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Key Components And Best Practices Of Early Decoding Instruction

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KEY COMPONENTS AND BEST PRACTICES OF EARLY DECODING
INSTRUCTION

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.

Hamline University

Saint Paul, Minnesota

August 2023

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CHAPTER ONE

Introduction

Background

We rely on elementary teachers to have a vast array of knowledge and skills: sciences, social studies, mathematics, literacy, child development and psychology, organizational skills, communication skills, classroom management skills, and so on. Most of a classroom teacher's day is spent teaching students, managing the classroom, assessing student work, communicating with families and colleagues, and lesson planning. Unfortunately, there is often little time to keep up with new developments and strategies in even one area of content and pedagogical knowledge, let alone all. Literacy is a multifaceted content area and, at times, a source of contention among educators. Various literacy instructional theories taught in teacher preparation courses have waxed and waned in popularity over the years. Many veteran educators have shifted their approach to literacy, even multiple times, as popularity in these different theories and strategies has changed. Now, fortunately, we have a wealth of research on how the brain learns to read. So, what does the research say? Which theories and strategies are supported by research, which are not, and which still need more investigation? This chapter will describe how I came to question certain strategies I was taught to use and became increasingly motivated to answer the question: *What are the best practices in literacy instruction in the early elementary grades?*

Professional Experience

I graduated in 2006 from Iowa State University with my elementary education license. As a university student, I was taught that the best way to teach literacy was to use

a whole-language approach, which is premised on the idea that students are exposed to an abundance of rich literature and will naturally, more or less, learn how to read. I began teaching fourth grade to students that spoke Spanish as their first language in a dual immersion program. Fourth grade was the first year they started to practice literacy skills in English. I took my whole-language approach and ran with it. The literature we read engaged them and was meaningful. I realized one day, however, that many of my students struggled to distinguish between the short vowel sounds, making spelling even simple words challenging for them. I had no idea how to help them.

A few years later I was in a different school district teaching first graders, and we were doing small group guided reading, where teachers choose a book leveled according to the group and practice reading the book and doing other literacy activities with it. I was excited by this approach. With small group guided reading, we teachers still used rich, engaging literature with the whole class, as well as providing individual students with tailored instruction. All we teachers were expected to do was determine student instructional reading levels and group them accordingly. We paid attention to the errors students made and encouraged them to look at pictures, the first sound, or think about what would “make sense” when they came to an unknown word. While some students were making acceptable progress, I had several students who had difficulty progressing past Fountas and Pinnell level B/C books. When they read, they often barely looked at the words. Instead, they tried to guess the words (often incorrectly) based on what was happening in the pictures, or by the general pattern of the book. I had no useful strategies to address this phenomenon.

Later, as a reading interventionist, I was still doing guided reading but I planned my small group instruction with more intention. I had read Jan Richardson's *The Next Step Forward in Guided Reading* (2016) which provided a lesson plan format for all levels of guided reading groups. In my reading groups, I was still teaching students with books at their instructional level, and I was including instruction in sight words, phonics, word work, and comprehension. Based on the content of the instructional level book I had chosen for the week, I determined which sight words and phonics patterns to teach. Yet, getting past level B/C books still proved very difficult for too many students. Also, I had kindergarten students who, after their initial assessment, were deemed "behind" in their literacy skills. How could new kindergarteners already be "behind?" What additional knowledge could I provide to help push them forward?

My school adopted a new reading intervention curriculum that was not guided reading. The curriculum had educators analyze student literacy screening data to determine which students might benefit from intervention. Instead of assessing a student's instructional reading level, diagnostic probes were provided to determine whether the area of need was phonemic awareness, phonics, fluency, or comprehension. Within the interventions included in phonemic awareness and phonics, students were placed within the scope and sequence of the curriculum based on which skills they had already mastered. These skills built upon each other and had a specific sequence beginning with easier skills, and progressing to the most complicated within the particular domain of literacy. Interventionists explicitly taught the target skill and then had students practice by reading decodable books and passages, not instructional-level books. No longer were my most beginning readers memorizing a pattern and looking at

pictures to figure out what the page said instead of the words. They were using patterns we had just discussed and applying them to words; something they had not been doing previously. Their confidence and engagement grew enormously when they realized they were able to make sense of the words on the page without using different guessing tactics or their memories.

Professional Rationale

While I have an elementary teaching license and can teach all the subjects covered in typical elementary curriculum, literacy is my passion. I firmly believe that strong literacy skills open up opportunities in so many areas because most of what we do requires us to not only read, but to synthesize and analyze what we read and communicate effectively with others. While strong literacy skills may not be critical in areas such as understanding mathematical concepts, lack of solid literacy skills will likely make learning more difficult.

According to the National Assessment of Educational Progress (NAEP), 33% of fourth grade students in the United States in 2022 scored at the proficient level in reading. The Covid-19 pandemic made achievement/opportunity gaps even wider (U. S. Department of Education, 2022) with 83% of fourth grade students living in poverty scoring below the proficient level (The Annie E. Casey Foundation, 2012). In my first ten years of teaching elementary students, I had already changed my approaches in teaching literacy frequently and substantially. I have often thought to myself, “How do we not yet know what the best approach is?” Research shows that students who are not at grade level in reading by third grade are four times as likely to drop out of school as those who read proficiently by third grade (The Annie E. Casey Foundation, 2012). When poverty is

also a factor, the chances increase up to eight-fold. While all students are affected, Black and Hispanic students are hit the hardest (The Annie E. Casey Foundation, 2012). These outcomes impact us all – those students, our communities, and society as a whole.

According to the Alliance for Excellent Education (2003), in the United States, students that dropout of high school are 3.5 times more likely to be arrested at some point in their lives than students that graduate, and people who have less than twelve years of schooling die at a rate that is 2.5 times higher than those that have more schooling (as cited in National Dropout Prevention Center, 2022). The National Reading Panel (1999) reported that illiteracy in adulthood costs taxpayers roughly \$224 billion per year in the United States (as cited in National Dropout Prevention Center, 2022).

In recent years, public media have paid increasing attention to the “science of reading” and the “latest” trends in teaching children to read. I have come to learn that the science of reading is not a specific curriculum or teaching strategy, but a focus on the not-so-new research on how the human brain learns to read and effective evidence-based instructional methods for teaching literacy. With the major impact that learning to read proficiently has on students and the amount of students lacking proficiency by fourth grade in the United States, it is imperative to deploy the most effective instructional methods, particularly in the early elementary years.

School districts are facing hard questions from families whose children are not making acceptable gains in reading and have educated themselves about the “science of reading” and effective research-based instructional literacy strategies. Recently, the podcast series *Sold a Story* (Hanford, 2022) has contributed to this, taking educators and families by storm. Journalist Emily Hanford investigated various literacy instructional

approaches, research, and policies, which provided evidence that some of the most popular approaches used today by educators in the United States are based on questionable research results. Many have listened to the podcast and questions from both teachers and parents are pouring into the schools I currently serve, surrounding our literacy instructional practices and how they align with what the research shows. They are also questioning some district-encouraged practices that were identified as ineffective in the podcast. Along with state and federal funding, many public schools rely heavily on local referendums and PTA donations to provide essential operating funds. If the public does not believe that children are receiving effective instruction, it could erode outside financial support. Finally, policy-makers can have a large impact on curriculum companies by implementing educational standards based on best practices.

Personal Rationale

Last year, I became a literacy coach for teachers of kindergarten through second grade in two elementary schools. The district curriculum is based on the balanced literacy approach, which emphasizes that phonics should be addressed as it is encountered in text, books for early and struggling readers should be predictable, and decoding strategies using context, structure, and visual clues should be encouraged. District leaders are beginning to move away from some aspects of balanced literacy and toward other strategies that are better supported by research. I have been given many learning opportunities that regular classroom teachers in the district do not have, because it is more cost-effective for the district to train coaches to train the teachers than to train everyone en masse. The shift away from balanced literacy, and its rationale, is not yet clear to most classroom teachers in my district. During the transition, I believe engaging

the teachers in the learning will be vital to getting them on board. For example, my school district adopted a new math curriculum this year and there was much push-back, although there is substantial research supporting the instructional strategies used in the curriculum. Unfortunately, these strategies and their rationale were not well-explained to classroom teachers; little time was given to teachers to investigate and prepare curriculum materials. Because of this, I believe teachers were less receptive to the curriculum change. In 2016, Bautista et al. (as cited in Aguilar et al., 2018) found that teacher beliefs influence how they view curriculum and strategies; thus, believing themselves to be unprepared or unfamiliar with what they are to teach affects how they respond to curricula changes.

Before implementing a new literacy curriculum in the coming years, gaining teacher understanding and support behind the change will be critical, and I believe this can best be achieved by taking time to ensure teachers know both the “why” and “how.”

Personal Perspective

I identify as a white, middle class, able-bodied, heterosexual, liberal-leaning, Christian-influenced, urban, cis-gender woman. Being the “norm” in most aspects of my identity, I need to ensure I seek out other perspectives. Oftentimes, I don’t know what I don’t know and need to approach topics with curiosity and an open mind. As a woman, I do have some understanding of what it is like to be in a non-dominant role, and I think this helps me recognize that those invisible barriers exist and empathize with others who are in the minority in some aspect of their identity.

There are two issues I want to emphasize as I complete my capstone. The first is personal values and what I view as strengths of an individual. Part of my culture is

valuing individuality and assertiveness. This is not true of all cultures, and I need to remind myself to try to look at other ways of seeing strengths. Because most of my identities are the “norm” for where I live, it can be easy for me to fall into the trap of a deficit perspective in my view of those who are not like me. The second issue is how specific groups of students are seen by educators. In literacy, one group that is often viewed through a deficit perspective is English language learners. Often their strengths in other languages are ignored while their lack of English is the main focus. I need to remember to view all students from a strengths-based perspective as well.

Conclusion

In the past few years, I have learned more about the importance of incorporating phonemic awareness, systematic and explicit phonics and morphology, fluency, vocabulary, and comprehension into literacy instruction. Chapter Two explores different instructional literacy theories and practices that have been widely used in recent history and the research related to early literacy, specifically focusing on *What are key components and best practices of early decoding instruction?* Chapter Three will describe the development of professional learning for early elementary teachers on the teaching of phonemic awareness, while Chapter Four will reflect upon the entire project.

CHAPTER TWO

Literature Review

Introduction

Both pre-pandemic and currently, a vast number of students in the United States have not been reading at grade level. This has far-reaching effects, both on the students themselves and society as a whole. Elementary teacher education programs include training on literacy instruction, but the basis of the teachings vary, and some include theories unsupported by current research. This review of literature seeks to gain insight into *What are key components and best practices of early decoding instruction?*

The first section of Chapter Two will give an overview of the history of the “reading wars,” which is a term referring to the vigorous debate among educators about the best way to instruct early readers. Both whole-language and phonics-focused instruction have been debated for years, and this section will define those terms and discuss broad themes in the research done within the past couple decades relating to effective reading instruction in the early grades.

Section two defines phonological and phonemic awareness and explores the importance of their inclusion in early learning. Phonological awareness begins early, even before kindergarten, and phonemic awareness is a key predictor of future reading success.

Section three describes the results of research on how children best develop reading skills in further detail, particularly in the area of decoding. A systematic scope and sequence for teaching letters and the sounds they represent, phonics patterns, and morphology help build a base of sight words and give the foundation for students to be able to read with relative ease, allowing them to focus more brain power on making meaning, which is the ultimate purpose of reading.

Decoding and phonological awareness are key skills required to become literate, but they are by no means the only important aspects of developing proficient readers. The final section of this chapter explores other factors that affect reading development. Proper assessment plays a vital role in providing students with timely, appropriate instruction. Teachers' perspectives of their students' strengths and areas for growth affect expectations and student outcomes. Finally, educators who are knowledgeable about current research and best practices are better prepared than those who are not to make instructional decisions regarding curriculum and differentiation.

Instructional Theories for Literacy Learning: Past and Present

Historically in the United States, the debate has existed over which is the most effective approach for teaching students to recognize words, whether it be approaching the word as a whole, or beginning with individual letters and sounds (Snowling et al, 2005). This debate began long before scientific research weighed in on the matter. While various sub-categories exist, historically, the two main approaches have been the phonics approach, which focuses on letter sounds, and the whole-language approach, which focuses on words as a whole (Kilpatrick, 2015). This debate is often referred to as the “reading wars.”

Phonics-based Approach

Those in support of phonics have argued that English is complex, and students need systematic, direct, and structured support in learning how to attack words (Snowling, Hulme, & Hulme, 2005). While there are different approaches to teaching phonics systematically, these approaches share a few key components. With systematic phonics, there is a planned scope and sequence and phonics are taught explicitly to

students. (National Reading Panel & National Institute of Child Health and Human Development, 2000). By explicit, it is meant that the instructor clearly and deliberately explains each new concept to students (Flanigan et al., 2022).

Whole-language approach

Whole-language proponents focus on reading and writing activities that put emphasis on meaning. That is not to say that phonics are ignored in these activities, but that they are taught more incidentally as they fit into each activity, instead of systematically (National Reading Panel & National Institute of Child Health and Human Development, 2000). Instruction is intended to be child-centered and meaningful, connecting the curriculum to other subject areas, and including an authentic variety of literary genres (Tracey & Morrow, 2012). These authentic texts are thought to promote better readers because they encourage children to focus on predictions and context to read unfamiliar words, and less on phonics patterns. Supporters of the whole-language approach agree with phonics proponents that English is highly complex; however, instead of directly teaching these complexities, they argue that children should be allowed to learn to read more naturally, similarly to how oral language is developed (Snowling et al., 2005).

Balanced Literacy Versus Structured Literacy

Today, two main frameworks for literacy instruction exist: balanced literacy and structured literacy. Fountas & Pinnell (1996) stated that balanced literacy is a “philosophical orientation that assumes that reading and writing achievement are developed through instruction and support in multiple environments using various approaches that differ by level of teacher support and child control” (as cited in

Lorimor-Easley & Reed, 2019, para. 2). Hoffman et al. (2000) said this framework encourages students to read words by attending to context, illustrations, and grapheme-phoneme patterns. Phonemes are the individual sounds that make up a word and a grapheme is a letter or letters that represent an individual sound. Similar to the whole-language approach, balanced literacy emphasizes surrounding children with high quality literature to support reading engagement and development (as cited in Lorimor-Easley & Reed, 2019). In small instructor-guided groups, early readers and, in some cases those considered to be poor readers, engage in reading leveled books that are often written in predictable patterns (such as those promoted by Fountas & Pinnell, 2009; Clay, 1994, as cited in International Dyslexia Association, 2019). These texts generally contain complex words, which encourage the reader to use context and illustrations to predict the word, relying less on their phoneme-grapheme knowledge to decode (International Dyslexia Association, 2019). Smith & Goodman (1971) developed the psycholinguistic guessing game theory of reading and proposed that early readers and skilled readers rely on the same strategies to read words and that these strategies, or cues, consist of attending to context, syntax, and spelling patterns to identify written words. Balanced literacy supports this theory and encourages instructors to analyze student reading errors and determine if the error was context, syntax, or phoneme/grapheme based (as cited in Kilpatrick, 2015). Mistakes based on context (such as reading “big” for “large”) are considered more encouraging because they demonstrate that the student is understanding what he or she is reading (Snowling, Hulme, & Hulme, 2005). Readers are encouraged to predict words by looking at the beginning sounds of the word and paying attention to what might make sense within the context of the text. Once a prediction is

made, readers can verify their prediction by checking the predicted word against the spelling of the word in the text (Parrila et al., 2017).

Structured Literacy. The structured literacy approach focuses more on phonics patterns and has a predetermined scope and sequence for teaching those patterns. Structured Literacy is characterized by the provision of systematic, explicit instruction that integrates listening, speaking, reading, and writing and emphasizes the structure of language across the speech sound system (phonology), the writing system (orthography), the structure of sentences (syntax), the meaningful parts of words (morphology), the relationships among words (semantics), and the organization of spoken and written discourse. (International Dyslexia Association, 2019, p. 6)

Each phonics pattern is clearly introduced (Lorimor-Easley & Reed, 2019), and using phoneme-grapheme knowledge as the first approach to help decode unfamiliar words is emphasized, using context only afterwards to verify correct identification (Kilpatrick, 2015). Instruction is modeled, multiple opportunities to practice the target skill are offered, and students are provided with timely corrective feedback. Instruction includes lessons targeted at the specific skill levels of individual students (International Dyslexia Association, 2019).

What Does the Research Say?

Many theorists and educators have assumed that learning to read is similar to learning to speak in that it is a natural process and will occur for almost everyone, so long as they are immersed in it. However, research shows this simply is not the case. While most people learn to speak, without instruction, most do not simply acquire reading skills

without assistance. Speech dates far back into human history, while written language is a more recent phenomenon (Seidenberg, 2017). While exposing children and surrounding them with rich literature can support reading development, it is insufficient to support them in learning to read without specific instruction (Moats, 2004). Ehri's (2020) research demonstrated that readers must have phoneme-grapheme knowledge or reading development will likely be limited to the very earliest stage of literacy development (see figure 1 in the subsection *Ehri's Phases*).

The 3-Cueing System. The idea that skilled readers skim over text and use context to decipher most written words has been proven false by research; rather, it is a strategy commonly used by less-skilled readers who must rely on context because of a lack of skills in using phonics patterns to decode. While context can help confirm the decoded word and assist with comprehension, it is not the first strategy employed by strong readers (Lyon, 1998; Moats, 2004). Some criticize structured literacy by arguing that limiting early readers to phonemes, graphemes, and decodable texts interferes with reading development (Kilpatrick, 2015). However, Gough et al. (1981) estimated that content words can only be predicted from context 10%-20% of the time, further supporting the need for phonics instruction (as cited in Lyon, 1998). Perfetti et al. (1996) and Vellutino & Fletcher (2004) have contributed to the numerous studies that concur that the primary difference between skilled readers and less-skilled readers is their ability to effectively decode words, and not their skills in predicting by using context (as cited in Snowling, Hulme, & Hulme, 2005).

Phonics Instruction. Share & Stanovich (1995) and Adams, Treiman & Pressley (1998) cited research on subjects' brains while reading indicates that every letter is

processed, although too quickly for the reader to recognize it (as cited in Moats, 2004). Adams (1990), Adams et al., (1998), Share & Stanovich (1995), and Pressley (1998) found that successful readers are aware that phonemes are connected to graphemes and they begin to recognize these graphemes and spelling patterns with growing automaticity (as cited in Moats, 2004). Foorman et al. (1997) found that much of the differences in reading comprehension in first graders could be attributed to their skills in sounding out words (as cited in Moats, 2004). In addition, Fletcher & Lyon (1998) found that reading comprehension correlated with student abilities to read words out of context and to spell nonsense words (as cited in Moats, 2004).

Key Components of Effective Reading Instruction. In 2000, the National Reading Panel published a meta-analysis of research on how people best learn to read. It identified five important components for reading instruction: phonological awareness, phonics, fluency, vocabulary, and comprehension strategies. Research on the teaching of systematic phonics and other approaches were compared to see which was the most effective method for learning to read. Results showed that regardless of the particular approach used for teaching systematic phonics, it was clearly more effective than other methods that did not explicitly teach phonics or did not teach them systematically. These findings held for students in kindergarten and first grade, as well as older struggling readers, students with identified disabilities, students of low socioeconomic status, and students identified as at-risk for future academic difficulties. Flanigan, Solic, and Gordon (2022) recommend combining phonics approaches.

Ehri's Phases

Over the past couple decades, Ehri (2014, 2020) has developed a theory that defines four phases of word reading development to help educators classify students' reading level and progress. The phases are defined by what knowledge the reader primarily relies on to read text.

Figure 1

Ehri's Phases of Reading Development

TABLE 1
Summary of Word Reading and Spelling Abilities That Characterize Ehri's (2005) Four Phases of Development

<i>Prealphabetic</i>	<i>Partial Alphabetic</i>	<i>Full Alphabetic</i>	<i>Consolidated Alphabetic</i>
May or may not know letters	Most letter shapes and names known; incomplete knowledge of GPs	Major GPs of writing system known	Grapho-syllabic spelling units known
Lack of phoneme awareness	Limited phonemic awareness; benefit of articulatory awareness instruction.	Full phonemic awareness: segmentation and blending	
No GP connections between spellings and pronunciations	Partial GP connections formed	Complete GP connections formed	Grapho-syllabic connections predominate
Sight words learned by remembering salient visual or context cues	Sight words learned by remembering partial GP connections	Sight words learned by remembering complete GP connections	Sight words learned primarily by grapho-syllabic connections
Sight word memory: unreliable, semantic errors, reading the environment	Sight word memory: Confusion of similarly spelled words	Sight word memory: accurate, automatic, unitized, growing, limited mainly to shorter words	Sight word memory: accurate, automatic, unitized, expanding rapidly; multisyllabic words easier to learn
No non-word decoding ability	Little or no non-word decoding ability	Growing ability to decode unfamiliar words and nonwords	Can decode unfamiliar words and nonwords proficiently
Cannot analogize	Analogizing precluded by partial memory for word spellings	Some use of analogizing but limited by smaller sight vocabulary	Greater use of analogizing as sight words accumulate
Unfamiliar words predicted from context	Unfamiliar words predicted using initial letters and context	Unfamiliar words in context read by decoding; context used to confirm or disconfirm words read	Unfamiliar words in context read by decoding or analogy; context used to confirm or disconfirm words read
Words spelled nonphonetically	Partial phonetic spellings invented; weak memory for correct spellings	Phonetically accurate GP spellings invented; growing memory for correct spellings	Grapho-syllabic and GP units to invent spellings; proficient memory for correct spellings

Note. Grapho-syllabic spelling units include subsyllabic units such as rime spellings, spellings of syllables, and spellings of morphemes including root words and affixes. GP = grapheme-phoneme connections.

From Ehri in *Orthographic Mapping in the Acquisition of Sight Word Reading, Spelling Memory, and Sight Word Learning*, 2014, p. 8

Early readers begin in the pre-alphabetic stage, where visual clues are more often used to read (such as illustrations or the golden double arches for McDonald's) instead of the letters that make up the words (Snowling, Hulme & Hulme, 2005). Student writing may contain familiar letters, but the letters are random and often not associated with the phonemes of the word. The second phase is the partial alphabetic stage, where students generally rely more on some letters and corresponding sounds to read words. They may

have parts of words they can decode simultaneously, instead of blending every individual phoneme. In the third phase, called full alphabetic phase, readers use letters and sounds to read and write and increase the number of words stored in their memory that they can read and write automatically. Readers in the fourth phase, the consolidated alphabetic phase, have a large store of spelling patterns they have mastered and use in reading and spelling, including unfamiliar multisyllabic words (Ehri, 2014).

Conclusion

How to effectively teach students to read words has been debated by educators for decades, if not centuries. Most agree that learning to read English is a complex process, but many disagree on how to teach it. Whole-language proponents focus on the importance of making meaning and engaging with the text and argue that, within a literacy-rich environment, students will learn to decode in a more natural fashion. Advocates of phonics argue that the rules of English phonology need to be taught explicitly and systematically for most students to learn to decode effectively. Current literacy frameworks have aspects of both sides, with balanced literacy leaning more to the side of whole-language and structured literacy leaning more towards the side of phonics-based. Recent research shows that successful readers rely first on phonology and morphology to decode words, and use context as confirmation, while less-skilled readers tend to use context as a first strategy.

Phonemic awareness

An important component in literacy instruction that supports phonics skills development is teaching phonological (specifically phonemic) awareness (National Reading Panel & National Institute of Child Health and Human Development, 2000).

Phonemic awareness is a subcategory of phonological awareness. Phonological awareness refers to the ability to recognize that language is made of sound parts and to be able to compare, connect, separate, and manipulate these sound parts (Konza, 2016). Phonological awareness follows a progression of focusing on larger parts of speech: words, syllables, onset and rime (the beginning and end of words), and making comparisons, such as recognizing when words rhyme (Melby-Lervag et al., 2012). Toward the end of the progression comes phonemic awareness, which is the ability to pick out phonemes (individual sounds) within words and manipulate them. Having phonemic awareness is crucial to understanding the alphabetic code; if one cannot distinguish between individual phonemes, one cannot relate them to letters to blend and decode words (Konza, 2016).

Research supporting phonemic awareness instruction

Multiple studies have shown a correlation between teaching phonemic awareness skills and early reading development, and especially the ability to segment and blend phonemes in individual words (Ehri, 2014). Longitudinal studies by Lervag et al. (2009), Muter et al. (2004), Roth et al. (2002), and Schatschneider et al. (2004), have demonstrated that students with solid phonemic awareness skills show a higher growth rate in reading in the early years (as cited in Melby-Lervag, Lyester, & Hulme, 2012). Bentin & Leshem (1993), Hatcher, Hulme, & Snowling (2004), Lundberg, Frost, & Petersen (1988), National Institute for Literacy (2008), National Institute of Child Health and Human Development (2000), and Troia (1999) found that, when paired with phonics instruction, phonemic awareness instruction is effective in the development of decoding skills in young readers (as cited in Melby-Lervag et al., 2012). In 1992, Griffith and

Olson (as cited in Konza, 2016) argued that phonemic awareness is the most important component of phonological awareness because individual sounds are the “raw material of reading and writing.” The substantial amount of research done on phonemic awareness supports the practice of directly teaching phonemic awareness skills to young students, as well as older students lacking these skills (Melby-Lervag et al., 2012). This is true not just for English, but other written languages as well (Parrila et al., 2017). In fact, one study found that phonological skills were not present for people who were illiterate (Seidenberg, 2017). This suggests that these skills do not necessarily develop naturally. Fortunately for multilingual students, phonemic awareness can transfer from the first language to the second, especially with phonemes both languages have in common (Rupley, 2009). While phonemic awareness skills serve as a foundation for the development of decoding skills, it is likely that, once decoding instruction begins, it helps facilitate further growth in phonemic awareness (Melby-Lervag et al., 2012).

Phonological and phonemic awareness instructional progression and best practices

Phonological awareness development begins early, often in preschool with simple tasks such as identifying rhyming words and segmenting one-syllable words into onset and rime, which are the beginning sound(s) of a word and the ending, including the vowel sound. The development of phonemic awareness begins as children need to change the initial sound of words to produce rhyming words (Konza, 2016). According to McBride-Chang (2004), the smaller the unit of sound (with phonemes being the smallest), the more difficult the skill, and even at the phoneme level, substituting and manipulating phonemes within words is more sophisticated than identifying individual phonemes (as cited in Melby-Lervag et al., 2012).

Blending individual phonemes together to make a word is an especially important skill for being able to decode (Konza, 2016). Carmine et al. (2006) argued that using words with continuous sounds (ones that can be drawn out) is best for beginning blending instruction (as cited in Konza, 2016). Small words containing two or three sounds should be used. Instruction should add in words with stop sounds (ones that cannot be drawn out) and words with more phonemes as skills develop, and include practice in segmenting phonemes within words (Konza, 2016). While almost every letter of the alphabet represents one phoneme, letters can combine to produce a single phoneme (such as /ch/ or /ai/ in ‘chain’). An exception to single letters or letter combinations representing a single phoneme is the letter X, which contains both the sounds /k/ and /s/ (Kilpatrick, 2015).

Konza (2016) recommends teaching students in smaller groups, as children may be at different levels in their skill development. For students that are on track for their age, these can be groupings of four to six students, while those needing to make accelerated gains should be placed in smaller groups. Phonological and phonemic skills should not be taught for more than a school year before including instruction in matching letters with letter sounds, but some children will benefit from continued phonemic awareness instruction alongside letter sound instruction. In fact, research by NICHD (2000) and Armbruster et al (2003) has found that most children need no more than 20 hours of direct instruction in phonemic awareness (as cited in Konza, 2016).

Connecting phonemic awareness to letter sounds

Multiple sources agree that letters and letter sounds need to be taught in tandem with phonemic awareness skills (Kilpatrick, 2015; Melby-Lervag et al., 2012; National Reading Panel & National Institute of Child Health and Human Development, 2000). For first grade classrooms, research by Foorman et al. (2006) showed that students were more skilled at decoding words when instruction focused on phonemic awareness and letter sounds (as cited in Mesmer & Kambach, 2022). Mesmer and Kambach (2022) report that in multiple research experiments, this instruction has been found to be most effective when paired with teaching children articulatory moves (i.e. having them pay attention to how the sounds feel and what happens with the lips, mouth, and tongue while making different sounds). Ehri (2014) suggests using pictures of mouths making letter sounds to support letter sound learning. Drawing attention to articulation can help students differentiate between phonemes that are similar, such as some of the short vowels (Moats, 2004).

Conclusion

Direct instruction in phonological and phonemic awareness is an important part of early reading development. Phonemic awareness is closely linked to early decoding skills. Studies of high school students have traced strong readers back to their early skills in connecting sounds with letters and decoding (Melby-Lervag et al., 2012). While some children develop some phonological skills without direct systematic instruction, Snowling, Hulme, and Hulme (2005) conclude, “Attention to small units in early reading instruction is helpful for all children, harmful for none, and crucial for some” (p. 518).

Word recognition

Decoding is a term used for when one uses the letters (graphemes), sounds (phonemes), and knowledge of meaningful word parts (morphemes) to recognize written words. This skill requires flexible thinking, as some words contain spelling irregularities or graphemes that have multiple possible pronunciations (Ehri, 2014). With increased understanding of phonics and morphology and continued practice in decoding, the number of sight words (words that can be automatically recognized) grows that a student has, allowing for the student to read with increasing fluency.

Systematic phonics instruction

The purpose of teaching phonics systematically is to provide readers with the skills and understanding needed to accurately decode text, and eventually become so proficient that the brain may focus on comprehension, the ultimate goal of reading (Flanigan et al., 2022). Teaching children phonics is most effective early on, before second grade (Flanigan et al., 2022; National Reading Panel & National Institute of Child Health and Human Development, 2000). Early phonics instruction should be coupled with phonemic awareness, starting with letters with continuous sounds and practice in blending and separating them, then progressing to sounds that stop (Mesmer & Kambach, 2022). Lervag et al. (2009) and Muter et al. (2004) claimed that letter knowledge is highly correlated with early reading development and is clearly affected by phonological awareness (as cited in Melby-Lervag et al., 2012). Debate continues over how much focus should be spent on learning letter names before focusing on sounds. Ehri (2014) argues that spending time learning letter names is beneficial. Many of the letter names contain the sounds they represent (such as /b/ in b or /f/ in f). Research by Cardoso-Martins et al. (2011) and Share (2004) supports the claim that students who

recognize letters by name learn their corresponding sounds more quickly and are better able to decode than those who do not learn letter names before sounds (as cited in Ehri, 2014). Some studies indicate that an effective strategy for learning letter names is teaching with embedded picture mnemonics (Ehri, 2014). Lorayne & Lucas (1975) found that recalling information is easier when one can associate the new information with something that is familiar (as cited in Alper et al., 1999). This memory strategy is referred to as using a mnemonic device (Alper et al., 1999). Often in literacy education, letters are paired with a picture that begins with the corresponding sound the letter represents. Embedded mnemonics goes a step further, actually embedding the letter within the picture. For example, the letter 's' may be drawn as a picture of a snake or letter 'b' may be drawn as a baseball bat next to a ball (Ehri, 2014). Ehri et al. (1984) did research that concluded that using embedded picture mnemonics was more effective for teaching letter names (and associated sounds) than using pictures that did not take on the shape of the letter, or learning letters without any picture association. After reviewing research literature on using embedded mnemonics to facilitate letter learning, Scruggs and Mastropieri (1990) came to a similar conclusion (as cited in Alper et al., 1999).

Johnson (2001) advised that words with single short vowels between two consonants should typically be taught first because there are only three sounds to navigate and the vowel is almost always short (as cited in Mesmer & Kambach, 2022). Pirani-McGurl (2009) recommended that after this, the progression should continue with digraphs and then blends (as cited in Mesmer & Kambach, 2022).

Phonics instruction is effective in a variety of settings, such as whole-class instruction, small group, or individual tutoring (National Reading Panel & National

Institute of Child Health and Human Development, 2000). Brief whole-class instruction can be used to introduce and expose students to grade-level content, while small group or individual instruction can be tailored to each student's needs (Flanigan et al., 2022).

Clymer (1963) stated that phonics should be taught as patterns, not hard and fast rules.

For example, the rule "when two vowels go walking, the first one does the talking" is true less than half the time (as cited in Flanigan et al., 2022). These patterns should be practiced in both reading and writing to support spelling instruction (Rupley, 2009).

Flanic et al. (2022) recommended using a mix of systematic phonics approaches:

synthetic and analogic. Synthetic phonics starts by teaching the graphemes (letter or letter combinations) associated with phonemes and teaching the reader to blend them together

to decode a word. Analogic phonics teaches readers to use spelling patterns they are already familiar with to help decode unfamiliar words containing the same spelling

pattern. For instance, a reader that can decode 'spell' can use their knowledge of the -ell pattern to read other words, such as 'well', 'bell', 'tell', and 'smell'. This strategy

becomes more effective as readers gain experience with spelling patterns (Ehri, 2014;

International Dyslexia Association, 2019). For systematic phonics instruction to be most

effective, pairing learning with practice reading connected texts is important (Kilpatrick,

2015). Allington (2013) and Seidenberg & Borkenhagen (2020) gave the

recommendation to combine direct instruction with practice in a 1:4 ratio (as cited in

Flanigan et al., 2022). Different types of texts can be used for this practice, including

trade books (ones that do not adjust language based on the target reader's skills), leveled

books (ones that have been evaluated and given a general reading level to pair with

students), and decodable texts (texts including words with spelling patterns intended to

match the scope and sequence of phonics instruction). Jenkins et al. (2004), Mesmer (2009), and Shanahan (2018a) stated that decodable texts have gained popularity in recent years but research is mixed on how effective their use is (as cited in Flanigan et al., 2022). Flanigan et al. (2022) recommended using a mix of text types with early readers.

A case for morphology instruction

Morphemes are the parts of words that convey meaning. A word may consist of only one morpheme, such as “tomato” or multiple such as “walked” (wherein in “walk” is one morpheme and “-ed” is another that conveys past tense). Roots, prefixes, and suffixes are all morphemes (Parrila et al., 2017). Bryant & Nunes (2004), Henderson (1984), Henderson & Templeton (1986), Henry (1989, 2003, 2010), Nunes et al. (2003), and Stephens & Hudson (1984) agreed that more attention should be paid to morphology instruction by literacy educators (as cited in Bowers & Bowers, 2017). There are differing conclusions about the percentage of English words that are “regular” (follow expected phonetic spelling patterns). Hannah et al. (1966) and Moats (2020) estimated that 84% of English words are spelled phonetically (as cited in Flanigan et al., 2022), while Crystal (2003) estimated that only 56% of English words are regular (as cited in Bowers & Bowers, 2017). Bowers & Bowers (2017) argued that English is not as unpredictable as many believe. Most spellings are expected when phonology, morphology, and etymology are taken into account and educators should include morphology and etymology in literacy instruction.

Morphological knowledge has been shown to correspond with word identification and fluency in younger readers (Parrila et al., 2017). Instruction in morphology has been shown to have an especially significant effect on English language learners and children

with speech delays (Bowers & Bowers, 2017). Moats (2000) stated that words with multiple morphemes are four times as common as words containing single morphemes, and that if students learned even just the most common morphemes, they could add up to 250 vocabulary words to their repertoire each year (as cited in Mesmer & Kambach, 2022). Memory for words has been shown to improve when meaning is connected (Bowers & Bowers, 2017). While some argue that morphology should be taught to older students, after phonics instruction (Adams, 1990; Ehri & McCormick, 1998; Larkin & Snowling, 2008), Bowers et al. (2010) and Carlisle (2010) found it makes an impact on early readers as well (as cited in Mesmer & Kambach, 2022). Carlisle (2003) and Bowers & Kirby (2010) found that morphological knowledge not only supports word recognition, but also vocabulary and, in turn, comprehension (as cited in Mesmer & Kambach, 2017). Bear et al. (2010) and Moats (2002) recommended the progression for instruction in morphology begin with compound words, followed by inflections and derivational morphemes, prefixes, suffixes, and affixes, and finally, Greek morphemes (as cited in Mesmer & Kambach, 2017). While phonics instruction is critical for early literacy, development can be supported and strengthened with the inclusion of morphology (Bowers & Bowers, 2017).

Sight words

Sight word is a term that Ehri (1992) used to describe a word that has become so familiar to the reader that it no longer needs to be decoded; it is automatically recalled by memory. To make a word into a sight word, the reader makes connections to spelling, meaning, and pronunciation. This is called orthographic mapping (as cited in Parrila et al., 2017). One teaching strategy often used for increasing the number of sight words a

student has is to have the student practice reading the word repeatedly. While this can help, there is variability in how many repetitions it takes for individuals to make the word a sight word. Ehri & Saltmarsh (1995) found that some students may need twice as many repetitions as others to commit the word to memory (as cited in Kilpatrick, 2015). Van den Broeck et al. (2010) found that as readers become more advanced, the speed at which words become part of their sight word bank aligns with the success of the reader's development (as cited in Kilpatrick, 2015). Dehaene & Cohen (2011), Forster (2012), Simos et al. (2013), and Van den Broeck & Geudens (2012) reported results from brain studies indicating that the parts of the brain activated during tasks involving reading words and visual memory are different (as cited in Kilpatrick, 2015). This implies that merely exposing one repeatedly to the image of the written word may not be as effective as desired. Kilpatrick (2015) stated that a word's spelling, pronunciation, and meaning are stored on different levels of the brain and the combination is the orthographic mapping of the word. To create these connections, one needs skills in phonemic awareness, knowledge of graphemes (letters or letter combinations that represent phonemes), and connections to meaning, along with repeated practice with the target word (Ehri, 2014). Farrell et al. (2020) stated that 37% of the Dolch high-frequency word list contains spellings that are irregular (as cited in Mesmer & Kambach, 2022). Ehri (2005) said instead of encouraging students to memorize irregularly-spelled words as a whole, educators are advised to have readers focus on the parts of the word where the spelling is regular, and take note of the parts of the word that are irregular (as cited in Mesmer & Kambach, 2022). Rosenthal & Ehri (2008) found that students recalled pronunciations and word meanings better when the words were associated with their

spellings (as cited in Ehri, 2014). This supports the research claiming that words are stored on various levels in the brain (Kilpatrick, 2015).

Conclusion

Skills in word recognition begin with the student gaining knowledge about letters and sounds, which can be supported by the use of embedded mnemonics. In early decoding instruction, there is a focus on blending simple words with short vowels and, as skills develop, progressing to multisyllabic words and morphology. Finally, proficiency in decoding text increases as words are added to a student's bank of sight words. Practicing with connected texts is a key component of decoding development.

Other considerations

While phonemic awareness and phonics play a large part in an early reader's development, other factors also have an important role. Knowing each student's specific areas of strength and areas for growth are vital in providing proper instruction that meets the needs of each individual. Having a deep understanding of how readers develop skills and effective strategies to support that development is key in making instructional decisions.

Assessment

Assessment is an important component of literacy instruction. Identifying students who may need additional support early, and addressing needs with tailored interventions, are critical for preventing future struggles and for literacy development success. A universal screener should be administered to all students to identify those who may be at-risk in order to provide early support before the issue grows. In addition to identifying students for potential support, universal screeners can help with evaluating the

effectiveness of the literacy curriculum being used. Many students flagged as being at-risk by the universal screener may be a sign that the curriculum does not provide sufficient quality lesson plans in certain areas of literacy. Universal screeners for literacy include the assessment of a variety of skills that predict student success at each grade level. For example, phonemic awareness skills are strongly correlated with reading success in kindergarten, but less strongly correlated in later grades. The recommended assessments by grade level for universal screening are described in Figure 2.

Figure 2

Skills Recommended for Reading by Grade

Grade Level	Skills Recommended for Screening
PreK-K	Phonological awareness (blending and segmenting at the syllable, onset-rime, and phoneme levels)
	Rapid automatic naming
	Letter-sound knowledge
	Phonological memory (typically assessed through nonword repetition)
	Listening comprehension/oral vocabulary
1	Phoneme awareness (blending, segmenting, manipulation)
	Nonword repetition
	Listening comprehension/oral vocabulary
	Word identification fluency (real and pseudo-words)
	Oral reading fluency
2	Word identification fluency (real and pseudo-words)
	Oral reading fluency
	Reading comprehension
3	Word identification fluency (real and pseudo-words)
	Oral reading fluency
	Reading comprehension

Note. From Marencin, Raines, & Troester in *Universal Screening within an RTI Framework*, 2022, p. 22

A benefit of universal screeners is that they are relatively quick to administer and easy to interpret. These screeners are normed and provide instructors with benchmarks to identify levels of academic risk. However, no assessment is perfect; errors do occur, whether it be from misadministration, scoring, or other influences on the individual student's performance on the particular day of assessment. Therefore, making decisions regarding an individual student based on one data point is not recommended. Instead, the skills of students who are flagged should be investigated further with diagnostic assessments. Best practice includes using a team of educators and support staff to analyze diagnostic results and make recommendations for intervention, if it is deemed necessary.

If multiple students would potentially benefit from the same intervention, they can be grouped together. Intervention should continue for at least six weeks, with frequent monitoring to determine progress and next steps (Marencin et al., 2022).

Connecting to comprehensive literacy frameworks

While using systematic phonics to develop word recognition skills is an important part of literacy instruction, experts agree that it cannot be the only component. As noted earlier, the National Reading Panel (2000) identified five components of effective literacy instruction, systematic phonics being one of them. A solid grasp of phonics patterns is not the ultimate goal of reading instruction; rather, the goal is to develop readers who have such a good grasp on phonics and decoding that brain space can be applied to making connections and comprehension (Flanigan et al., 2022). Carpenter (2021) reminded us of the importance of also focusing on meaning within literacy instruction, in particular with English language learners. While there is a general recommended scope and sequence of phonics instruction, many important vocabulary words are complex, and educators should keep in mind the overall language needs of their students.

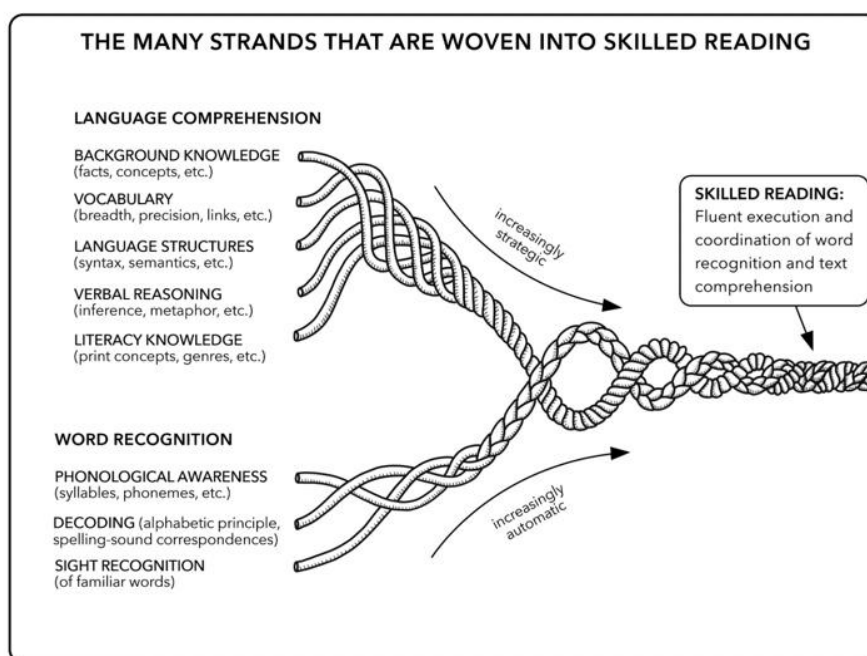
The Simple View of Reading and Scarborough's Reading Rope

Gough and Tunmer (1986) proposed the theory that success in literacy is dependent on two basic components: decoding skills, and language comprehension. The equation $reading = decoding \times comprehension$ represents the combined importance of both understanding language and being able to correctly identify written words (as cited in Stainthorp, 2021). Scarborough (2001) deconstructs these two components further, likening key literacy skills to the strands of a woven rope. The two main strands, or components, like the Simple View of Reading, are word recognition and language

comprehension. Within the strand of word recognition are the substrands phonological awareness, decoding, and sight recognition. Within the strand of language comprehension are the substrands background knowledge, vocabulary, language structure, verbal reasoning, and literacy knowledge (as cited in Moats & Tolman, 2019).

Figure 3

Scarborough's Reading Rope



Note. From H. S. Scarborough in *Handbook of Early Literacy Research*, 2002, p. 98

Engagement, fluency, comprehension, and extensive practice with authentic texts are key to an effective literacy program (Flanigan et al., 2022; Lyon, 1988; National Reading Panel (U.S.) & National Institute of Child Health and Human Development (U.S.), 2000). Students need explicit practice with systematic phonics geared toward their current skills; but, as emphasized by whole language proponents, they must also be exposed to rich literature and vocabulary and provided with opportunities to critically analyze, discuss, and write about text. Ensuring that students develop phonemic

awareness and including systematic phonics into the literacy curriculum is necessary so that students gain the word recognition skills they need in order to focus on making meaning of text.

Teacher perspective and knowledge

Educators sometimes have ‘deficit thinking’ regarding student academic achievement or behavior. According to Valencia and Black (as cited in Palmer and Witanapatirana, 2020) deficit thinking assumes that students fail in school because outside factors, such as home environment and culture, impede learning.

It often leads the educator to lower expectations for particular groups, such as students from low socio-economic backgrounds and students of color (Reed, 2020). Many school districts focus on the achievement gap to identify students who are not meeting expectations, in hopes of improving student success. Critics argue that this is participating in deficit thinking. As Paunesku (2021, para. 5) argued:

Focusing solely on achievement rather than opportunity can reinforce a deficit-oriented discourse that blames underserved students, families, and communities for disparities between their educational outcomes and those of their more privileged peers. It reveals the symptoms, but not the causes of inequitable attainment.

Finally, while including systematic phonics in literacy teaching is important, it is equally important for the educators to be knowledgeable about the “why” behind their instructional practices and about their students’ strengths and areas for growth. The more educators know about these things, the more successful they and their students will be. Phonics programs should include a pre-determined scope and sequence of skills that build

on previously learned skills (Flanigan et al., 2022). Curricula can vary, and teachers need to evaluate the strengths of a program and what areas might need adjustments (National Reading Panel (U.S.) & National Institute of Child Health and Human Development (U.S.), 2000). A knowledgeable teacher can modify and tailor teaching for students to maximize effectiveness (Flanigan et al., 2022).

Conclusion

While explicit and systematic instruction in phonemic awareness and phonics is critical, it is not the only factor that affects a child's reading development. Educators must focus on each student as a whole person, with both strengths and areas for improvement, be knowledgeable about best practices, know how to use assessment to effectively individualize instruction, and recognize that accurate, fluent decoding is a component, and not the entirety, of literacy instruction.

Research rationale

Educating students from various backgrounds, with unique personalities, experiences, and strengths poses challenges. As with all teaching, some strategies work for some students and not for others. The goal of my literature review was to distill which theories and strategies are most effective for most students. Many students have been taught within whole-language classrooms and balanced literacy classrooms and have successfully become literate. Yet, many students in these same classrooms have struggled unsuccessfully, from early on, in becoming proficient readers. These early failures in reading can have lifelong effects. As an early grade educator trained in whole-language theory and who later studied and taught children using the balanced literacy framework, I

believe that I, and others like me, have an ethical obligation to know if my practices are supported by research. Then, once I know better, I need to do better.

Chapter Summary

Chapter Two addressed the question, *What are key components and best practices of early decoding instruction?* by examining historical and current theories about how children best learn to decode written text. It began with a summary of the thinking surrounding two major historical theories that influence frameworks used today. The whole-language theory emphasizes surrounding children with rich literature and reading for meaning, using context as a main support to read words. Phonics-based instruction focuses on teaching and using phonemes, graphemes, and morphemes as a first strategy to read words. Two popular current frameworks, balanced literacy and structured literacy, further build upon these two models, with balanced literacy emphasizing context and meaning to recognize words, and structured literacy emphasizing phonics. Current research was examined and the clear conclusion was that systematic and explicit instruction in phonics has been proven to be the most effective model for supporting growth in decoding skills. The section concluded with a description of Ehri's phases that early readers go through in becoming proficient decoders.

A major finding in reviewing the literature was the importance of instruction in phonological and phonemic awareness, beginning even before kindergarten. Research has shown a strong correlation between an early reader's phonological skills, and more specifically, phonemic awareness, and future success in decoding. Beginning instruction should focus on larger chunks of words, such as syllables and onset-rime, and narrow down to instruction at the phoneme level. Including instruction in letter sounds is not the

next step, but rather should coincide with phonemic awareness instruction for maximum effectiveness.

Alongside instruction in phonemic awareness, systematic and explicit instruction in word recognition skills begins with individual letters and the sounds they represent. As skills develop, readers are able to identify and decode more complex spelling patterns, and, eventually, morphemes and multisyllabic words. With practice, these words become recognized automatically by the student, and are considered to be part of that particular student's sight word bank.

Lastly, while this literature review has focused mainly on the impact of phonics instruction on early decoding skills, the final section examines the broader picture of literacy instruction, including the importance of assessment, how word recognition fits within the Simple View of Reading and Scarborough's Reading Rope, and the impact teacher knowledge and perspective have on student success.

Using research-based strategies for adult learning, Chapter Three will outline plans for professional development training for early-grade teachers. This training will impart the important findings of the research reviewed in Chapter Two and will provide teachers with ideas for application in the classroom, specifically in the area of connecting phonemic awareness to alphabet knowledge. Educators who can provide students with a solid foundation in early literacy skills will set those students up for future success.

CHAPTER THREE

Project Description

Introduction

Chapter Two reviewed research literature with the goal of answering the question *What are key components and best practices of early decoding instruction?* It covered historical theories and practices, including the whole-language approach and the phonics-based approach, and how those approaches have shaped two current frameworks, balanced literacy and structured literacy. Delving into brain research and research-supported instructional practices, Chapter Two described important components of effective decoding instruction and general scope and sequence, including phonological and phonemic awareness, early letter identification and sound correspondence, blending simple words with short vowels and continuing to more complex words with multiple syllables and with a focus on morphology. It also emphasized the importance of developing a bank of sight words for increasing fluency. Finally, Chapter Two concluded with reminders of other important aspects of literacy learning, such as assessment and teacher knowledge and perspective.

Chapter Three will describe the element of the literature review of Chapter Two I have chosen to focus on in my teacher professional development planning: phonemic awareness. The methods section will provide a review of research that supports the content that I plan to include in my professional development training as well as sources on effective practices for adult learning that have provided direction on how I plan the professional development. The project description section provides information about what the professional development will look like and important topics to be covered in

each session. The project completion timeline describes what step and when I will need to work on my project development. The setting/audience section identifies the environment for the professional development, as well as the target audience, and, finally, the assessment section focuses on how I will evaluate the effectiveness of the professional training that I develop.

Methods

My instructional decisions, such as spreading training out over the year, connecting with the teacher's daily instruction, giving choice in learning, and providing time to practice, are supported by works by Aguilar & Cohen (2022), Darling-Hammond et al. (2017), and Knowles (2005). These sources influenced how I planned and implemented the phonemic awareness professional development training series for elementary teachers. Marencin et al. (2022) and Kilpatrick (2015, 2016) are sources I relied on to guide the assessment portion of the professional development series. Sources by Kilpatrick (2016), the National Reading Panel (2000), Melvey-Lervag et al. (2012), Moats & Tolman (2019), and Burkins & Yates (2021) provide evidence of the importance of phonemic awareness instruction that I will use to give teachers background knowledge. Rupley (2009), Mesmer & Kambach (2022), and Konza (2016) are sources I will use to develop the phonemic awareness instructional strategies portion of the professional development.

Project description

This project provides professional development to early grade elementary teachers about the importance of phonemic awareness instruction, including articulation and strategies to build phonemic awareness with students. I envision conducting several

one-hour sessions throughout the school year, with more towards the beginning of the school year. In the first session, I will present the research behind the importance of phonemic awareness instruction with young and/or struggling students, a recommended scope and sequence for teaching, and how to assess student skills and areas of need. I will ask teachers to choose some students from their own classrooms to assess, using the PAST (Phonological Awareness Screening Test) (Kilpatrick, 2016, pp. 238–239) and bring back their student results. In session two, we will analyze those results and focus on classroom strategies to build upon phonemic awareness skills targeting where individual students are at. I will ask teachers to choose a strategy they want to use in their classroom. Teachers will practice instructing using the chosen strategy in pairs before being sent off to practice in their individual classrooms. Teachers will be asked to bring back their thoughts and observations to the group for session three. In session three, teachers will be asked to share their classroom experiences in small groups and learn about and practice progress monitoring students in phonemic awareness. Before session four, teachers will be asked to progress monitor the previously selected students and bring that data back to discuss with their team. Session four will focus on learning English phonemes and their similarities and differences to one another and how to incorporate instruction in articulation. Teachers will be given a little time to plan based on the progress monitoring results they bring to the session and practice the instructional strategies they choose to use. Teachers will return to the classroom and come to session five ready to share what they tried, how it went, and how students are progressing. At this point, the remainder of the professional development for the year will be based on what teachers are needing/wanting. Some may want more time to practice strategies on each

other or team collaboration time to plan future lessons. Some may want either me or another team member to observe and give feedback. A final session at the end of the school year will conclude the professional development series. We will review spring universal screening results and identify areas of growth and goals for the following school year. In teams, we will ask teachers to share something they want to continue for the next year and something they want to modify.

Project Completion Timeline

In order to effectively plan my capstone project, I will need to follow a timeline. I spent February of 2023 reflecting on personal and work experiences and educational interests to determine where my passion lies and narrowed my focus to early elementary literacy skills. As I began to research the important components of effective instruction, I realized that literacy was too broad a topic, so I focused on decoding and word recognition. I spent the rest of February gathering research sources related to my topic. I wrote my literature review in March, 2023, using the sources I had gathered in February. I began writing Chapter Three in April, and it was then that I decided I wanted to provide professional development to elementary teachers. My decision to focus specifically on phonemic awareness and not all aspects that I researched about decoding instruction stemmed from my desire to give teachers a deep understanding of the research and instructional practices, as well as time to practice and reflect upon their instruction, as recommended by Darling-Hammond et al. (2017).

Beginning in early June 2023, I referred to Aguilar & Cohen (2022), Knowles, et al. (2005), and Darling-Hammond, Hylar, Gardner, & Espinoza (2017) to identify best practices in professional development planning and implementation and to determine end

goals for teachers in my professional development training, and to develop a timeline for the delivery of professional development and important topics to be covered. Later in June, I developed assessments for teachers' learning and further professional development needs, and July 2023 was spent developing slides, presentations, handouts, activities, etc., for teachers for our professional development sessions. In late July 2023, I reflected upon my work and wrote Chapter Four of my capstone project.

Setting/Audience

The setting will be an urban public elementary school with a diverse student population of about 350. Relationships between district leadership and teachers are strained; there has been a lot of turnover at the district level, and teachers were on strike last year. Teachers have been encouraged to start learning about the science of reading and research-based practices, but the district literacy curriculum falls short in providing instruction that aligns with the science and practices. K-2 classroom teachers range from having years of elementary teaching experience to being new in the profession. Most, but not all, of the staff are white females.

Assessment

I will collect data in the form of exit tickets and surveys from staff, as well as progress monitoring data of the students the teachers choose to target. I will compare school-wide universal screening of phonemic awareness between fall, winter, and spring to show trends in student growth.

Conclusion

In my literature review, I found several sources supporting the importance of teaching phonemic awareness and best practices for instruction. I also am using works by

professional development experts to help guide my planning, which includes professional development and applied practice in the classroom throughout the school year. Early grade elementary teachers who teach in a diverse urban public school setting are my target participants. My project completion timeline is seven months.

Summary

Chapter Three takes my learning from the literature review of Chapter Two and dives deeper into phonemic awareness, an important component of decoding instruction. After seven months, I will have broadly reviewed literature on the impact of phonemic awareness instruction and researched-based best practices in order to take that information back to the early elementary teachers I work with and help guide them in determining where their students are at, what skills are needed, and strategies for instruction in those skills. I will develop in-person training for teachers that provides them with knowledge of the research on phonemic awareness and instruction. During these training sessions, teachers will be expected to reflect upon their own students and take the learning from the professional development back to their classrooms to practice assessment, instructional strategies, and interventions. The end of the school year will provide teachers with choices in how they would like to be supported in their learning.

Upon completion, I will review the important components of the project I develop, which are professional development training and materials, and reflect upon my work and potential future extensions of my work.

CHAPTER FOUR

Project Reflection

Introduction

I began my capstone project with the intent to educate myself on how to best teach students to read. As time went on, I realized I wanted to focus on building a strong foundation for readers that would provide them with the skills they needed to enjoy and comprehend various media. This led me to ask the question: *What are key components and best practices of early decoding instruction?* Through this investigation, I have learned not only about current research on how the brain learns to read and effective instructional strategies but also about myself as a learner and how I see myself contributing to the field of education. My project focused on imparting important information about phonemic awareness instruction to other educators but lends itself to future work in investigating research on literacy learning and developing ways to present this knowledge to other teachers.

Personal Growth

Though I have mainly focused on the important and useful insight I have gained about literacy instruction for early readers, I have also learned much about the research process and myself as both a learner and a writer. My capstone project has been, by far, my biggest academic undertaking yet and saying I had not been intimidated before starting would be dishonest. The pressure of my entire degree resting on this paper and project was the biggest concern I had when beginning graduate school. I know how to “do” school: how to write papers, take tests, do projects, and earn respectable grades. However, I had never worked on a single task to this depth or extent prior to now.

One important learning I gained about creating a research project is the importance of being flexible and trusting the brainstorming process. When I begin a task, I feel most confident when I know exactly what I am doing and how I am going to go about it. This is not the case with research. Even choosing an initial idea took lots of reflection and yet what I ended up with still differed from what I had first envisioned. I went into this process first thinking about what interested me and only that. While the researcher should have a personal investment in the research, one needs to think more broadly in how this learning will be useful and how it may help the profession as a whole. Taking time to reflect on my learning up until now and identify my interests and issues I see in literacy education helped to mold my final project, which was quite different from my initial plans. Throughout the process, I would occasionally chastise myself for not having a better sense of what the final product would be, but I now see that it was part of the process and not just the first step.

A second lesson I took from this experience is the value of making smaller goals and deadlines along the way. I will admit, when I was first asked to make a project timeline, I rolled my eyes, thinking it was busy work. I am happy to report I was wrong; breaking down the parts of the project into bite-sized pieces and considering my schedule really helped me to not only feel less overwhelmed, but to also manage my time effectively and complete my project on schedule. I fully plan to make timelines for myself in the future for major undertakings.

Allowing time for the brainstorming process, being flexible throughout the project development, and breaking down the paper and project into steps has helped me to become more organized, efficient, and confident. I now feel I have the tools to assume

big endeavors successfully. Along with increased self-awareness and personal growth, there is much information I have gained that will be invaluable in my work in education, not only for myself, but also for those I am able to share it with and, most importantly, the children and families I serve.

Key Take-aways

This past academic year, I was fortunate to be given the opportunity by my school district to participate in LETRS (Language Essentials for Teachers of Reading and Spelling) training, developed by literacy experts and authors Louisa Moats and Carol Tolman. I knew at the time that I wanted to explore the “science of reading,” i.e. the vast amount of research about how the brain learns to read and how educators can effectively support those learning to read, and this was a fantastic chance to do that. LETRS training paired wonderfully with my literature review, providing me with key people and topics to explore.

While investigating the question: *What are key components and best practices of early decoding instruction?* I read much about the theories causing the “reading wars” and what scientific research actually supports. Though I have taught my students from both ideologies of the debate, in recent years I have learned that the research supports a focus on phonics instruction; therefore, finding the facts to support that did not have a large effect on me because I already had my answer to the “what.” What did have a great impact was learning more about how the brain processes and retains oral and written language and what strategies are most helpful in supporting students learning to read, i.e. the “why” and “how” of early literacy instruction.

The literature review helped me to become a more critical reader. In literacy education theories, some of the theories have been developed out of intuition, or what “felt right.” Unfortunately, human intuition can be wrong. I spent the first years of my career teaching literacy based on a theory that felt good intuitively, but did not have solid research to support it. In my literature review, I learned to pay attention especially to common conclusions about literacy learning that had multiple large studies supporting it. These conclusions often related to how the brain functions while learning to read. Research about the effectiveness of certain strategies for literacy instruction often had smaller bodies of support. I still paid attention to these smaller bodies, but I am cautious to fully buy into them yet until more research is done.

I think some of the most important policy implications this wealth of information about learning to read can have is to develop requirements for what is included in teacher education at the university level, requirements for continuing education credits for teachers applying for relicensure, and requirements for adopted curriculums to be developed based on the science of how readers best learn. While there has been movement toward these goals, we still have room for improvement. Even in my own district this past school year, I have witnessed students being referred for special education evaluations based on the fact that the students failed to progress with reading intervention, while the specific reading intervention used did not have scientific research to support its efficacy. As a teacher, I was given a literacy curriculum and told I was expected to use it with my students that directed the teacher to use strategies with students that have been proven to be strategies used by struggling readers, not strong ones.

The project I created, based on my findings in the literature review, focused specifically on phonemic awareness instruction. To create a series of professional development training sessions, I did use the information from my literature review but I also had to find additional resources to learn how to most effectively impart the information I wanted participants to gain, as I was quite certain that simply reading my literature review to a group would not be as impactful as I would like. Two main sources I turned to were works by Knowles, et al. (2005) and Aguilar & Cohen (2022). They provided me with recommendations for how to build buy-in and actively engage adult learners. I also spent time finding books and media to use during the training sessions that could be adjusted in order to create more interactive learning experiences, including the *University of Florida Literacy Institute* website and the *Reading Rockets* website, and the books *Shifting the Balance* (Burkins & Yates, 2021), and *Equipped for Reading Success: A Comprehensive, Step by Step Program for Developing Phonemic Awareness and Fluent Word Recognition* (Kilpatrick, 2016).

Melding the training I was provided by my school district with the literature review I conducted to answer the question: *What are key components and best practices of early decoding instruction?* gave me invaluable information I can use to instruct my practice as an educator. To multiply the benefits of everything I learned, I needed to be able to share this information with other educators in a time-efficient and engaging way, which led to the development of a series of educator training sessions related to phonemic awareness and the intention to create more professional development relating to other important aspects of early literacy instruction.

Considerations for the Future

One area that I might further investigate is whether the research findings are consistent with English language learners, and if not, what is and what is not? What does research indicate is best practice for these students? Most of the research I came across discussed older struggling readers and those with learning differences but not English learners and I would be cautious to make assumptions that all the research applies perfectly.

As noted in the section “Key Take-aways,” some strategies that have less research to back them up would be worth further investigation. There are many promising strategies out there that simply need more supporting evidence before they can be deemed effective. I would recommend caution to those who would take the research about how the brain learns to read and make assumptions about practical instructional strategies without the proper due diligence of researching their effectiveness.

The professional development series I created for my project would be beneficial for school districts that want to provide teachers with knowledge and effective strategies for phonemic instruction without asking or requiring teachers to put in additional hours of time beyond their contract. Earlier in this chapter, I discussed how much I benefited from LETRS training but requiring all educators to complete this training or something similar may not be feasible. LETRS requires a commitment to participate in training for an entire academic year (or two if one pursues the second half of the training), investing significant time outside of work each week to complete. My project hones in on key learning and strategies that can be tailored to meet the needs of the participant’s grade level and

students and provides an opportunity for grade level teams to collaborate in learning, planning, and implementation.

Continuing to investigate best practices in early literacy instruction will be an on-going task as there is, and will continue to be, much research data available. As various populations in our country grow, ensuring we are keeping our linguistically diverse students in mind will be important, as well as confirming that strategies we use are sufficiently vetted. Similar to the field of medicine, one cannot ever pretend to have all the information on how to best instruct students in literacy, as all the information is ever-developing and being refined.

Summary

I firmly believe that the great majority of educators care deeply about their students and strive to do their best for them. There is a balance all educators have to find between planning for daily instruction and student needs and growing one's own knowledge about learners and best instructional practices, and it is easy to get consumed with the daily planning and preparation. This capstone project not only encouraged me to focus on growing my own knowledge about early readers and effective strategies to support their learning, but taught me much in how to interpret research and critically evaluate the credibility of the information I came across. I entered this profession with vastly different beliefs in how to best instruct students in literacy than I do today. At times, I have guilt thinking about how I blindly accepted and promoted these theories. However, this thinking does not help my students. What will help them is making a commitment to work to continually improve my practice and keep up-to-date on research

related to instruction. As author Maya Angelou said, “When you know better, do better.”
When it comes to our students and literacy, we must continually strive to know better.

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