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Understanding Effective Literacy Instruction for Primary Grade Teachers

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Understanding Effective Literacy Instruction for Primary Grade Teachers

by

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

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CHAPTER ONE

Introduction

Overview

The goal of education is to provide youth with the skills and knowledge they need to go out into the world and contribute to their communities through the work they do. In order for this to happen, we must ensure that every student has the opportunity to reach literacy success. As a literacy intervention teacher, I am faced with the task of trying to help students who are not reading proficiently at their grade level. I work with students in third, fourth and fifth grades who are reading significantly below grade level. Each year there are more struggling readers than I have time in my schedule to help. This problem is not unique to my school district. The National Assessment of Educational Progress (NAEP) report from 2019 shows that only 34% of fourth graders in our nation's public schools are reading at or above grade level proficiency. This is not a new problem. There has been concern about the reading levels of American students in public schools for decades now. This leads to my research question: *How can a deeper understanding of the science of reading support primary grade teachers to be more effective with literacy instruction for beginning readers?* During the past two years I have been on my own journey to understand how literacy skills develop. My goal is to help other educators understand this as well, as I continue to learn more about the complicated process of how we learn to read. To help other educators gain this knowledge I will develop self-paced professional development modules that explain how skilled reading develops. This chapter will cover my history, why I became a reading teacher and literacy advocate. It will also address the rationale behind why I chose this topic for my capstone project. I

will explain why my topic is so important and what is covered in the forthcoming chapters.

My Story

I am an avid reader and from my earliest memories I have always loved to read. I was fortunate to live in a house full of books and remember crawling into comfortable laps to have books read to me whenever I wanted. I looked forward to weekly trips to the public library for the children's storytime where we would listen to stories and explore new ideas, feelings, and places through the pages of the book. After listening to the story I would be able to wander up and down the book aisles looking for the next fabulous book that I could borrow and take home for the week. I became a proficient reader with little effort, and recall being placed in the highest level of reading groups from the moment that reading instruction began in elementary school.

Learning to read, and school in general, came pretty easy for me. I enjoyed my time in school and always looked forward to a new school year starting as the summer would come to a close. When it came time in my educational journey to begin thinking about a career beyond high school, it didn't take long for me to decide that I wanted to be a teacher. I loved working with children, and with my mom being a Reading Recovery teacher, teaching seemed like a perfect fit. Watching my mom work with struggling readers in her job, combined with my own love for reading, helped me know that I wanted to help instill that love of reading in all kids by becoming a teacher. I completed all of the undergraduate coursework to obtain my teaching license and once I was a licensed teacher I signed up for the graduate coursework required to get my reading endorsement.

Upon completion of my reading endorsement I was hired for my first teaching position as a Title I reading teacher in a small, consolidated school district in central Iowa. As I was preparing for my first teaching position as a reading teacher, I realized that I knew nothing about how to actually teach reading! I called my mom and we sat down so she could give me a crash course on all of her Reading Recovery training. I learned a lot that year but there was still a lot I needed to learn. The following year, I moved to Minnesota and gained employment as a resource teacher. I taught reading interventions to struggling readers. Next, I taught kindergarten where instead of working with struggling readers, I taught beginning readers. Though I had taken extra coursework in teaching reading, I was still not confident in my knowledge of how reading developed. I leaned on the 8 year veteran kindergarten teacher next door for advice and guidance on how to teach reading. I taught kindergarten for four years before staying at home to start my family.

As a stay at home mom I started the cycle over again that my mom had started when I was a child. I wanted my own children to develop that same love of reading I had developed, so I provided a comfortable lap for my kids to climb into and listen to a book whenever they wanted. I took them to the weekly storytime lessons at the local library. I surrounded them with books, and low and behold, my oldest was reading before he started kindergarten and my youngest left kindergarten a reader. All of this reinforced my misunderstanding that the most powerful influence on becoming a reader was being exposed to rich literature and being read to. I would later learn that things just aren't that simple.

After my kids were both in school and I was spending most of my time volunteering in their classrooms, my husband suggested that I might consider getting paid to spend all of my time at school. I knew I wanted to get back to teaching but I also knew I wanted to focus solely on teaching reading. I wanted to be a reading interventionist. I desired getting back to that idea of instilling a love of reading in every child. I was hired as a reading interventionist and began the coursework for getting my K-12 reading licensure in Minnesota. The district I worked in provided Leveled Literacy Intervention, also known as LLI (Fountas & Pinnel, 2009), as the curriculum for intervention. I had years of experience teaching both reading intervention and kindergarten beginning readers, however I was still not confident in my abilities to teach all learners how to read. I decided that year to use the LLI kit with fidelity. I assumed this curriculum must be research based and the best instruction for the struggling readers that I worked with. As that year came to an end, I was disappointed that I did not see the accelerated growth I had hoped for with my students. The next year I continued to use LLI and started to look a little more closely at how it was structured. I also made a huge discovery that would change the way I teach and think about literacy instruction.

Journey to Becoming a Literacy Advocate

I started to question the methods I was using to teach struggling readers and I discovered a podcast that caused me to wonder about my idea that people learn to read by exposure to books and texts. I began looking for more resources to answer the burning questions I now had about reading instruction: How do we learn to read? What are the best methods for reading instruction? I listened to Emily Hanford's audio documentary, *Hard words: Why aren't kids being taught to read?* (2018), and I discovered that there

was so much I didn't know about literacy acquisition. I began listening, watching and reading anything I could find that would answer my questions about how reading develops. As I joined newsletter lists and Facebook groups I discovered that I am not alone; there are many educators that are asking the same questions and seeking the same answers as I was. Throughout this learning I came to understand that there were gaps in my own learning that influenced my effectiveness in helping students gain literacy skills.

Learning about what was missing in my education around literacy instruction inspired me to start discussions with the other reading intervention teacher in my building. I started to share what I was learning and I discovered that our stories were very similar with regards to our pre-service and in-service instruction around literacy. Neither of us had learned these crucial components of literacy acquisition: what phonemic awareness is and why it is so important in reading development, how explicit, systematic phonics instruction is key to teaching many children how to read, or that fluency is a measure of accuracy, rate AND prosody and correlates highly with reading comprehension. This information is important for understanding reading acquisition.

Rationale and Importance

Educators who have been entrusted to teach beginning readers the skills they need to become proficient readers need to be knowledgeable about how these reading skills are developed. Many mainstream educators have not been provided with the coursework or professional development necessary to ensure they know the best practices in literacy instruction. Every year the number of students who need my help because they are reading below grade level proficiency is more than I have time in my schedule to meet with. Helping teachers understand what the research says about literacy instruction that

benefits all students is of the utmost importance. I am hopeful that if primary teachers understand and use the best practices for teaching all beginning readers that the number of struggling readers in the intermediate grades will decrease.

I see literacy as a key to an equitable experience in schools. There is evidence that nearly all kids are able to learn to read but the current data shows that isn't our reality. If we can get literacy instruction right for all students, we will make a significant difference in their futures.

Summary

Good reading instruction is critical to ensure that students are successful in becoming proficient readers and are therefore able to achieve the goals that they set for themselves in life. As I think about this capstone project and how it relates to this goal, I see the self-paced professional development modules that I will create as a way to continue to grow my knowledge and support my colleagues in understanding how to develop proficient readers. This professional learning is important to engage in for the benefit of our students. I will research effective ways to teach literacy skills to all students and how teacher knowledge about literacy development affects students progress as I answer the question, *How can a deeper understanding of the science of reading support primary grade teachers be more effective with literacy instruction for beginning readers?* Through these self-paced professional development modules, my goal is to provide teachers with the information that they need to address the literacy needs of all the students in their classrooms.

In Chapter Two, I will analyze and review relevant literature that supports my capstone project. I will start with a historical perspective about literacy instruction and

the theories of reading instruction that have been put into place . Next, I will discuss the five pillars of literacy development and what the research suggests is important about each of them.

Chapter Three will outline the details of my capstone project, which is a professional development experience for educators to learn more about the science of reading. I will discuss the format, the intended audience, and how it can be used.

In Chapter Four I will conclude my capstone with a reflection on my learning during the writing, development and completion of my project. I will review the implications and limitations of my project and how this project may evolve in the future.

CHAPTER TWO

Review of the Literature

Introduction

The purpose of this chapter is to examine and synthesize the research related to the question: *How can a deeper understanding of the science of reading support primary grade teachers to be more effective with literacy instruction for beginning readers?* The review will begin with a definition of the science of reading and a look back at the history of reading instruction. Understanding the history of reading instruction helps illuminate the challenges teachers and students face today in regards to early literacy. Following this, the review will explore the five core components of reading and how they relate to effective literacy instruction.

The first component of literacy instruction that will be analyzed is phonemic awareness. Understanding what phonemic awareness is and how it relates to literacy acquisition is important in building a foundation of knowledge. Effective phonemic awareness activities that can be used in the classroom will be explored. The next component that will be looked at is phonics instruction. This section will be examining the manner in which phonics instruction is presented to students and the impact the instruction has on the learner. Following that will be an exploration of reading fluency. Reading fluency will be defined and effective strategies for teaching fluency will be presented. The core component of reading that will be examined after that will be vocabulary instruction. There will be an overview of how vocabulary is developed and a discussion of how vocabulary connects to reading proficiency. The final component of literacy instruction that will be analyzed is reading comprehension. The complexities of

comprehension will be assessed through an exploration of how each of the preceding components intersect. This section will include an analysis of the effectiveness of instructing comprehension through a skills instruction approach without taking into consideration the other components of reading instruction. This examination of the science of reading, including the five core components of reading instruction, will attempt to provide necessary and relevant information for primary teachers about the most effective literacy instruction for all of their students.

Science of Reading History and Definition

Reading is a complex process and teaching someone how to read can be equally complex. Written language has been around for between 5,000 - 10,000 years, which is not very long in the evolutionary history of people. According to Eman (1968), the American public education system, which was formed, in part, to teach everyone about our written language system, started in the 1830s. Around this time, the word method of reading was used in which students were taught to look at the whole word or a picture of the word in order to learn to read (Emans, 1968). In Emans' *History of Phonics*, he tells of a shift in reading instruction to a more phonics-focused approach at the turn of the century. This shift in reading instruction happened multiple times in history, causing much contention. By the 1980s, whole language instruction emerged as a movement. Liben and Liben (2019) state that whole language instruction teaches students to rely on the context and syntax of sentences to read words rather than focusing on the letters and sounds. Acceptance of the whole language movement was not universal at the time, as some educators held onto their beliefs about phonics instruction (Pearson, 2004). Educators promoting phonics instruction focus on teaching an understanding of the

relationship between letters and sounds and how specific letters or letter combinations represent sounds in the words we read. The contention between these two theories, and low reading scores on national assessments in the early 1990s, led to a heated debate about which instructional method was best (Hanford, 2018).

In 1997, Congress commissioned the National Reading Panel (NRP) to evaluate the existing research in order to determine the most effective ways to teach children to read. The NRP report found that there are five core components of reading instruction that are vital to reading proficiency: phonemic awareness, phonics, fluency, vocabulary and comprehension (NRP, 2000). From this report, proponents of whole language had to admit that phonics instruction was also key to reading instruction and this information led to the rise of balanced literacy (Hanford, 2018). There is not one definition of balanced literacy -- each source defines it differently -- but Lorimor-Easley and Reed (2019) state that balanced literacy is a philosophical orientation in which instruction is focused on multiple reading environments that vary in the level of teacher support and student control (e.g., shared reading, guided reading and independent reading) and uses a word study approach to phonics instruction that is rarely emphasized or taught systematically. Studies suggest that many children will read no matter what type of reading instruction they receive, but as many as 60% of children need explicit, systematic reading instruction in order to learn how to read (Young, 2021). This leads to an exploration of the science of reading and what explicit, systematic instruction in reading entails.

The Science of Reading Defined

The science of reading is a body of scientifically based research that informs us how proficient reading and writing develop (The Reading League [TRL], 2022). TRL

developed this common definition of the science of reading in order to dispel misunderstandings as the term “the science of reading” has become a popular topic of discussion in recent years. It is important to understand that the science of reading is not a philosophy, a fad or pendulum swing, a political agenda or a program of instruction (TRL, 2022). The science of reading is a term that has been around for more than 200 years and the research dates back to the middle of the 20th century (Shanahan, 2020). According to Shanahan, it is a body of evidence on how skillful reading develops. As with anything, there are those that are opposed to a renewed reliance on science when it comes to reading instruction but the opposition seems to be directed towards the specific instructional practices being promoted rather than the science. Shanahan postulates that if the research data was favorable to the opposition’s often untested instructional theories, the opponents would gladly accept the scientific support.

Science of Reading Theoretical Frameworks

There are two theoretical frameworks aligned with reading research that help build an understanding of how skillful reading develops (TRL, 2022). The first of those theoretical frameworks is the simple view of reading. Gough and Tunmer (1986) presented this theory that reading comprehension is the product of the ability to decode (word recognition) and the knowledge of language (language comprehension.) The theory is illustrated as a multiplication problem: word recognition (WR) x language comprehension (LC) = reading comprehension (RC). This view illustrates that if there is a deficit in either area, word recognition or language comprehension, reading comprehension is adversely affected. Being highly skilled in one area cannot compensate for a lack of skill in the other (TRL, 2022). This model emphasizes that neither phonics

instruction alone nor instruction centered solely in rich language experiences is enough to develop proficiency in reading. Instruction in both areas is vital to proficiency in reading comprehension.

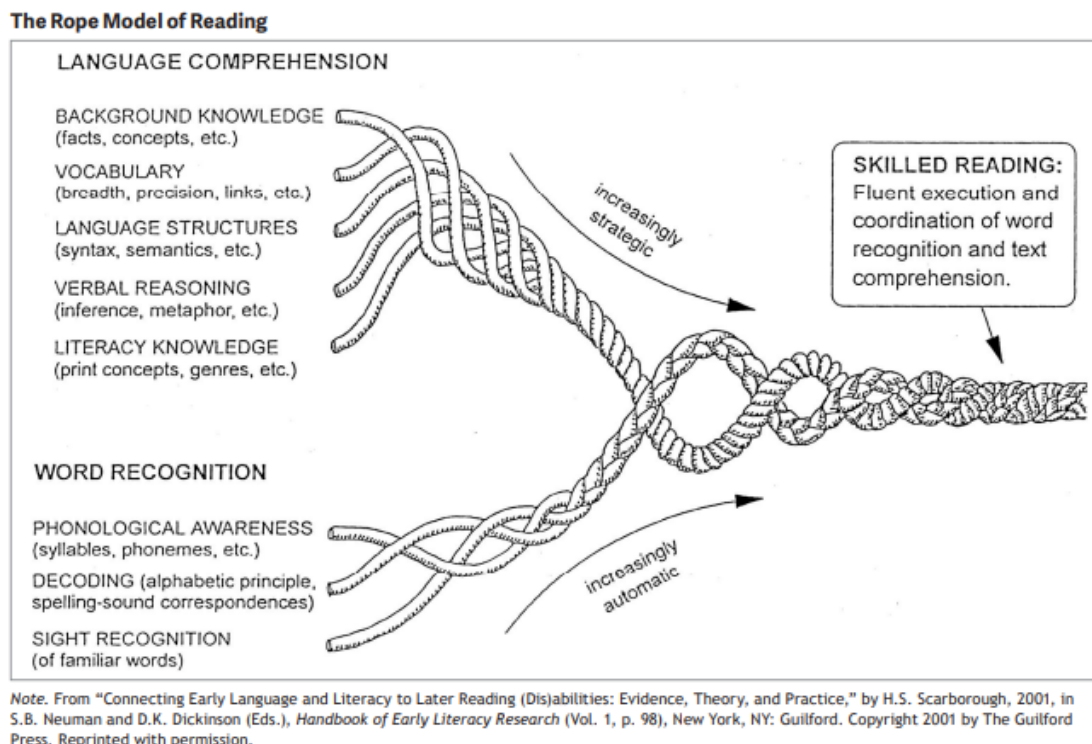
Figure 1



Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, 7, 6-10.

The second theoretical framework that demonstrates the relationship between word recognition and language comprehension is Scarborough's (2001) Reading Rope (see Figure 2 below). Scarborough shows a more in-depth understanding of the subcomponents of Gough and Tunmer's (1986) Simple View of Reading with her Reading Rope. In Scarborough's rope, language comprehension and word recognition are broken down into smaller strands and the rope is a visual representation of how all of the strands are woven together to result in skilled reading. Scarborough breaks language comprehension into five strands: background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge, more precisely defining each of these subcomponents. The word recognition side is broken down into the strands phonological awareness, decoding and sight recognition. The processes from both sides of the reading rope work together interactively rather than independently (Scarborough, 2001). The reading rope represents the complexities involved in skilled reading.

Figure 2



A more recent theoretical framework builds upon the Simple View and the Reading Rope, and includes more current research. Duke and Cartwright (2021) offer the Active View of Reading which incorporates additional factors, such as self-regulation and bridging processes, into the previous models. The bridging processes that are included in this model demonstrate how word recognition and language comprehension have areas that overlap that include print concepts, fluency, vocabulary and morphological awareness. These areas can be thought of as a bridge between word recognition and language comprehension. The active view also includes active self-regulation to address differences in executive function skills, motivation and engagement, and strategy use, which can all contribute to reading development.

These theoretical frameworks demonstrate the complexities involved in learning to read. Teachers should have a deep understanding of these complex processes in order to teach them effectively. Cunningham et al. (2004) found that many K-3 teachers do not have a knowledge base that is aligned with the science of reading's body of research. Without knowledge of how skilled reading develops it is hard to teach these skills effectively.

Translating Research into Practice

Solari et al (2020) argue that a major factor in how literacy instruction occurs, or does not occur, in classrooms today is a lack of transfer between research scientists and classroom teachers. One problem is that there is a lack of communication between colleges of applied science and colleges of education resulting in teacher preparation programs that lack methodology based on reading research (Solari et al, 2020). Another problem, according to Solari et al., involves the tightly controlled environments of research studies and how these can be difficult to transfer into classroom practices where multiple factors are involved in daily decision making. Solari et al. propose a road map that is multidirectional wherein research scientists and education stakeholders work collaboratively to understand the best practices for literacy development. This back and forth communication is key in improving teacher knowledge of the complex processes and theoretical frameworks involved in becoming a skilled reader. We will start an exploration of each of the components of this complex process on the word recognition side of the Simple View and Scarborough's Rope with phonemic awareness.

Phonemic Awareness

Phonemic awareness is one of the important skills that should be taught to beginning readers. This was highlighted by the NRP report (2000) which stated that phonemic awareness instruction was effective in boosting reading comprehension.

Phonemic awareness is one component of phonological awareness. Kilpatrick (2016) indicates that phonological awareness is the ability to identify and manipulate units of oral language, such as words, syllables, onsets and rimes, and sounds. The smallest unit of phonological awareness is the phoneme, or individual sound in spoken words.

Phonemic awareness is the ability to identify and manipulate individual sounds with a spoken word. Having an understanding of what phonemic awareness is, and how it develops is important because poor phoneme awareness is a common source of reading difficulties (Kilpatrick, 2016).

Speech to Print

One aspect of phonemic awareness is speech-to-print. Moats (2020) explains that a speech-to-print approach is one that anchors beginning reading instruction in phonemes, or letter sounds, and links these phonemes to the graphemes of written language. The human brain has evolved for speech. A baby does not need to be taught how to talk; if the infant is spoken to, he or she will learn the speech sounds and develop oral language skills. The same is not true for reading. Our brains are not wired for processing written language and therefore reading skills need to be explicitly taught (Moats, 2020). Reading is not a natural process. Research suggests that including instruction on articulation of sounds, or how sounds are produced in the mouth, can increase reading performance (Becker & Sylvan, 2021; Boyer & Ehri, 2011). Teaching students to be aware of how

they are producing the sounds they are making by demonstrating or having them use mirrors to watch their own mouths can provide valuable information to their awareness of the phonemes.

Sequence of Skills

Part of the explicit instruction necessary for reading is phonemic awareness instruction, which Lindsey (2022) breaks into six skills. The first skill in the progression of phonemic awareness instruction is the ability to hear individual sounds. This is important because when learning to read an alphabetic system, such as English, the written symbols represent the language at a phoneme level. The next skill is the ability to generate individual sounds. Saying a sound in isolation demonstrates an understanding that words are made up of individual sounds. After the ability to generate a sound is the ability to isolate a specific sound within a word. Blending two or more sounds together to say a word is next in the progression of skills. The final two skills are the ability to segment words into the individual sounds and the ability to manipulate sounds by adding, deleting or substituting individual sounds in words. These phonemic awareness activities will move from exclusively oral tasks to tasks that include letters. After students know some sound-spelling relationships, letters should be introduced into the instruction in order for it to be the most effective (Lindsey, 2022).

Orthographic Mapping

Competency with phonemic awareness skills leads to the ability to orthographically map words in the brain. Orthographic mapping is the process that occurs in the brain as the reader links a word's spelling to its phonology and semantic information (Ehri, 2014, 2020). Kilpatrick (2016) describes orthographic mapping as “the

mental process we use to permanently store words for immediate, effortless retrieval” (p. 5). This is important because when the reader can recognize and understand a word automatically it enables the reader to focus attention on the meaning of the text as a whole. One way to help support the development of orthographic maps is explicit instruction in decoding (Lindsey, 2022). Proficiency with decoding skills is the most efficient and effective way for readers to recognize new words (Miles & Ehri, 2019). Understanding how orthographic memory is developed will help educators support their students in building these orthographic connections.

Phonics

Instruction in decoding is synonymous with phonics. Scarborough (2001) includes the alphabetic principle and spelling-sound correspondences, both of which are part of phonics instruction, under decoding on the word recognition side of the Reading Rope. Phonics is the understanding that there is a predictable relationship between the sounds of oral language and the symbols in written language. Understanding this connection is critical in learning to read (Liben & Liben, 2019; Moats, 2009). According to Ehri (2005), beginning readers move through four developmental phases when they are learning to read.

Developmental Phases of Word Reading

Ehri (2005) notes that the first phase a reader will go through when learning to read is the pre-alphabetic phase. In the pre-alphabetic phase readers do not have any knowledge of the alphabet and use visual features or contextual clues to identify words. Some examples from this phase include reading the word *McDonald's* by noticing the golden arches, or remembering the word look because it has two eyeballs in the middle.

Readers in this phase are not making any letter-to-sound connections. The next of Ehri's phases is the partial alphabetic phase. In this phase, readers have begun to make some connections between letters and the sounds that they make, though typically the first and final letters are the ones that readers attend to most. After the partial alphabetic phase is the full alphabetic phase. According to Ehri, within the full alphabetic phase readers are not only able to connect individual letters with their sounds, but they recognize more complicated graphemes like digraphs, trigraphs and silent letter combinations. The final phase of word learning is the consolidated alphabetic phase. Readers in the consolidated phase become familiar with letter patterns that occur repeatedly within different words. They recognize these larger units of grapheme-phoneme connections and consolidate them in order to more easily read multisyllabic words.

Sound-Spelling Relationships, Sounds First

Students move through the word reading phases as they are developing their understanding of letter-sound correspondences. Some researchers suggest that instruction on letter-sound, or sound-spelling, relationships should begin with sounds (Lindsey, 2022). Written language consists of graphemes, or letters and letter combinations, that represent the sounds, or phonemes, in oral language. There are 26 letters in the English alphabet, but there are more phonemes and graphemes than that. The English language does not have a one-to-one correspondence between letters and sounds. Linguists do not all agree on the number of phonemes in English, but Moats (2020) suggests that there are 44, and at least 250 graphemes used to spell the 44 phonemes. The complexity of this illustrates how important it is to teach students how to map phonemes to the graphemes used to spell them.

Systematic Phonics Instruction

The order in which to instruct students about the phonemes and how to spell them should follow a scope and sequence. The instruction should be systematic (Liben & Liben, 2019). The NRP's investigation into phonics instruction concluded that systematic phonics instruction had a greater effect on students' growth in reading than unsystematic programs or no phonics instruction at all (NRP, 2000). Though there is not one agreed upon scope and sequence that everyone should use to teach phonics, all systematic phonics instruction will move from simple to complex. In contrast, some educators or curriculums use excerpts of the text they are teaching out of and choose the phonics skill to target based on that text, rather than use a scope and sequence. This method does not ensure that students will receive instruction on all of the phonics patterns, nor does it necessarily move from simple patterns to more complex ones.

Decodable Texts

When teaching any skill, student practice is a vital component. Lindsey (2022) explains that after teaching phonics skills it is important to provide text that includes the phonics patterns that have been taught. Decodable texts are an important part of phonics instruction. According to a study by Mesmer (2005) where she investigated the relationship between using decodable texts coordinated with phonics instruction and word recognition strategies, students are more successful when they can use the sound-spelling relationships that they have learned about to decode the words. Other types of texts, such as leveled readers, may include spelling patterns that are more complex. When students are asked to decode a word that they do not know the sound-spelling relationship for, they often guess at the word by using the picture or

context clues (Lindsey, 2022). As texts become more challenging, students will no longer be successful in understanding the text by using these guessing strategies. Good readers map the sound-spelling patterns in order to grow their reading skills (Seidenberg, 2018). An important thing to note is that decodable books and passages are temporary. Decodable texts are used to practice the phonics skills that have been taught but once students are proficient with all phonics skills, including advanced phonic skills, they will be able to successfully decode words in authentic texts.

Fluency

As students become successful at the foundational skills involved in decoding words on a page, fluent reading begins to develop. Rasinski (2018) defines fluency as reading accurately and automatically, with an appropriate rate for the text and with expression. According to Rasinski (2012, 2018), fluency can be thought of as a bridge between word recognition and comprehension. It involves the ability to decode words automatically, therefore enabling the reader to focus on the meaning of the words and understand the text. On Scarborough's Reading Rope, fluency ties together the two large bundles of strands of the rope, resulting in skilled reading.

Reading with Accuracy and Automaticity

Accuracy is pronouncing the words correctly and decoding the words as they are written on the page (Liben & Liben, 2019). It also includes noticing and reading punctuation correctly. Accurate reading is important to ensure that the reader understands what the author has written. According to Liben and Liben (2019), automaticity is the ability to recognize words effortlessly, using the orthographic map of the word's spelling, meaning and pronunciation to read it automatically. Automatic decoding is essential

because it minimizes the cognitive load on the reader, enabling them to focus more on what the text means (Rasinski, 2018; Liben & Liben, 2019). Both accuracy and automaticity are prerequisites for reading fluency. Reading research has demonstrated a positive correlation between these two skills and reading comprehension (Rasinski, 2018).

Reading at an Appropriate Rate

Another key aspect of reading fluency is appropriate reading rate or the speed at which a person reads aloud. When a reader reads too slowly, short term memory can't hold onto the earlier words and comprehension suffers. Reading too quickly is skimming the surface and the reader does not gain a deep understanding of the text. When reading occurs at an appropriate, or just right, pace, the sentences come together as a unit and the reader is able to make sense of what the author is saying (Liben & Liben, 2019). The type of text will determine the appropriate speed for reading. Different types of texts will warrant different rates of reading. Hasbrouck and Tindall (2006, 2017) have established oral reading fluency norms in order to assess students to determine if they are reading aloud at an appropriate rate. This assessment can identify students who need additional support with foundational reading skills.

Reading with Prosody

Prosody is reading aloud expressively with appropriate timing, rhythm, phrasing and intonation (Liben & Liben, 2019). This vital aspect of reading fluency links to comprehending the text. When a reader reads with good expression and rhythm, it demonstrates that the reader understands the meaning of what they are reading and is making sense of the syntax and context clues (Rasinski, 2018). Prosodic reading involves

these five elements (Liben & Liben, 2019): phrasing or grouping words as they belong together in a sentence, pausing or knowing when to pause both within and between sentences, accenting or knowing which syllables, words or phrases should be stressed, inflection or using rising and falling pitch that matches the context, and expression or matching the voice to the feelings conveyed within the text. Prosody is a combination of these skills and is believed to be related to comprehension for many reasons (Lindsey, 2022). It may help readers to be able to hold onto phrases in their memory, it may show how a reader is understanding the text in the moment or it may be the result of the reader understanding print concepts and syntax. When asking students to read aloud, it is important to encourage them to read with appropriate expression.

Activities that Promote Reading Fluency

Practice with reading fluency is important for all students to engage in. For beginning readers this practice takes the form of listening to models of fluent reading and explicitly talking about what skilled reading sounds like. As students start to develop independent reading skills, providing the right type of texts is necessary to support reading fluency, texts that are appropriately challenging but that students can be successful within. According to Liben and Liben (2019), there are two ways to improve fluency: students follow along in the text while a skilled reader models fluent reading and students repeatedly reading the same text. There are many activities that promote fluency using these two strategies. One of these activities is echo reading. Echo reading is when the teacher first reads a portion of the text aloud while the students follow along and then the students take a turn reading aloud the same section. Another activity that promotes fluency is choral reading. During choral reading the whole group reads aloud at the same

time. Rasinski (2018) states that with the choral reading method, feedback is built in because students hear the other students reading around them and notice errors immediately. Paired or buddy reading can also be used to practice reading fluency (Rasinski, 2018). In paired reading students hear the passage read aloud to the whole group and then are paired up with another student to take turns reading; one student reads aloud while the other follows along and then they switch roles. While teaching the paired reading procedure, teachers can instruct students on how to give useful feedback to their partner should the partner get stuck or make a mistake. Reader's theater is also an activity that can improve fluent reading. Students have fun rehearsing their lines in a script in order to perform the play for an audience. According to Samuels (1979), repeatedly reading a text has a positive impact on reading fluency and comprehension. Something that all of these activities have in common is students are engaged in reading the text repeatedly.

Vocabulary

Vocabulary is a core component of skilled reading and can be found as a strand on the language comprehension side of Scarborough's Rope (Scarborough, 2001). Heibert et al (2004) explain that the term vocabulary refers to the words that must be understood in order to communicate effectively. Vocabulary development starts with oral language. As was mentioned in the discussion on phonemic awareness, oral language develops naturally. The human brain has evolved for speech and does not need instruction in order to learn to talk. Oral language develops by exposure to words (Lindsey, 2022). As we listen to words around us and begin to use the words in our own speaking, we create meaning for the words. According to Lindsey (2022), this is important for reading

because if we encounter a word in print that is not part of our known vocabulary it makes comprehension challenging.

Types of Vocabulary Words

According to Hiebert et al (2004), there are three types of vocabulary words to consider for vocabulary instruction: tier one words, tier two words and tier three words. Hiebert states that tier one words are words that are typically found in oral language. These are the words that we use when we have conversations with other people. Often tier one words are less formal and more familiar words. Tier two words are words that are more commonly found in written text. These words are thought to be more academic in nature. Tier two words are not used often in conversations but are found in texts across many different content areas. Tier three words are vocabulary words that are limited to specific domains. Instruction in a specialized content area would require knowledge of tier three vocabulary in order to understand it (Hiebert et al, 2004).

The Relationship Between Vocabulary and Comprehension

Vocabulary knowledge, or the ability to understand what a word means, has an important role in reading comprehension. Research findings show that early oral language skills can predict later reading comprehension scores (Lindsey, 2022). Knowing many words and their meanings enables readers to understand what the text is saying when they encounter the words in print. Stanovich (1986) postulates that having a rich vocabulary can help develop skilled reading. The same can be true in the opposite direction; being a skilled reader can develop vocabulary knowledge. The result of this reciprocal relationship is that children with greater vocabulary knowledge may develop skilled reading faster than others, and in turn, those reading skills will help them develop

more vocabulary knowledge. The children that lack vocabulary knowledge and take longer to develop skilled reading fall behind. Stanovich (1986) terms this The Matthew Effect in reading. In the Matthew effects in reading, students with strong reading skills grow exponentially by learning new vocabulary through reading and build stronger reading skills with their vocabulary knowledge. Those students who are not skilled readers do not learn new vocabulary and fall farther behind. The gap between skilled readers and struggling readers grows larger. This demonstrates how each component of reading instruction is connected together and teachers need a solid understanding of all of the components in order to teach literacy effectively.

Comprehension

Comprehension is the ultimate goal of reading instruction. Each component of skilled reading instruction discussed so far works together to arrive at reading comprehension. Scarborough's Rope (2001) illustrates how the strands from the language comprehension side and the strands from the word recognition are woven together, resulting in skilled reading where the reader understands what the text says. An influential component from the language comprehension side is background knowledge. Researchers agree that background knowledge is essential for reading comprehension (Neuman et al., 2014; Willingham, 2017). The more you know about a topic, the easier it is to decode the words, understand what the words say and remember what the text is about. Having knowledge of a topic supports the ability to make inferences about information missing from the text as well as decode a word not previously seen in text (Cabell & Hwang, 2020).

An implication of the effect that background knowledge has on reading comprehension can be seen in comprehension assessments. A study conducted by Recht and Leslie (1988) showed that students who were knowledgeable about the topic of baseball before reading a passage about baseball scored better on the comprehension assessment than students who had less knowledge of baseball, regardless of the students' reading ability. Comprehension skills are hard to assess and tests of reading comprehension often favor the student who has more background knowledge about the topic (Steiner & Magee, 2019).

Willingham (2017) argues that reading comprehension is made up of three processes: extracting ideas from sentences, connecting these ideas to each other, and building a more general idea of what the text is saying. His sentiment is that the reader who understands the text remembers the idea of what the text is about but doesn't remember the particular words that the author used. Steiner and Magee (2019) remind us that when the topic of the text is new or foreign, it is much more difficult to connect the ideas and discover the gist of the passage. Reading comprehension is connecting ideas across sentences in order to build an understanding of the author's message.

In an effort to teach reading comprehension some curriculum writers and educators have tried to break reading comprehension into a list of skills. These skills, such as activating prior knowledge, finding the main idea, making inferences, and summarizing the key supporting details and ideas, are important skills for students to be taught, but they should not be taught in isolation (Steiner & Magee, 2019). A student who is able to find the main idea in one text may not be able to find it in another, depending on the knowledge that the student has on the topic of the text and the way the text is

organized. Understanding the content of the text is dependent on multiple factors and comprehension skills, such as finding the main idea and making inferences, do not appear to always transfer from one text to the next.

Summary

In this chapter, research was analyzed and synthesized on the science of reading and how the five core components of reading relate to effective literacy instruction in order to address the research question: *How can a deeper understanding of the science of reading support primary grade teachers to be more effective with literacy instruction for beginning readers?* The information shared helped create an understanding of how skilled reading develops and what primary teachers need to know about how reading develops.

The takeaway from this chapter is that reading is complex. There are multiple components that work in tandem with each other as reading skills develop. Understanding how each component progresses and how they relate to each other is important for educators who teach beginning readers. All of the components are valuable and need to have instruction dedicated to them, though some components need more focus than others at certain times in a reader's development. It is important to have a solid understanding of each component in reading development and to recognize the influence that one reading skill has on the next. By examining these aspects of reading development, primary teachers can have more confidence in their ability to meet the literacy needs of all of their students.

In the next chapter, I will explain my capstone project and how I will be supporting primary teachers to increase their understanding of how skilled reading

develops. I will use the research from this chapter to develop a self-paced professional development unit that includes modules on each of the five core components of reading. The purpose of this project is to help primary teachers build their knowledge of how skilled reading develops and enable them to deliver effective literacy instruction to the beginning readers in their classrooms. I will discuss the intended audience, provide a rationale for the development of this professional development experience, and give a detailed description of the project.

CHAPTER THREE

Project Description

Introduction

Learning to read is a complex task. Once we become skilled, proficient readers, we take for granted the ease with which the different areas of our brain communicate to make sense of the text on a page. Not every person becomes a skilled, proficient reader, though research suggests that nearly 95% of people are capable of becoming proficient readers (Young, 2021). It is helpful to understand how skilled reading develops in order to help students reach their full literacy potential. Working with intermediate grade students in my school, I see a great need for the primary teachers to have an understanding of literacy development in order to help prevent the literacy struggles that many of my students are dealing with. This led me to pursue an answer to the question: *How can a deeper understanding of the science of reading support primary grade teachers to be more effective with literacy instruction for beginning readers?* Chapter Two uncovered research evidence about the most effective literacy instruction for beginning readers. With this information in mind I developed my capstone project. My capstone project was a self-paced professional development course for primary grade teachers to use to learn more about the science of reading and the most effective ways to teach beginning readers.

Chapter Three describes the professional development course that I created for teachers to gain knowledge on how early literacy skills develop. The professional development course includes opportunities for teachers to engage in active learning and observe models of effective practice. The course also encourages time for reflective

discussions and feedback through collaboration with peers. These elements of professional development are effective in helping teachers make changes in their professional practice that results in improved student outcomes (Darling-Hammond et al., 2017). This chapter provides an overview of the setting for my capstone project and information on the intended audience. Included in Chapter Three is a rationale for why I chose this project, a detailed description of the course, the timeline for the project and how the effectiveness of the project will be measured.

Setting and Audience

This capstone project was designed for use in an elementary school in a suburb of Minneapolis, Minnesota where I work. The school has approximately 600 students in grades kindergarten through fifth grade. Forty percent of fourth grade students are reading at grade level proficiency. The diversity of the school population has increased each year for the past five years and the English language learner population has increased by 15%. The school is in a school district that supports a balanced literacy approach to teaching reading and writing.

The intended audience for the professional development project was the primary grade teachers and administrators at my school, though any elementary teacher would benefit from the information provided in the professional development course. While developing the course I kept in mind educators that work with students who are beginning, developing, or older, struggling readers. Educators who could benefit from the course include classroom teachers, reading interventionists, special education teachers, or EL teachers.

Rationale

The teachers at my school were each teaching literacy a little differently. As I began to have conversations with them about what I was learning about the science of reading, many of them said that they wished they would have known more about how skilled reading develops. I took this opportunity to create a way that the teachers at my school could begin learning together about the science of reading. Knowing that time is a precious resource and our school district did not provide a lot of professional development time, I decided to create a self-paced course that teachers could work through on their own. I created a timeline and schedule for meetings where teachers could come together to discuss what they were learning in the course. I chose to create this professional development experience as a way for the teachers at my school to understand how to best meet the literacy needs of every student in their classroom. By doing so I hoped that we could prevent some of the reading struggles that the intermediate students I work with face.

Project Description

For my capstone project I created a professional development course using Google slides and Schoology, the learning management system used in my school district. Teachers and administrators in my district use Schoology to create, manage and share information and resources with their learners. I chose this platform because the staff is familiar with how it operates. The professional development course contains six modules. Within each module there are resources, guides, links to articles or websites, videos and examples. The modules were set up in an organized manner to build upon the previous module and previous learning. The goal of each module was to give an

introduction about each subtopic and an explanation of its importance in skilled reading development. The resources in each module helped the learner gain a better understanding of how literacy skills develop and helped start conversations between educators about what the best practices for literacy instruction are.

Module One

Module one started with an introduction to the science of reading and background information important to understanding the rest of the course. In this module there was a description of the history of reading instruction and how it leads up to current day literacy instruction practices. The two main theoretical frameworks of the science of reading were explored in order to set the learner up for understanding the importance of each of the modules that followed. The learner was able to use visual representations of the literacy frameworks to deepen their understanding of how skilled literacy develops. Learners were also able to access videos that explored the importance of the science of reading, and a list of resources to explore if they wanted more knowledge on the topic.

Module Two

Module two was all about phonemic awareness. This module started with a definition of phonemic awareness and an explanation of the important role it plays in literacy development. Phonemic awareness terms were defined for the learner and an explanation of the difference between phonological awareness and phonemic awareness was given. Videos about both phonological awareness and phonemic awareness were included to further develop the learner's knowledge of these terms. An explanation of how oral language develops, and the connections between oral language and written language, was explored. The module concluded with ideas of phonemic awareness

activities that educators could incorporate into their classrooms. It also included videos modeling some of these activities in order for teachers to see phonemic awareness activities in action. Additional resources for learning about, and teaching, phonemic awareness were at the end.

Module Three

In module three, learners explored the core literacy component of phonics. The module started with an explanation of what systematic and explicit phonics instruction is. It also defined terms such as phonics, phoneme, grapheme, morpheme, digraph and schwa. Best practices in phonics instruction, and what to look for in a phonics program, were discussed. An argument for the use of decodable text, and how it enables students to practice the specific phonics skills that they've been taught, was given. A method of teaching high frequency words and irregularly spelled words, using phonics instead of memorization, was explored. Teachers were encouraged to examine their current literacy practices and reflect on if the phonics instruction was systematic and explicit. At the end of the module I included sample phonics lesson plans and videos that model best practices in phonics instruction. If the learner wanted to learn more about phonics, additional resources were included.

Module Four

The fourth module of the professional development course was focused on reading fluency. This module started by defining what fluency is and what fluency isn't. It discussed the misunderstandings around fluency and how they came to be. There are many activities and interventions that can help improve reading fluency. Ideas for these activities include choral reading, echo reading, repeated reading and reader's theater.

Explanations of the activities were given to the learner and videos modeling the activities were provided. Educators were invited to try a new fluency activity with their students and discuss this with a colleague. Links for additional resources were included at the end.

Module Five

The core literacy component of vocabulary was discussed in module five. This module started with an explanation of the importance of vocabulary development and the connection between vocabulary and comprehension. The module included a description of types of vocabulary words and lesson ideas for introducing new vocabulary. Videos of vocabulary lessons for teachers to watch others model effective vocabulary instruction were a part of this module. The module ended with vocabulary activity ideas as well as resources that teachers could use if they wanted to further explore the topic.

Module Six

The final module of the professional development course delved into the topic of comprehension. This module began with a presentation of how all of the core components of literacy work together to result in reading comprehension and the processes involved. It included a discussion of factors that can lead to difficulties with reading comprehension and how to address these. Best practices for developing reading comprehension skills were described. The module included the suggestion of a strategy to try in their classroom to help improve reading comprehension for students. At the conclusion of the module there were additional resources to explore in order to learn more about the topic of reading comprehension.

Timeline

The creation of this professional development course took place during the 2023 spring semester, though the ideas for this course began developing in my mind over a year ago, as I began to learn more about the science of reading. I have been considering what information is most vital for educators to learn about and how to present the information for some time. I spent the months of January to March gathering resources, model lesson videos, and lesson examples, as well as creating instructional content. It was my mission to make the course appealing, engaging and applicable for the staff at my school. I consulted with my peer reviewer, content expert and other colleagues during this time to ensure that the content was easy to understand and relevant. The month of April was spent revising and editing the capstone with the help of my peer reviewer, content expert and course advisor. Upon completion of the capstone, the professional development course was shared with the staff at my school. The intervention team at my school intends to schedule times throughout the summer and following school year to discuss, with the kindergarten and first grade teams, the information provided by the course. Through this implementation plan, the primary grade teachers at my school will gain a better understanding of how skilled reading develops.

Assessment

The professional development project I created was intended to be used by primary teachers to improve and guide their instructional practices as it relates to teaching beginning readers. The success of the project will be measured by feedback from teachers who interact with the course, as well as by an increase in discussions in my school around the topic of skilled reading and how it develops. It is my intention to

continually engage my colleagues in conversations about what they have learned through the course and how to implement the best practices in literacy instruction in their classrooms. I hope to use the feedback from my colleagues to continually improve the professional development course and add materials or resources that my colleagues are interested in learning more about. Ideally, this course could be shared with any educator who would like to learn more about how skilled reading develops and what the best practices are for literacy instruction with beginning readers.

Summary

In Chapter Three I described the development, creation and implementation of my capstone project. The chapter began with a description of the setting and audience for my project. It continued with a discussion of the rationale behind why I chose to create a professional development experience for the teachers at my school. A detailed explanation of the professional development course, including a description of each course module, followed. In addition, this chapter included a timeline for completion of the project and how the finished project would be assessed.

The upcoming final chapter will summarize my learning from this project. Within this chapter I will reflect upon the process of creating this project and the learning that resulted from the experience. I will discuss the limitations related to the project and give suggestions for further research and how I might use, or make improvements to, the project in the future.

CHAPTER FOUR

Conclusion

Introduction

I have been passionate about teaching literacy from the beginning of my career. I entered into this masters program in order to advance my knowledge and my career. Part of my literacy learning journey uncovered information and research that I was previously unaware of. I wish I would have known about this literacy research earlier and this inspired me to learn more and find a way to spread my knowledge to other educators. This led me to my research question: *How can a deeper understanding of the science of reading support primary grade teachers to be more effective with literacy instruction for beginning readers?* As I considered how to share the information with other educators, a professional development course began to form in my mind and the beginnings of my capstone project was born.

I created my capstone project as a method for other educators to learn about what the research says are the most effective methods for teaching beginning readers. I chose to make the project a self-paced professional development course in order to respect educators' busy schedules and allow them to make time for this important learning experience as it fits into their busy lives. In this chapter I will reflect upon what I have learned throughout the capstone project process, and I will revisit the literature that was influential in my capstone project. I will explore possible implications and limitations of the project as well as any future research that could be done in relation to my research question. Finally, I will share how I plan to communicate about and share the results of

my project with other educators and how this capstone project will benefit the education profession.

Major Learnings

The process of completing this capstone project has been a wonderful learning experience for me. I have learned an immeasurable amount as a researcher, writer and learner. As a researcher, I have learned more about the research process and how to be a better consumer of research articles. As a writer I have learned to dig deep, and be patient, and that it will all come together in the end. And as a learner, I have found that my passion for learning grows ever stronger as I am reinvigorated in my desire to continue to be a lifelong learner and share my knowledge with others. My capstone project is one way in which I hope to share this knowledge.

As I consider the major learning that I am taking away from this experience, one of the most significant realizations is that there is always more to learn. The research will continue to evolve, researchers will uncover new understandings, and we will continue to learn more. This highlights the importance of continued professional development in the education field. When we know better, we can do better and continue to help children meet their maximum potential. Literacy education is in the news today as the science of reading movement makes headlines. I am hopeful that this heightened media attention will begin to bridge the gap between research and practice and provide more professional development experiences, grounded in the science of reading, to educators everywhere.

Another major learning that I am considering as I reflect on this process is how literacy is a basic right, that every person should have the ability to read and write proficiently. I believe that educators have always felt that this was the goal—to teach every

person to read and write—but I don't think that we were prepared with the knowledge of how to effectively make this a reality. When all educators understand what the science says about how the brain learns to read, and what the research says about the most effective practices for teaching beginning reading, we will be able to work together to ensure that all students are receiving the literacy instruction that they need to become skilled readers.

The final major learning that I have come to in the reflection on my capstone project is that the work of education takes a community. One person learning new information and a new strategy for teaching is great and may have positive outcomes for the students in his or her classroom, but in order to affect change for all of the students in our systems we must come together and share what we are learning with each other and with our leaders. The work of changing and improving systems is hard and slow, but when we are committed to working together we can make change that lasts.

Revisiting the Literature

Part of this process of reflecting on my capstone project was looking back at the literature that I reviewed and considering what had the most impact on my project. When I started my literature review I had already purchased and read a number of books on my research topic. It was through the bibliographies of these books that I found many of the research articles that I read for my project. The books themselves have a prominent spot in the self-paced professional development course I developed for my project, and I recommend each of them as a resource for teachers to learn more about the topic.

The first book that I recommend in my capstone project is the book *Know Better, Do Better* by David and Meredith Liben (2019). This book is easy to read, as it is not

filled with scientific jargon, and it offers information based on reading research, as well as practical activities and routines that can help improve student's learning outcomes. In the book, the authors describe their learning journey as educators and leaders in a new charter school in New York City, and how they dug into learning more about how kids learn to read after their charter school received the lowest reading scores in their entire district. I enjoyed learning about the changes that they made and the positive outcomes that they achieved. I appreciated that this book has suggestions for research based practical applications that teachers can use in their own classrooms.

The second book that I highly recommended in my capstone project was the book *Equipped for Reading Success* by David Kilpatrick (2016). This was the first book that I read during my own literacy learning journey and it was very helpful in explaining how skilled reading develops. In it, Kilpatrick (2016) asserts the fact that phonemic awareness is essential, and that some children may not develop proficiency in phonemic awareness without direct instruction in it. This prevents some children from reaching their maximum reading potential. He also states that phoneme awareness can help typical readers begin learning to read more quickly and efficiently. This was helpful in my understanding of how everyone benefits from phonemic awareness instruction.

I also recommend the book *Speech to Print: Language Essentials for Teachers* by Louisa Moats (2020). I include this book in my phonemic awareness module because it offers valuable information about what teachers should know about the language of English in order to be the most effective at teaching beginning readers. She offers information to help educators grasp the structure of written and spoken English and understand how children learn to read. Moats also offers insights on the importance of

anchoring reading instruction in speech, arguing that children come to us with the ability to speak and our job is to help them connect those speech sounds to print in order to teach them to read. I found this insight to be helpful in shifting what I would prioritize in beginning reading instruction.

Another book that I recommend in my capstone project is *Reading Above the Fray: Reliable Research-Based Routines for Developing Decoding Skills* by Julia Lindsey. I recommended this book because it is another easy read that is engaging and it's written in a style that feels like you are having a conversation with the teacher next door. It includes many practical applications that teachers can try in the classroom, each of them research based. Lindsey reiterates the importance of developing decoding skills for beginning readers using explicit, systematic instruction so that they can become confident, skilled readers.

Through the literature review I was able to use these resources and deepen my understanding of the research, which in turn allowed me to find further resources to share with fellow educators through my capstone project. Understanding the research helped me to curate a list of videos, podcasts and articles to include in my professional development course. Using these resources, teachers can begin their own journey of understanding how skilled reading develops.

Implications

The research highlighted in this project has important implications for literacy education and what changes should be made in reading instruction. The nation's literacy scores have remained dismal for the past few decades and even with the effort of the National Reading Panel (2000) to get information out about research based best practices,

literacy scores did not change. I am hopeful that with the current resurgence of media coverage around the topic of literacy education, more and more educators will be provided professional development training about how skilled reading develops. Researchers estimate that almost all children can be taught to read by the end of first grade (Moats, 2020). With that knowledge, our priority should be to ensure that teachers understand how children learn to read.

When I think of a future where all teachers have an understanding of how skilled reading develops, and are able to provide the best literacy instruction for all of the students in their classrooms, I see positive outcomes. One positive outcome would be that fewer students would be identified as needing special education services. Studies suggest that as many as 60% of children need explicit, systematic reading instruction in order to learn how to read (Young, 2021). When those children do not receive the type of instruction that they need, they fall further and further behind until they are so far behind that they may qualify for an IEP. Providing the explicit, systematic instruction that they need may prevent some of those students from falling behind. Another positive outcome of providing instruction that is best for all of the students in the classroom, not just the students who learn to read no matter what type of reading instruction they receive, is that there would be fewer student dropouts and more students on track to be college and career ready by the end of high school. This is a future that I would love to see.

Limitations

The field of education is vast and the task of teaching children to read and write proficiently is complicated. When considering an undertaking the size of this project, there are always challenges and limitations. The biggest limitation that I faced with my

project was the amount of information that I wanted to disseminate. Reading is a complex process and providing information on everything that teachers should know about how skilled reading develops was a big task. I believe that I was able to narrow my focus on the foundational knowledge that teachers should have an understanding of but there is much more that could be included.

Another challenge for me was considering my project through the lens of a classroom teacher rather than a reading interventionist. Though I have classroom experience from early in my career, it has been years since I have been a classroom teacher and it was sometimes difficult for me to remember to consider that classroom teachers are responsible for more than literacy skills. My project involves hours worth of information, and though I believe that connections can be made between literacy and other content areas, it was hard to limit what I included in my course as I know that teachers have limited time available to devote to one subject area.

The final challenge that I faced with my project was limited professional development time built into my district's school calendar. We are allotted very few professional development days and many of those days are already filled with other initiatives. Teachers who want to engage with all of the material in my course will likely have to do some of the work outside of the contracted school hours. This may limit the amount of information that teachers can receive or the amount of teachers who participate in the professional development course.

Future Research and Ideas

The challenges and limitations relating to the large amount of information that is included with understanding and implementing effective literacy instruction leads to the

future research and ideas that I have for this project. I envision that this project will continue to expand and grow as teachers progress through the professional development course. I may possibly develop a 2.0 course that would continue where the first course leaves off. I know that I would like to develop more modules for the course that would include literacy assessment information and guidance on effective writing instruction.

As teachers begin engaging with the course, I hope to have discussions with them, and through the feedback that I receive from them, include more resources that they would find helpful. I envision continuing to add new content to the course as more research findings are explored around the topic of literacy education or new, compelling interviews and articles are published by prominent educators and researchers. I look forward to continuing to expand my knowledge on the topic of literacy education and share what I'm learning with other educators.

Communicating Results

The first step in my plan to share my results with other educators is to share my project, a self-paced professional development course, with the teachers in my elementary building. I have already shared my project with the other reading experts in my building and with the literacy specialist in my district to gain initial feedback and start discussions. I also plan to share my project with the Director of Elementary Learning in my district where perhaps it could reach a district wide audience. I hope to have the opportunity to speak at a staff meeting in my building in order to introduce my project to the staff, explain its purpose and invite them to join the course. I created the course as a self-paced learning experience in order to honor each teachers' time and allow them to find the time to fit this learning into their busy schedules.

My sister is a second grade teacher in central Iowa and I also plan to share my project with her. I believe that the topic of understanding how to effectively teach all children to become skilled readers is so important and that the more educators that are engaging with this information the better. My project will also be included in the Hamline University Digital Commons where students and staff will have the opportunity to view it.

Benefit to the Profession

The number of students who struggle to read with proficiency in our nation continues to be a problem. Changes need to be made in literacy education in order to improve the outcomes for our students. My project includes information on what research shows are the most effective methods for teaching beginner readers. This professional development course will benefit the teaching profession because it will offer educators a place to go to find out information on how the brain learns to read, what teachers need to do to help beginning readers learn and what to do if a student struggles. I believe that my course will provide a starting point for learning and discussion in order to ensure that teachers are effectively teaching all of their students to read proficiently.

Summary

In this chapter I reflected on the creation and outcomes of my capstone project, a self-paced professional development course addressing the question: *How can a deeper understanding of the science of reading support primary grade teachers to be more effective with literacy instruction for beginning readers?* I described what I learned from the process of developing this course, and revisited the important literature that contributed to my project. I expounded on the implications and limitations of my project

and addressed what future research may be beneficial to the project and included at a later date. Finally, I explained how my project will be shared with a wide audience of educators in order to benefit the profession by providing knowledge to primary grade teachers about how skilled reading develops.

The prevailing message I hope to convey through this professional development course is that, through a better understanding of how skilled reading develops, educators can work together to ensure that all learners are provided the tools necessary to become proficient readers. Literacy skills are vital and securing reading proficiency for our students empowers them to succeed in the world. It is my hope that this project will be an impactful resource that affects not just educators, but ultimately the students that we serve.

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