importance

Phonological awareness is highly related to later success in reading and spelling and has been observed that becoming fluent in phonics can prepare children for reading instruction (Chard & Dickson, 1999). The knowledge of letter sounds is needed to understand the alphabetic principle that is the foundation of the English written language. Becoming phonologically aware prepares children for later reading instruction which includes phonics, word analysis, and spelling. Research has repeatedly shown that this skill in preschoolers is one of the more important predictors of early reading success in a child's first few years of school (Carreker & Birsch, 2011).

The most common barrier to learning early word reading skills is the inability to process language phonologically. Beginning readers must be able to understand that structure of words in order to benefit from any reading instruction. When a student is able to blend and segment letter sounds within words, they are able to use this knowledge to read and build words. Because of this, phonological awareness is thought to be a strong indicator of reader success. This knowledge has led educators to believe that reading problems can be prevented or minimized when identified early and can lead to success in a reading program that includes phonological awareness. Though there is significant evidence for a need for preventative-based reading practices and early identification, the extent to which this occurs in classrooms is unclear (Rasinski & Padak, 2013).

For skilled readers, acquiring basic reading skills can be quite easy. However, this is not the case for struggling readers. These readers have difficulty with sight reading as well as decoding and sound-symbol relationships. They exhibit common trends in that inability to manipulate phonemes and difficulties associating a letter with a sound and blending these parts to decode words. It is clear that for these students, a need to develop phonological awareness is vital to their reading success. These are major roadblocks to overcome. Often teachers of struggling readers discover that the breakdown in the meaning making process of words occurs either at the phonological awareness or phonological processing stage. That means that these struggling readers have minimal awareness of phonemes and a difficulty associating written text with a sound or blending sound units to discord words. It makes sense that a prerequisite to reading would be the development of phonological awareness and related skills (Bursuck & Blanks, 2010).

Often, children with learning disabilities demonstrate difficulties with phonological awareness. Other children without such abilities may have the same difficulty without displaying characteristics of any sort of learning disability. The important thing to take away from this is that most children, with or without disabilities, are likely to benefit from kinesthetic instruction though the approach and degree of explicit instruction may vary. In the next section, there will be an in-depth investigation on multisensory phonics instruction and how it compares with other methods of explicit instruction. This will then lead into the discussion of why I have chosen to use multisensory phonics instruction as my capstone project.

Benefits

In the text “From Phonics to Fluency” (Rasinski & Padak, 2013), there is the belief that phonics and word recognition is important for all readers. It is also important that teachers are familiar with the connection between the concepts of phonemic awareness and reading acquisition. Phonemic awareness provides the foundation for learning phonics which readers need in order to decode unknown words. Students who lack phonemic awareness are most at risk to experience difficulty in learning phonics and learning to read (Rasinski & Padak, 2013). Unfortunately, a significant number of students enter early elementary with insufficient phonemic awareness. Therefore, this need for phonics instruction and intervention is really targeted at those particular students.

Chard and Dickson’s (1999) study of phonological awareness discusses historic research regarding phonics to early reading. Within this discussion there is the discovery

that children who have learning disabilities will often demonstrate difficulties with phonological awareness skills. He also mentions that many other children will have the same difficulties without the characteristics of a learning disability. This is followed by the finding that these students who lack phonemic awareness can be identified and improved with explicit instruction and that this instruction is also likely to benefit most children. He is not the only researcher to uncover such significance. In a technical report on the metacognitive approach to phonics, researchers made a case for instruction by stating that poor readers often have difficulty with sound simple relationships and depend on explicit phonics instruction to learn how the English language works (Gaskin et al., 1988). This report goes on to make the argument that poor readers are ones who most benefit from gaining a firm understanding of phonics skills in order to progress to grade level standards . Lastly, another research study on the prevention of reading problems provides evidence on the use of phonics instruction as a preferred practice for teaching decoding to at-risk children (Bursuck & Blanks, 2002). It was also found that early identification and intervention that emphasize phonemic awareness is a critical component of at-risk reading students. These findings, though decades apart, have uncovered that the students who are most at risk for reading failure are the true beneficiaries of explicit phonics instruction and that reading problems can be minimized and/or prevented with explicit instruction in phonemic awareness.

This explicit instruction is a main component of multisensory and visual phonics instruction. In the next section, there will be a discussion on how multisensory instruction has been used for effective phonics instruction and how it compares with other

approaches. This will be followed by a section of who truly benefits from multisensory instruction and how this relates back to the research question addressing visual phonics as an effective implementation into a phonics curriculum.

Multisensory Instruction

Language involves using the whole brain: auditory, visual and tactile/kinesthetic functions. The goal of multisensory instruction is to use the integration of these functions within instructional strategies. By doing so, it is the belief of many researchers that children are able to learn language concepts by using all of these brain functions which reinforces memory (Carreker & Birsch, 2011). This section of chapter two will discuss how multisensory instruction was chosen as the backbone for my research question and how it has led to a narrowed down topic of kinesthetics and visual phonics. The first section will define what multisensory instruction is and what it looks like in the classroom. This will then move into the next section that will compare multisensory instruction with other phonics instruction methodologies. There will then be a discussion on the effectiveness of multisensory phonics instruction. The last section will discuss how multisensory phonics instruction has led to the branching off area of kinesthetics and how the two are connected.

Definition

The term multisensory refers to the engagement of all these sensory systems within phonics instruction. This is based on a theory of teaching phonics that engages a child's sensory may enhance learning (Schlesinger & Gray, 2017). Language involves the automatic linkage of auditory, visual, and kinesthetic motor functions. The goal of

multisensory instruction is to foster automatic integration of these functions. This integration is believed to foster learning through the sequenced teaching of all systems. Students can engage all learning pathways to the brain in performing language tasks. Including multi-sensory components in instructions routines helps students to make deeper connections (Carreker & Birsch, 2011).

The majority of research on multisensory instruction has been through The International Dyslexia Foundation which was founded by Dr. Orton. That is because the origin of multisensory instruction began with Dr. Orton. In the 1920s, Orton was researching intervention techniques to use on students with dyslexia. Orton realized that students with dyslexia were shown to benefit from systematic based phonics instruction. What made Orton's approach unique was that it taught each phonogram and rules for blending using auditory, visual and kinesthetic techniques. This approach was later referred to as the Orton Gillingham multisensory approach. It has since been adapted by teachers to use in their reading programs in order to accommodate the specific needs of their students (Ring et al., 2017).

In the discussion on phonological awareness, researchers made the connection between explicit instruction and phonological awareness for students who are at-risk for reading failure. This means that phonics instruction is delivered in a systematic, direct and engaging way in order to promote achievement for all students. Taking this into consideration, it is important that teachers have a variety of strategies, supported by research, to teach such skills as phonemic awareness. Because each child has a unique set of learning needs, one approach may not address those needs and so the effectiveness of

multisensory strategies developed. Though do all scholars agree on the definition of multisensory instruction? Many scholars (Joshi et al., 2002; Ring et al., 2017; Scheffel, 2008) all agree that it is a systematic approach to phonics instruction that uses visual and symbolic cues to simplify letter to sound correspondences and which is based around the methods of Orton Gillingham. Though these scholars agree on the terms and use of multisensory phonics instruction, it is important to compare this with other approaches for effectiveness. The next section will discuss the usage of three phonics instruction strategies and how the analysis of these approaches have helped to guide the research question around visual phonics as a useful tool for phonics instruction.

Comparison with other approaches

Given the importance of phonological awareness in early reading, the debate turns from whether it is important to which approaches to teaching it is most effective. There are typically three approaches to reading instruction (ARI) (Morrow & Tracy, 1997). The first is the whole language approach. Some advocates for the whole language approach suggest that phonics should be taught in the context of reading and writing activities; that it should not be isolated. The second is the phonics approach. Those that follow this method believe that teaching phonics needs to be direct and systematic. The third approach is an eclectic mix of the previous two. Those following the eclectic approach believe that there needs to be middle ground to both previously mentioned approaches. This means that there can be an effective integration of whole language and systematic instruction that include in-context experiences and systematic instruction (Morrow & Tracy, 1997).

In a study examining all three approaches, teachers using the whole language approach focused on analyzing meaning from context towards words. Reading instruction was down without any internal analysis of the words and the learner was expected to acquire the alphabetic principle indirectly through meaningful words and stories. This study failed to confirm the hypothesis that the whole language approach would increase competency in reading difficulties (Faust & Kandelshine-Waldman, 2011).

In the same study, some teachers were using the eclectic approach to ARI by incorporating the principles of both phonic and whole language instruction practices. The students in this study were taught to search for meaning in words using prior knowledge and pictures if available. The students also learned about the alphabetic principle and were systematically instructed in phonemic awareness. The students in this portion of the study showed evidence of increased competency in reading abilities. The study also concluded that the whole language approach did not compensate for the difficulties of low achieving readers and that the more eclectic approach may be more effective for low achieving readers who require phonological awareness of the spoken and written English language (Faust, 2011).

The National Reading Panel (2000) determined that many difficulties in learning to read were caused by inadequate phonemic awareness and that explicit instruction in phonemic awareness should be a vital component reading instruction for children who have difficulties understanding that the words in oral language are composed of smaller speech sounds. The Panel also concluded that literature provides strong evidence that the best improvements were seen from systematic phonics instruction. The Panel later

discusses the notion that, due to the fact children differ in reading capability, no single approach to teaching phonics could be used in all cases. For this reason, it is vital for teachers to use different types of approaches to teaching phonics and to tailor these approaches to precise groups of students. It was also discussed within the Panel report that children at risk of reading failure require direct and systematic instruction of phonics instruction and should be supplied as early as possible. The Panel concluded that these children at risk of reading in kindergarten and in the first grade respond well to instruction that is delivered in a vibrant, imaginative, and wonderful fashion.

It can be concluded that reading instruction that incorporates systematic phonics instruction can help with phonological awareness in struggling readers. This type of instruction introduces letter sound correspondences in a planned-out sequence and has shown to contribute to beginning reading growth more so than non systematic instruction (National Reading Panel, 2000). It was also concluded this type of instruction is recommended for implementation by schools and teachers.

Multisensory phonics instruction

A popular idea of this systematic phonics instruction are that lessons can engage visual, auditory, and kinesthetic sensory systems. This is called a multisensory approach to systematic phonics instruction and it is based on the idea of teaching phonics skills to mastery in order of successful reading and comprehension to take place. This requires that teachers engage student learning through visual, auditory, and kinesthetic cues.

In one study to determine the effectiveness of multisensory phonics intervention of older readers, the use of visual memory cues, grapheme-to-phoneme correspondences,

tactile manipulation, and decoding/encoding practices were effective (Henry, 2020). It was documented by the researcher that many of the students looked forward to the word work and were receptive to the multiple opportunities to imprint accurate reading skills. Students were using strategies to sound out, segment, flip the sound and recall reading unknown words. This allowed these students, who were identified as struggling readers, to make gains in their reading accuracy and fluency. In a reading pre assessment, half of fifth grade students and half of sixth grade students skipped at least one word. In the post assessment, no student skipped or asked to skip any words and 15 out of 19 students made reading gains following the multisensory reading intervention. These same students were also observed to be engaged and motivated by the multisensory phonics intervention. Lastly, the multisensory phonics intervention created engagement through peer collaboration (Henry, 2020).

Another example of the effectiveness of multisensory instruction towards reading and phonemic awareness was examined within first grade students. The reason for first grade was brought on by the awareness that, though phonemic awareness should be established in kindergarten, first graders who lack proficiency in this area need to have this deficit addressed as quickly as possible. This study evaluated the effectiveness of the Institute for Multisensory Education's Orton Gillingham based reading program across three school districts in the state of Colorado. This reading program was designed to be incorporated in an already existing reading curriculum in order to provide a multisensory, phonetic instructional tool. It relied on directly teaching the fundamental structures of language (sound-symbol relationships) and progressing into phonetic rules and work

attach skills all using multisensory methods. By the end of the study, it was found that phonemic awareness skills were improved during the school year and provides evidence to support the inclusion of multi-sensory tools within an established reading curriculum (Scheffel et al., 2008).

This next example of the effectiveness of multisensory teaching takes place in an inner city first grade classroom. One group in the class was taught with the multisensory approach based on the Orton-Gillingham principle, the control in the class was taught with the Houghton-Mifflin Basal Reading Program. The results of this study showed that the students taught with the multisensory approach performed better on phonological awareness tests, decoding and reading comprehension when compared to the control group. It was concluded that this improvement is attributed to the multisensory approach used in the study (Joshi et al., 2002). This study is of particular interest to my research question because it shows that multisensory phonics instruction can be used at the first-grade level and that systematic reading instruction is essential at early elementary grade levels.

According to the literature review thus far, it is important for literacy and phonics curriculums to prevent reading difficulties early on as soon as deficits are detected. Since phonemic awareness is a skill that should be established in kindergarten, first graders who lack proficiency in this area need to have it addressed as quickly as possible through an effective approach. The review of literature on interventions in phonemic awareness for struggling readers is shown to be effective when multisensory approaches are integrated into the curriculum. However, multisensory instruction can mean a wide range

of interventions with an equally wide range of results. I want to look more closely at what it is about multisensory instruction that can make it so effective. I used the research of Chen and Savage (2014) as my jumping point. This study looked for evidence of simplistic and effective phonics interventions. What they discovered was that phonics interventions that used kinesthetics and visual cues to simplify letters to sound correspondences were easy to memorize and helped struggling readers make more efficient reading gains (Chen & Savage, 2014).

Multisensory phonics instruction is about providing that approach with effective results through explicit and systematic instruction. Visual phonics instruction branches off from multisensory instruction by using the same explicit, systematic approach but with the implementation of hand-shapes with corresponding movements to help with the sound production of phonemes. Movement is not just used for games, it is used for the accurate sound production of learned phonemes. The next section will look more closely at what kinesthetic instruction is and how it relates to visual phonics, who can benefit from kinesthetic instruction and how it can be used for effective phonemic awareness interventions.

Kinesthetic Instruction

When researchers closely looked at students with reading difficulties and weaknesses in phonological awareness, it was determined that systematic phonics interventions that used visual and symbolic cues to simplify letter to sound connections were easier to remember and helped these struggling readers make gains in phonemic fluency and reading accuracy. Another important finding within this same study was that

the students were engaged and motivated in the phonics activities (Chen & Savage, 2014). These findings have led to the research into kinesthetic instruction and how it is used to help with phonological awareness of struggling readers. It is this study, and others like it, that are driving my research to branch off from the multisensory approach and into kinesthetic learning. The first section will define what kinesthetic instruction is and how it is implemented in the classroom. This will then move into the next section that will look at the demographics of students who can benefit from this type of instruction. There will then be a discussion on how kinesthetic is used for phonics instruction.

Definition

Multisensory instruction is the use of direction strategies involving visual, auditory, tactile and kinesthetic sensory systems to learn the various stages of literacy and language development. One aspect of multisensory learning is kinesthetics. Kinesthetics refers to the sensory experience stimulated by body movements and tensions (Carreker & Birsch, 2011). It involves using hands and body movements and sensitivity to muscle movements. The first part of this section will discuss more of the background in kinesthetics and how it ties into instruction. The second part of this section will discuss how kinesthetics is used in phonics instruction using the See the Sound/Visual Phonics (STS/VP) approach. The last part of this section will dive into the results of this type of kinesthetic phonics instruction and how these results are shaping my research.

Kinesthetics pertains to the sensory experience stimulated by bodily movements and tensions. This means the students demonstrate their comprehension of letter shapes and sounds while moving parts of their bodies through space (Carreker & Birsch, 2011).

The kinesthetic approach to teaching relies on the student's active physical participation. Kinesthetics is the body's physical response to visual, auditory, and tactile stimulation to produce multisensory learning. Because kinesthetic learning is very tactile and hands-on, there are many techniques that are involved when teaching a kinesthetically inclined individual (Grant, 1985). Along with kinesthetic instruction is kinesthetic memory cues. This is defined as a physical action that is related to a letter sound, the type of sound a letter produces (Berkness, 2016).

Kinesthetic information can increase a student's memory and ability to discriminate between speech sounds. A student's awareness of the position of the mouth, tongue, teeth or lips while producing a letter sound assists in the learning process. This information increases the student's visual memory and ability to discriminate between letter shapes. Also, the students' awareness of how a letter feels when written in the air or on paper can connect kinesthetic and visual information so that the letter shapes and sounds can be thoroughly learned (Carreker & Birsch, 2011).

Benefits

It is important to think about who is going to benefit from this research before moving forward. Kinesthetic movement and gestures can impact a child's ability to communicate what they know more than what they are able to do through speech. This is because when gestures are paired with speech, that skill is likely to have a lasting impact and enable those students to retain the information more readily (Rule et al., 2006). This type of learning can benefit students who are tactile and who enjoy participating in hands-on activities. You might find that kinesthetic learners feel the need to move

side-to-side as they are being taught, or even participate in activities that involve the whole body. This movement of the body will stimulate the brain, waking it up and increasing its awareness and capacity to take in more information (Grant, 1985).

In a study to show the relationship between learning style among ethnic groups, the research concluded that of the four ethnic groups studied (Mexican, Armenian American, Korean and Anglo) regardless of sex and level of academic achievement, there was a major preference for kinesthetic learning. These findings suggest that all the students in the study will be able to learn better when teachers provide interactive learning activities that require physical involvement (Park, 1997).

One study in recent years took the time to examine the “who, what, when, where, why” of visual phonics. In this study, Narr and Cawthon (2011) asked teacher participants to describe with whom they had used visual phonics, both during the 2008–2009 academic year and in previous academic years. Teachers responded by stating they used Visual Phonics primarily with students who were DHH and students that had other disabilities (not including DHH). These same teachers also reported using Visual Phonics with students who were English Language Learners. The majority of teachers included using Visual Phonics with elementary-age students. A much smaller number of teachers used it with middle school and high school students (Narr & Cawthon, 2011). Narr’s study validates that visual phonics is not exclusive to the deaf and hard of hearing population but can be applied to several targeted student populations with different intervention needs.

Kinesthetic Phonics Instruction

While it can be agreed that kinesthetic instruction refers to the body's physical response to visual, auditory, and tactile stimulation to produce multisensory learning, there are many different ways to implement this in the classroom. There have been many studies to demonstrate the different ways to implement kinesthetics into the classroom. One aspect all the studies agree upon is that instructional strategies need to be flexible enough to meet the individualized needs of learners when implemented in a small group or one-on-one. It is also important that teachers have a variety of approaches that are supported by research.

Many kinesthetic activities presented in studies over the years include songs, phonics card games, word games and writing. These activities must also be practical, easy to create and offer variations in order to meet the needs of diverse learners. One of eight intelligences developed by Gardner, bodily - kinesthetic intelligence involves the use of your whole body to convey ideas and feelings (Coopla, 2006). In Rule's (2006) study of kinesthetics activities for teaching phonological awareness, he focused on activities adapted from Glaser's "Every child can read: Activities to teach phonological awareness". These activities included songs, phonics card games, word games and writing.

Fellow researchers refer to kinesthetic learning as incorporating the whole body through games, songs and writing (Gardner et al., 2013). I, however, am drawing on scholars who say that visual phonics is a more effective method for teaching kinesthetic phonics to struggling readers. This system of phonics instruction was originally

developed by a mother for her deaf son, to aid in teaching speech and reading. This method has since been studied and researched, and the outcome was the Visual Phonics System known today. In 1982 the formation of the International Communication Learning Institute I.C.L.I. introduced See-the-Sound /Visual Phonics (Dewes, 2017). I am drawing my research based upon work done by Goldin-Meadow which supports the significance that hand gestures have in language development. I am also looking at Krupke (as cited in Montgomery, 2008), who is a lead researcher and trainer in See the Sound: Visual Phonics. I am basing some of my project development on researchers who examined how visual sound interventions have the ability to improve literacy skills for at risk readers (Cihon et al., 2008; Gardner et al, 2013).

There are many effective approaches to kinesthetic learning as described in the literature from a number of researchers. Games, music, writing, and whole body movements have all shown to be effective in one way or another. After looking over the literature, I have determined to steer my research in the way of using visual phonics as an aspect of kinesthetic learning. Though the research on this topic is limited, what is out there has shown how the use of hand movements and visual phonics can be an effective approach when helping struggling readers develop their phonemic awareness. In the next section, I will look at research that first defines visual phonics. This will then lead into the next section that will examine how visual phonics has been used in the classroom. Lastly, the literature review will discuss the results researchers have found when implementing visual phonics into various literacy programs and settings.

Visual Phonics

It is imperative to give teachers and educators the knowledge and resources to effectively teach pre reading skills and assist young children who are at risk for reading failure. The use of visual phonics can be a resource to those teachers in improving phonemic awareness for such students and, in the end, help decrease the gap in reading fluency. This section of chapter two will discuss how the literature behind visual phonics is driving my research to answer the question: *Can visual phonics be integrated into a first grade phonics curriculum to improve reading achievement?* The first section within the Visual Phonics topic will go over the definition of visual phonics and how it is linked to kinesthetic and multisensory instruction. This will be followed by a section discussing the same examples of visual phonics being implemented in the classroom. The last section will go over the effects visual phonics has had on beginning and struggling readers in past research.

Definition

Visual phonics is an intervention tool that provides a hand sign for every phoneme in the English language. This intervention combines auditory, kinesthetic, and visual cues and responses to assist in teaching phonemic awareness (Cihon et al., 2013). The use of Visual Phonics is an example of how teachers have adapted phonics-based reading instruction for deaf and hard of hearing students, though, over the years, has been implemented to help all students who struggle with phonemic awareness. The hand-cues are visual kinesthetic representations of phonemes and are used to convey phonemic information about phonemes within words. For example, the spoken word “toe” would be

represented using the hand cues for the phonemes /t/ and /o/. The /t/ is represented by flicking the index finger off of the thumb, in the area near the mouth, with palm facing forward. This “flicking” movement of the index finger kinesthetically represents what the tongue does in the mouth when articulating the phoneme /t/. These kinesthetic hand cues along with written letter symbols can be used to demonstrate spelling patterns or phonetic word structure (Narr & Cawthon, 2011).

Examples in the classroom

One study of interest that addresses the use of kinesthetics for teaching letter sounds is the study done by Gardner et al. (2013), called *Implementing Visual Phonics with Hearing Kindergarteners at Risk for Reading Failure*. This research investigated a kinesthetic intervention called the See the Sound/Visual Phonics (STS/VP). It combines auditory, kinesthetic, and visual cues and responses to teach phonemic awareness and phonic skills. This intervention technique was developed to make phonics visible and discernable to students who are deaf or hard of hearing through the use of hand signs for each phoneme in the English language. The results of this study indicated that STS/VP can be an effective tool for teaching all students (not just deaf students) initial phonic skills (Gardner et al, 2013).

For example: when teaching syllables, tap the left hand on the right arm, moving upward in sequence of wrist, elbow, shoulder and head depending on how many syllables are in a word. To further visualize this method, let's use the word /mirror/. This word has two syllables and so you would tap one hand on the other wrist and elbow for the two syllables. Another exercise using kinesthetics can be for phonemes. You tap an index

finger of one hand on the fingers of the other hand while segmenting the sounds in a word. One could also use the index finger and use the points on the arm, as described previously, to sound out the word. For example, use the index finger to sound out /cat/. Start at the wrist for /c/ sound, point to the elbow for the short /a/ sound and then the shoulder for the /t/ sound. For longer words, fingerspelling gestures of sign language could also be used. All of these strategies provide clues to the number of sounds in a particular word while incorporating body movements (Carreker & Birsch, 2011)

The hand gestures also mimic some aspect of the mouth, tongue and throat movements that are made when producing a sound as well as providing a kinesthetic shape linked to the sound. Using visuals of hand signs can be placed under vowels, digraphs, or irregular spellings to clarify sounds in printed texts for struggling readers. This places the intervention at the level of sound, not letters, making sound concrete and providing a foundation for developing phonemic awareness. Another study looked at how this approach increased literacy in kindergarten students who were identified as at-risk for reading failure (Cihon et al., 2008). The study used a generic lesson plan for delivering instruction which included a method of assigning one distinct hand movement for each phoneme. An example of this would be in teaching the /ow/ sound. By the end of the lesson the student would say the /ow/ sound and then make the corresponding hand sign taught to go with this sound. The student would then read coded words, making the corresponding hand sign each time the target sound would appear. The hand signs are tied to the articulation of letters and allows struggling readers to make letter/sound connections. This intervention resulted in post-intervention gains on both the DIEBLS

and CBM assessments which test literacy skills including phonological awareness and the alphabetic principle. This lesson example placed in this study offers a framework for incorporating this strategy into any existing reading curriculum or teaching strategy. Another aspect of this study that can be particularly appealing to some educators is that it is easy to learn and inexpensive because materials are not consumable. It should also be noted that the students within this study were kept active and maintained focus on the concept being taught (Cihon et al., 2008).

Results

Although visual phonics (VP) was originally created for deaf and hard of hearing students, research has shown that it can benefit students of all abilities (Cihon et al., 2008). Two goals of visual phonics are to improve awareness and improve speech through hand and mouth movement and to incorporate a multisensory representation of sound. The hand cues are used in visual phonics to provide a way to visualize a sound. Visual phonics can also be used as a tool for intervention in phonics instruction (Smith & Wang, 2010). This tool has been implemented in classrooms for over 20 years, but until recently, used without the support of evidence. Its implementation has instead been based largely on anecdotal support (Narr & Cawthon, 2011). Though there is not much research out there on the effectiveness of visual phonics and hand cue instruction, the results from the few studies that are out there can be thought of as a beginning to more research heading in the direction of the use of visual phonics and hand cues as an aspect of kinesthetic learning to be used for phonics instruction.

As stated in an article by Woosley et al. (2006) on visual phonics:

Though visual phonics and hand cues have little research on effectiveness of these strategies, they do hold a promise as a method for providing systematic access to the English phonological system. The incorporation of Visual Phonics, access to phonemic awareness and alphabet knowledge appears quite possible (p. 456).

Woosley is not the only one to believe in the method of visual phonics as an effective kinesthetic approach of phonics instruction. Another study was conducted to study the impact that See the Sound Visual Phonics (STS/VP) has on beginning readers in kindergarten. The ST/VP paired abstract letters and sound with forty-six hand cues and symbols. The kinesthetic hand cues along with verbal sound and visual symbols enabled the students in this study to make deep connections to abstract letters of print. In the end, the students who received STS/VP interventions were able to read a mean of 5 more letters sounds than their peers and had a higher growth rate of phonological awareness than those students who did not receive the same interventions (Dewes, 2017).

Although this research evidence adds significantly to our understanding of how Visual Phonics can be used in specific situations with specific curricula, it does not describe the range of everyday use and teachers' perceptions of its effectiveness with a diverse student population. As a tool, it is thought that Visual Phonics can be used as a support in existing curriculum. It must be noted, however, that aside from the hand cues, there are no guidelines that are associated with its use. Much of the integration and use of Visual Phonics is left to be determined by the creative teacher who reflects thoughtfully on how best to infuse it into their instruction (Narr & Cawthon, 2011).

In a case study of a deaf student identified as “K”, comparisons of pre and post tests showed improvement in phonological awareness and speech production. K was able to correctly identify beginning consonant sounds 91% of the time in a post test. This same student also produced 20% of target sounds in a “Identify Sounds in Words” pretest. The posttest resulted in the production of 83% the same target sounds. By the end of the study, K demonstrated an understanding that words are made up of sounds and improved their ability to model each sound. Visual Phonics was determined effective when implemented during phonics and literacy lessons (Smith & Wang, 2010).

Another study was conducted to study the effects of hand cues for a college aged student with motor speech disorders. This study examined the effect mimicry hand gestures would have on speech sound accuracy when paired with a multisensory approach which consisted of verbal instructions and visual modeling of the hand cues. Results showed that there was an increase in accuracy of speech sounds (Rusiewicz & Rivera, 2017). This data can add to the limited investigations being conducted on hand cues and visual phonics and a subset of multisensory instruction. However further research is needed to support the results of this preliminary study and the use of multisensory treatment approached to speech and letter sound management.

The use of visual phonics when incorporated into a phonics curriculum can help support phonological awareness and provide an alternative source of information about the English language. Two researchers said it perfectly at the end of their study by stating, “These studies demonstrate a need for more research on its effectiveness as a strategy to

help struggling readers. Visual phonics has the ability to bridge the gap between learning to read and reading to learn.” (Smith & Wang, 2010, p.129).

By identifying students who have not developed phonological awareness, the usage of visual phonics could be of benefit in helping them quickly learn these skills. Teachers are faced with the need to differentiate their approaches to meet the needs of these students. Integrating explicit instruction, like visual phonics, into their curriculum can allow teachers to differentiate instruction and provide their students with the opportunity to develop and retain their letter sound recognition. There is still a need for continued research on the effectiveness of the visual phonics approach but it is my hope that my research will be added to what is already out there and that it will provide a gateway for more educators and researchers to continue the study the effectiveness of visual phonics instruction through their own implementation designs.

Summary

Visual phonics has the ability to reduce the burden of phonological memory by providing a visual and kinesthetic support. The implementation of this approach can allow students to make deeper connections that allow for the success of reading fluency and accuracy. I am asking the question of *Can a small group visual phonics curriculum help to improve reading achievement?* because of the possible positive effects it could have on a student’s reading achievement. Students who develop early literacy skills, such as visual phonics, are able to apply them throughout their learning process and decrease the gap between reading achievement in higher grade levels.

The literature presented in this chapter provides important information on kinesthetic and visual phonics to help students who are struggling readers. The first section addresses the importance of phonics instruction and the need for students to achieve fluency in phonological awareness in order to become successful readers. The second important idea is that there are a variety of strategies that can be used to teach phonological awareness. These strategies are compared, and the conclusion is made that there are many benefits to multisensory phonics instruction. These benefits are the driving force behind my research. The third idea addresses how multisensory instruction branches off into kinesthetic learning and how it is being used for phonics instruction. The last section touches upon an aspect of kinesthetic phonics instruction: visual phonics. This section discusses the importance of visual phonics instruction and the positive results it has provided researchers and educators in recent years. All of these ideas provide evidence for my research question: *Can visual phonics be integrated into a First-Grade phonics curriculum to improve reading achievement?*

The procedures of inquiry from the literature review has helped me to create a curriculum design project that provides a differentiated approach to teaching phonological awareness and how it can improve reading fluency for struggling readers. Chapter three will discuss my plan for implementing the findings of the literature review into a curriculum design to address my research question. Within chapter three, I will explain the curriculum design framework, my methods and the rationale for choosing them, the setting and participants involved, and the data collection and analysis process.

CHAPTER THREE

Project Description

Introduction

As a first-grade teacher, I feel I am one of the last lines of defense when it comes to helping struggling readers. Once a student passes second grade, their phonics instruction stops. Once children fall behind in reading, a challenging instructional task becomes even more difficult. Children who are behind in reading at the end of the first grade usually continue to be behind at the fourth grade and throughout their schooling (Cihon et al., 2008). My research project addresses the question: *Can a small group visual phonics curriculum help to improve reading achievement?* I choose this as my project because the use of visual phonics can be a resource to teachers, such as myself, in improving phonemic awareness for students identified early on as at-risk for reading failure and, in the end, help decrease the gap in reading fluency.

For my capstone project, I created a visual phonics curriculum to be integrated in small group instruction for first grade students. In Chapter One, I established my experience with learning and teaching literacy in an early elementary classroom, which provided background knowledge as to why I developed this question. Chapter Two reviewed the background knowledge of visual phonics and the important role it plays in phonological awareness. By reviewing the literature, basic ideas emerged about a visual phonics curriculum within a first grade classroom. Chapter Three will demonstrate a detailed process designed for small group visual phonics instruction for first graders. Throughout this chapter I will provide a rationale for my topic, the frameworks that were

utilized, the intended audience, and a description of my intended project. I will also discuss how my literature review has led me to the creation of my project. Using the knowledge gained from this research, I will discuss the curriculum design framework used to design a unit plan and the intended participants, setting and timeline.

Application of Research

Once I decided to answer my research question through a curriculum design project, I knew I wanted my topic to focus on small group phonics instruction using visual phonics as the strategy. In the past, phonics has been taught in my school through both small literary group time and whole group reading. Unlike the whole group reading instruction, the small group literacy instruction did not follow a common core curriculum. Instead, it was based on state standards and worked towards assessing individual students' needs for reading comprehension and phonics and guiding instruction based on those needs. I wanted to change that with this project design. I wanted to design a small group phonics instruction unit that could be a tool for not only myself but other educators teaching the same skills and standards.

Throughout my literature review, it was found that visual phonics (VP) improved phonological awareness and reading skills in early elementary students with low language skills or who were at risk for reading failure. Furthermore, some researchers found that students who demonstrated deficits in phonics skills were able to improve their letter-sound relation skills and most students' reading risk level was decreased (Gardner et al., 2013). It is this type of research findings that are the driving factor for the purpose of this curriculum design. I want the curriculum to extend the initial efforts of these

researchers and implement VP into a daily phonics curriculum to address the needs of all students who are at risk for reading failure as well as introduce new decoding skills to all learners of the English language.

Curriculum model

The Theory of Visual Phonics is an important example of how teachers have adapted phonics-based reading instruction and is the driving force behind my curriculum model. Therefore, the model behind this project is a curriculum model which is learner centered. This model allows for direct and explicit visual phonics instruction and differentiation within instructional plans. The purpose of the current study is to examine how to effectively integrate Visual Phonics into a pre-selected structured phonics curriculum using this model. The results from a study of visual phonics on hearing kindergarteners who were at risk for reading failure demonstrated that visual phonics can be an effective tool for teaching students' initial phonic skills (Gardner et al., 2013). The goal of this curriculum design is to link direct and explicit visual phonics instructional strategies to phonological awareness and reading growth among first grade students. This integration of visual phonics will provide instruction in a way that will address the challenges of misinterpretation of directions from teachers as well as giving them a systematic approach to phonics instruction that will benefit the students involved.

The curriculum design will follow the approach of direct instruction. This is a comprehensive system of instruction that refers to patterns of teaching behaviors that correlate with increased academic performance of students (Gersten & Darch, 1986). The principle behind this instructional design is that in order for all students to learn, both

materials and teacher presentations of these materials must be clear and unambiguous. Direct and explicit instruction also recognizes that educators face the challenges of designing effective instructional systems for teaching certain academic skills and developing a curriculum that will be effective as an instructional system for both educators and students.

This curriculum design is able to address these features which align directly with explicit visual phonics instruction. Visual phonics provide a systematic and direct approach to the English phonological system (Woolsey et al., 2006). Why does direct and explicit instruction matter when designing a curriculum? In a study on direct and explicit instruction, it was concluded that low performing students repeatedly show higher academic performance achievement when their teachers follow consistent practices of demonstration (hand gestures in visual phonics) guided practice and feedback (Rosenshine, 1984). Guided instruction that follows demonstration will allow the teacher to ask questions of students, check for understanding, give feedback, reteach if necessary and ultimately meet the individual needs of each student in a systematic way.

Curriculum Design Framework

The design for this project will be based on Wiggins and McTighe's (2011) *Understanding by Design*. This "backward" design focuses on student learning and understanding. It lends itself to explicit instruction within a mainstream curriculum. It also allows the teacher to plan instruction based on the desired results and acceptable evidence. The desired results of this curriculum project will be for all students to increase their knowledge of phonological awareness. I will be basing my desired results from

Colorado's academic standards in first grade literacy. The evidence for this will be determined through assessments and quick checks at the end of each lesson. I will use PALS testing for my formal pre assessment. This assessment will provide me with useful information to guide and inform my teaching. The plan for the instruction will be based on the explicit implementation of visual phonics within a preselected phonics curriculum program. I will use a design template to create a unit plan.

I chose this framework for my curriculum revision project because UbD is widely regarded as a best practice in curriculum design. By beginning with the overall goals and assessment criteria, lessons and learning activities can be developed to meet those goals. When developing units following this framework, there are three stages of curriculum development. The first stage in the UbD framework is to identify the desired results. During this stage, educational standards should be considered to select appropriate results. For this stage, I consulted the Colorado Academic Standards for Reading, Writing and Communicating for grades K – 12 (2010) as well as the National Governors Association Center for Best Practices, & Council of Chief State School Officers (2010). Common Core State Standards for 1st Grade Reading, Writing and Communication Standards (2020). The grade level expectations for these standards focus on oral expression and listening. The phonological awareness expectations are that students will be able to use verbal and nonverbal language to express and receive information.

The standards I used are as follows:

- CCSS: RF.1.2 Demonstrate understanding of spoken words, syllables, and sounds (phonemes)

- CCSS:RF.1.2a Distinguish long from short vowels in spoken single-syllable words
- CCSS: RF.1.2b Orally produce single-syllable words by blending sounds (phonemes), including consonant sounds
- CCSS: RF.1.2c Isolate and pronounce initial, media vowel, and final sounds (phonemes) in spoken single-syllable words.
- CCSS:RF.1.2d Segment spoken single-syllable words into their complete sequence of individual sounds.

By combining Wiggins and McTighe's (2011) "backward" unit design model, I was able to create a general framework for this curriculum. Within this model, Wiggins and McTighe discuss the three stages to follow: desired results, assessment evidence and learning plan. The first step of my curriculum design was selected in a phonics program. The phonics program I chose was Riggs. The Riggs: Writing and Spelling Road to Reading and Thinking is an explicit phonics program which incorporates multi-sensory techniques into each lesson and supports all students as they use learning tools that maximize their own learning. Riggs uses multi-sensory, classical direct instruction and dictation. This instruction development is based on the scientific research that has clearly demonstrated that explicit phonics instruction is the single most effective approach for all students(<https://www.riggsinst.org>). However, it is the intention of this project that it can be integrated into other preselected phonics curriculums where intervention strategies are available. The second step was introducing weekly phonograms. These phonograms would be introduced according to the "Writing and Spelling Road to Reading and

Thinking “Revised” Orton Phonograms” teachers edition text provided by the Riggs Institute. The third step is practicing the phonograms with the use of visual phonics as the multisensory strategy. The teacher is to teach the sound/s as they are given in key words, in the order shown, and with any listed instructions.

Participants and Setting

The setting of this project will be in a public K-8 charter school in a large metropolitan area in the state of Colorado. The school follows a classical model for instruction and the model behind this project will be worked into that model. The idea behind the location is based on a study that took place in an elementary school in a working-class community outside of a large metropolitan area (Chion et al., 2008; Gardner et al., 2013). It should be noted that the implementation of visual phonics can ideally take place anywhere phonics, decoding and beginning reading instruction is taking place. Its multisensory background makes it accessible to different types of learners across a variety of academic settings. I am also using the research conducted by Gardner (2013) of implementing visual phonics for students who are at risk for reading failure when thinking about participants and setting of this curriculum. In Gardner’s study, the setting is in an elementary school in a working class community outside of a large metropolitan area. One Kindergarten class was recruited to participate in his study. This setting reflects the current setting of the school of which I am teaching as well as class size and is a good comparison for effectiveness in curriculum design of the same approach as Gardner.

In Rosenshine's (1983) study on direct instruction, it was discovered that his conceptions were often effectively applied in regular classrooms, often with low income students and/or mildly handicapped students. In using Rosenshine's findings, I plan on using the format of direct small group instruction to target the curriculum towards lower performing students (Rosenshine,1983) Using the research gained from Cihon's study on visual phonics, it is recommended that this strategy be used on students who tested low on their reading and phonics skills from assessments. Literature findings suggest that all students will be able to learn better when teachers provide interactive learning activities that require physical involvement (Park, 1997). The current project design is intended for the current group of first- graders within the setting of the study. However, modifications can be made to this research to fit the needs to lower elementary educators or any of which have students struggling in the area of phonological awareness.

Grouping Students

There is considerable evidence to suggest that students with learning disabilities benefit from reading instruction that is provided in one to one or small groupings. Similarly, students who do not respond well to large group instruction may need supplementary small group instruction that is targeted to their literacy needs. It can also be said that small group instruction can be an effective alternative to one-on-one instruction as a way to teach to more students having the same needs (Chen & Savage, 2014). Carreker and Birsh (2011) also discussed the importance of intensity of instruction. In connecting research and practice, the authors discussed that through small group instruction, with intensity guided by students' rate of progress, students with

reading problems have a better chance of closing the reading gap with their peers than in a large group setting. This statement was followed by the need for students to engage in structured multisensory activities that can be closely monitored. This is not possible in a whole group setting (Carreker & Birsch, 2011).

In another study that examined the effectiveness of visual phonics instruction, a large group setting was used for teaching the school districts recommended phonics content. After whole group instruction for one week, students were assessed and if the student could not make the letter sound connections they were then selected for intervention. This study demonstrated that only a small group of students required intervention and allowed time and space for a small group intervention to take place. In the end, the results from this small group intervention resulted in allowing the students to become effective in initial phonic skills (Gardner, 2013). It is with this literature review that I am planning the implementation of this curriculum to take place in a small group setting.

By reviewing the literature findings about effective phonics instruction and intervention, I learned that the first step after assessments is to group students. For effectiveness of instruction, the student would be placed in four to five groups consisting of no more than five students in one group. The students would be placed in their groups depending on their literacy levels and phonological awareness skills levels. In order to identify groups, they will be color coded. This color coding will be segregated into the following colors and groupings: red will be for the group of students with the highest literacy skills and who need the least amount of intervention, orange and yellow will be

for those students who are in the middle of the road for literacy skills, green and blue will be designated for those students demonstrating the lowest level of literacy skills and who need the most attention.

Implementation

Materials would include a construed manual that is based on Visual Phonics research and their findings of effective approaches. This manual will provide a written and iconic description of each sound (Gardner et al., 2013) as well as combine auditory, kinesthetic, and visual cues and responses to teach phonemic awareness and phonic skills. The intervention technique will use hand signs for each phoneme in the English language and can be an effective tool for teaching all students (not just deaf students) initial phonic skills (Gardner et al., 2013). Other materials required would be Visual Phonics instruction cards, a list of letter-sound targets students had errors on, an observer recording data sheet, and the phonological awareness assessment tool that was implemented within the school system as a pre/post measurement.

The curriculum design is based on research that has been conducted in the areas of visual phonics and effective approaches to reading interventions in primary grade levels. It will introduce the students to the first letters of the alphabet, one per week. These letters will be both vowels and consonants. During instruction, visual phonics cues are used with speech to visually represent initial consonant and vowel sounds. The teacher will use hand signs provided through Visual Phonics training and cue cards. For example, students will be shown the hand sign for a phoneme and read text without additional written cues. Within the instruction, there will also be several opportunities for

each student to respond within their small groups. Afterwards, students will be assessed on the instructed letter-sound by the teacher at the end of the week. If the student cannot produce the correct sound for the letter, a revised lesson will be given. Once students demonstrate mastery of these phonics skills, they will be taught 13 more letters and four digraphs (one letter and one digraph per week). Finally, students are taught the remaining letters of the alphabet (Cihon et al., 2008).

Cihon's (2008) study on visual phonics provided some examples (see Figures 1 and 2) of intervention strategies to teach the See the Sound/Visual Phonics using hand signs.

Figure 1

Behaviors to Teach the STS/VP Hand Sign

Table 1
Behaviors to Teach the STS/VP Hand Sign

Step	Teacher Behavior	Participant Behavior
1	“Watch my mouth while I say /ow/” and says /ow/ in an exaggerated fashion Teacher repeats the step twice	Watch and listen
2	Teacher says, “Now you try it with me” Teacher says the /ow/ sound Repeats twice	Participant says the /ow/ sound Repeats twice
3	Teacher says, “I’m going to show you a hand sign that looks and feels like /ow/” The teacher demonstrates the hand sign while saying /ow/. Teacher repeats the step twice.	Watch and listen
4	Teachers says, “Now you try it with me” Teacher says the /ow/ sound while making the hand sign Repeats twice	Participant says the /ow/ sound while making the hand sign Repeats twice
5	Teacher says, “show me the /ow/ sound and the hand sign four times.”	Participant says the /ow/ sound and makes the corresponding hand sign. Participant repeats three times
6	Teacher presents the participant with five words that contain the target sound	Participant reads the words, making the corresponding hand sign each time she comes to the target sound
7	Teacher gives the participant a sentence with 5 words containing the target sound embedded	Participant reads the passage, making the corresponding hand sign each time she comes to the target sound

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Note: Adapted from “Using visual phonics as a strategic intervention to increase literacy behaviors for kindergarten participants at-risk for reading failure” by T. Cihon, 2008, *Journal of Early and Intensive Behavior Intervention*, 5(3), p.143

Figure 2*Behaviors for the Revised Teaching Protocol*

Step	Teacher Behavior	Participant Behavior
5a	Presents the learner with a field of at least three letters and asks the learner to “point to the letters that make the sound /ow/ “while making the corresponding hand sign	Points to the corresponding letter
6/7 8/9	After the participant reads the sound and makes the corresponding hand sign, also asks the participant to point to the corresponding letter.	Points to the corresponding letters

Note: Adapted from “Using visual phonics as a strategic intervention to increase literacy behaviors for kindergarten participants at-risk for reading failure” by T. Cihon et al., 2008, *Journal of Early and Intensive Behavior Intervention*, 5(3), p.145

Timeline

In accordance with the Colorado Department of Education Curriculum Overview, the length of the unit for developing patterns of success is 6 – 8 weeks. The content within this unit includes communication (non-verbal and verbal) as well as phonics, fluency, and phonological awareness. Ideally, the timeline for this instruction would take place throughout the school year when phonics instruction is taking place. The integration of visual phonics into small group instructions would occur daily or every other day with times set aside for practice and application of skills learned. At the end of

each week a spelling and phonogram test would be given which would allow students to demonstrate mastery of skills learned this week.

Assessment

The Phonological Awareness Literacy Screening (PALS) would be implemented as an assessment tool to help drive instruction. This test would provide comprehensive assessments of students' knowledge of important literacy fundamentals. The PALS Plus test is for grades 1 – 8 and is designed to identify students in need of reading instruction beyond what is typically provided to developing readers. These assessment tools also have Quick Checks which allow ongoing student progress monitoring. The results of this assessment (or another one like it) would allow the educator to assess the needs to individual students and plan instruction around those needs.

Posttests would be a required assessment strategy to understand if each participant has met mastery criteria for each instructed letter sound. One week after a letter sound has been taught, students would be assessed by presenting a writing of words that contain the target letter sound taught that week.

I will be using the Colorado Department of Education's Curriculum Development Overview to help set the expectations for this curriculum. By the end of this curriculum, my students will understand that decoding words requires the application of the alphabetic principle, letter sounds and letter combinations. Some guiding questions to help with these expectations would be: "How many ways can we break apart a word?" and "Why is learning letter combinations important for becoming an effective reader?".

Summary

The implementation of visual phonics can easily fit into a preselected phonics curriculum and serve as an effective means of teaching phonological awareness to first grade students. By using the “backward” model and a structured phonics curriculum, the visual phonics component is able to meet the students literacy needs. Also, students will be able to take the skills learned from visual phonics and apply it to their reading and language skills after a year of instruction. This gives the students power of their learning and helps to lessen the gap in reading achievement among students as they progress through higher grade levels.

Chapter One introduced the motivation behind this research project and provided insight into the need for teachers to expand their teaching approaches to meet the needs of a diverse group of learners in a general education classroom. Chapter Two reviewed the literature behind effective phonics instruction and the development of using multisensory instruction as an effective approach to phonics instruction. It also led into the development of visual phonics and summarized how it has been used effectively in the classroom to increase phonological awareness in a variety of student populations. Chapter Three revisited the insights gained from this literature review to help me answer my research question. I have described the curriculum framework that I will use and why this framework will allow for the design of a useful project. I have explained the intended audience and setting and why explicit instruction is suited for this learning environment. Lastly, it demonstrated a model used to answer my research question “ *Can visual*

phonics be integrated into a First-Grade phonics curriculum to improve reading achievement?”

Chapter Four will reflect on my capstone process and discuss the possible challenges and limitations of my project. I will discuss the effectiveness of the curriculum model, what I have learned through the development of this curriculum and places where I can improve to make the curriculum more effective for both teachers and students.

Chapter Four

Reflection

Introduction

The goal of this curriculum project is to design instruction that builds skills in phonological awareness and word recognition through the use of visual phonics. In this project, I used the research gathered on visual phonics in conjunction with the Riggs Institute's Writing and Spelling Road to Reading program (McCulloch, 1979) and incorporated Colorado State Standards on reading and phonics into instruction for first grade students. This project aimed to answer the research question: *Can a small group visual phonics curriculum help to improve reading achievement?*

In this final chapter of my capstone project, I discuss what I have learned throughout my capstone process. I refer back to my literature review and discuss its relevance to my project findings. I then will discuss the implications and limitations of this project. Next, I make suggestions for future revisions and research and the implications this project has on the world of literacy instruction. Lastly, I end this chapter by reflecting on my project.

Major Learnings

The original goal of my project was to answer the research question: Can a kinesthetics approach within a structured phonics lesson increase phonological awareness in struggling readers? It was my intention early on in the capstone process to have this be my thesis question. This question would lead to a design for intervention to be done in small groups with evaluations of effectiveness within a small student population in one

first grade classroom. However life has a way of changing things either for better or worse and due to the pandemic and working remotely for the first half of the year I was forced to change my capstone. However, I did not want to change my overall intent, which was to create a tool which all literacy teachers could use to help a wide range of learners gain phonological awareness.

The curriculum project was written for elementary education teachers, specifically early elementary (kindergarten and first grade). The purpose of the curriculum design is to link direct and explicit visual phonics instructional strategies to phonological awareness and reading growth among first grade students. During the curriculum's development, the following findings in my literature review were extremely helpful: knowing the features of research based direct small group instruction and how it links to curriculum design with refined teaching techniques (Gersten, 1986) and how the Understanding by Design framework is useful in creating engaging lessons that produce effective learning outcomes.

Using Wiggins and McTighe's (2011) *Understanding by Design* as the source for my curriculum development, I discovered that the backward design and UbD template to be an effective base of which to create a phonics curriculum. This "backward" design focuses on student learning and understanding by creating a curriculum that meets specified purposes and is mindful of its audience. It is a design that must also be informed and shaped by state standards. These standards are the building blocks of any good curriculum as they provide a framework to identify learning priorities. I wanted to consider my past teaching experiences with individual students and what their needs were

as the base of this backward design. It was my intent to have this curriculum be content focused by design by choosing an instructional method that is based on research to cause learning. I wanted to avoid the “twin sins” (Wiggins and McTighe, 2011) of design that was “hands on without being minds on”. The chosen design and activities must lead to learning. The visual phonics activities are meant to do just that. An example of this is when students learn the sign for both long and short vowels /a/ and recreate that hand sign when they hear that vowel sound in a spoken word. Students are not only being engaged through a physical and visual activity and learning a new skill that they can apply knowledge of a phonics standard.

I also wanted to use Riggs (McCulloch, 1979) phonological awareness curriculum as a basis on which to model my design. Riggs provided a method of which phonemes to teach and in what order. The order of phonemes provides stepping stones for students to build comprehension off of previous knowledge. The component of this literacy program I focused on is its multisensory methodology used to teach it. A student's learning style is addressed through sight, sound, voice and writing. It also implements direct instruction techniques which promote opportunities for critical thinking and analysis. However, some changes were made to this design in order to fit small group needs to students. The sounds are not taught in isolation as is customary in the Riggs design. Instead, visual representations of sounds with hand signals and visuals act as aides and allow students to demonstrate understanding through multiple avenues. Also, in my curriculum design, students learn four phonograms per week instead of per day. This allows students time to

master one or two phonograms in a given time and then tested once a week on four targeted phonograms for the week.

Literature Review

Throughout the development of my project, I was heavily motivated by the research done on visual phonics. I often referred back to the work done by leading researchers in the study of visual phonics (Cihon et al., 2008; Carreker & Birsch, 2011) when creating a visual phonics curriculum as an adaptation to phonics based instruction. It was their research findings that lead to the incorporation of kinesthetic hand cues, mouth movements and decoding of syllables as a method to demonstrate phonetic word structure.

It was the research done by Cihon et al. (2008) on the use of visual phonics that heavily influenced my daily instruction with the use of hand gestures and mouth movements. It made sense that the hand gestures and mouth movements would help students to link a phoneme to a sound and to clarify that a letter can make more than one sound. However, this research was just a base and I felt some changes needed to be made to make daily instruction more cohesive. I made the connection that along with the hand sign, a movement needed to be used at times to distinguish different letters for each phoneme. For example, in teaching the letter "a" students would make the hand for "a" and incorporate a different movement to distinguish between short and long "a". This research also addressed the idea of making the hand movements mimic the mouth movements. I wanted to take this idea into a new direction. I felt students should be able to see their mouth movements when they make the letter sound. That is where the idea of

mirrors entered my instruction. Students can look into a mirror and visually see how their mouths move and make simultaneous kinesthetic and visual connections to the taught phonemes (Cihon et al, 2008).

Another study to impact my curriculum design was that of Carreker and Birsch (2011). The foundation of the research was the belief in the effectiveness of incorporating kinesthetics into phonics instruction. In this study, students would segment sounds in a word through tapping out the sounds on their arms or hands. This provides students clues to the number of sounds in a given word. I wanted to continue this idea in my curriculum. I did this by providing opportunities for decoding practice within each daily lesson. If students can combine this decoding strategy outlined by Carreker and Birsch (2011) and use it along with the visual phonics techniques based off of work done by Cihon et al. (2008) study, they will be able to not only gain a firm understanding of phonemic awareness, they will have the skills and tools necessary to become lifelong successful readers.

Implications

Elementary education policies are changing each year along with trends in teaching. These policies are affected by changes in demographics, curriculum, and instruction. As I was creating this curriculum, I thought about how it would affect a teacher's implementation of multisensory and visual phonics instruction in a general education setting. This project has the potential to pave the way for schools to explore changes in their curriculum and how we assess our students on a statewide basis. A shift from traditional delivery of phonics instruction to one that incorporates a multisensory approach can not only help to ensure effective delivery of the content but can help

teachers assess their students using a wide variety of tools easily at their disposal. The use of visual phonics implementation into any early elementary classroom allows educators to meet the need for an integrated curricula that has child-centered pedagogical standards and a commitment to the promotion of equity in the classroom. For this to happen, schools must change the programs of curriculum and instruction or adopt new ones that can be implemented into pre-existing programs. It is my hope that this curriculum will be one of those adopted in, first into my current school and hopefully into others in the future.

This curriculum design can be combined with previous work done in the field of visual phonics and be used to create a phonics and reading curriculum that is inclusive to all types of learners. Implementing this curriculum into daily classroom instruction can provide teachers with an opportunity to allow their students to learn letters and sounds in a way that aligns with a multisensory approach. Providing students with the opportunity to learn this way will empower them by providing a foundation of skills and tools of phonemic awareness and allowing them to use those tools when needed in order to become successful decoders and readers but also lifelong learners.

Limitations

One limitation that kept surfacing as I was researching for this curriculum design was my lack of training in See the Sound (<http://seethesound.org/>) visual phonics. My curriculum is structured after research findings in combination with phonics and reading curriculums. If time would allow, I would love to have been able to dive into getting

trained in the background of visual phonics and the effective techniques used to guide instruction.

The next limitation I encountered was the fact that this curriculum involves new methodologies which require teacher preparation before lessons can be taught for the first time.

One limitation of this curriculum is that it only includes mastery of the first 26 phonemes of the English language. However, there are 71 common phonograms and 45 sounds in explicit (in isolation) phonics instruction dictation. This curriculum would have to extend to a year long scope and sequence design in order to properly instruct students on these phonograms and sounds. An extended curriculum would also allow time for teachers to reinforce or re-teach phonograms when needed.

It must also be noted that this curriculum caters to specific learners, i.e., those who have been assessed to struggle with grade level reading and lacking in phonological awareness. It needs to be addressed on how to make this curriculum cater to ALL learners and how to add more differentiation into the design. This differentiation should target all learners: below grade level, at grade level and above grade level. A barrier that I worked on overcoming was the creation of alphabetic tools that would work for a variety of learners. These tools were designed to help not just low literacy students but English Learners and more visual learners as well. These tools are introduced and integrated throughout the daily instruction of each targeted phoneme. First, using visual slides of the production of each hand sign that is associated with the phonemes and graphemes throughout the curriculum. The second piece is using white boards and mirrors to practice

the recreation of correct hand signs and mouth movements. This progresses into the third piece of using word cards to practice decoding skills and recognizing the correct phoneme dictation in a given word. Lastly, I introduced pictures to correspond to each phoneme to help those visual learners and English language learners make real life connections to the learning objective. It is my belief that these tools can be integrated into any classroom and do not require the use of technology, which could be seen as some as a limiting factor.

There may be further limitations depending on the reading and/or phonics curriculum that is being implemented in the classroom. This curriculum works in conjunction with the Riggs reading and writing design. Other programs may lend teachers to work through the curriculum design differently and make changes to fit their classroom's academic needs.

With more research and training, I feel these barriers can be met and overcome and the knowledge gained can be added to this existing curriculum to make it more complete in the systematic instruction of phonemic awareness. Moving forward it should be the goal to take these ideas into consideration when integrating this curriculum into a general education classroom.

Further Research

I would be interested to see how the use of visual phonics can be applied to reading grade level texts, In particular, the use of decodable readers. These can easily be integrated into the existing curriculum for activating schema, as an exit ticket or for enrichment activities.

I also feel there is a need in future research to show how visual phonics integrated in early education can lead to an increase in reading fluency in upper elementary grade levels. There is so much research done on how this method can be effective for lower elementary students, in particular pre-kindergarten thru first grade. However, there is little to no research conducted on how this can affect students as they progress through grade levels. In addition, it would be interesting to see if these students retain their phonics skills and are able to use these skills in reading more difficult decodable words.

Benefits to Education

Now that this project is completed, I will provide the curriculum to the current director of the Aurora Academy Charter School's literacy program as well as literacy interventions, our K - 2 instructors and the Special Education team. This project is aimed to benefit students who read below grade level or in special service programs. However, this curriculum could also be adapted to meeting the needs of all general education students with the inclusion of enrichment activities. However, these activities would be at the discretion of the instructor. The curriculum can also be useful for students who are mute, deaf and/or hard of hearing as well as English Language Learners. The visual phonics instruction allows its audience to learn the root of the English language by teaching the sound and not just the written form on the alphabet.

It is my hope that this curriculum will give other teachers the opportunity to teach phonics in a way that empowers all students in a new and exciting way. I want teachers to have another resource at their disposal: one that I didn't have. The benefit to this curriculum is that it can easily fit into a preselected phonics curriculum and can be used

alongside it and/or as an intervention tool. I want this curriculum to give teachers the tools and guides necessary to enrich their phonics instruction and promote equity in their instruction by empowering all types of learners.

Conclusion

This project was created to answer the question: *Can a small group visual phonics curriculum help to improve reading achievement?* In this chapter, I discussed what I learned throughout the creation of this capstone project. I connected my writing experience to my literature review. I then proceeded to discuss the project findings and its limitations. To conclude, I discussed who will benefit from this project and suggestions for future research on the topic of visual literacy.

I want to thank all of my students throughout the years who have taught me that our struggles make us stronger and that we can overcome any obstacles if only we are willing to try and to seek our new ideas along the way. With that in mind, I expect this project to grow and evolve over the years just as our teaching styles and students do. I want this project to give teachers and students the knowledge in knowing that there is more than one way to learn and that we, as educators, are lifelong learners ourselves. Let us never stop learning, never stop trying and always encourage our students to do the same each and every day.

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