CORE PRACTICES IN THE INSTRUCTION OF FOUNDATIONAL READING SKILLS IN PRIMARY GRADES (K-2)

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Dedication

I dedicate this work to my three beautiful grandchildren: Kamdyn, Alex, and Konnor. It is for them, and all the other children who will be learning to read in the Dover Area School District, that I have sought to improve instructional practices, not just during this research study, but throughout my 30-year career as an educator.

To Kamdyn, you came along at a most unexpected time, but also at a time when I needed something, someone, to provide me a beacon of hope. You were that light, and you continue to be my sunshine on a cloudy day. You will always be my number one girl. How much? More than the world…

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My darlings, your Mimi loves you more than you will ever know and hopes that your love of life and learning will only grow with time.

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Abstract

Data from initial third-grade diagnostic assessments for the last two years, as well as results of third-grade PSSA tests, indicate that students in the Dover Area School District are demonstrating weaknesses in foundational reading skills. This research is critical at this time not only to provide information to assist in closing learning gaps created by the COVID-19 pandemic, but also given the relationship between a student's level of reading proficiency in third grade and future success. The focus of this action research was to gather qualitative and quantitative data relative to instructional practices in primary classrooms specific to foundational reading skills, teachers' use of assessment to drive instruction, and kindergarten through second grade student performance on triannual diagnostic and benchmark assessments. Data was collected through teacher surveys, direct classroom observations, semi-structured teacher interviews, and diagnostic and benchmark scores for students in kindergarten through second grade during the 2022-23 school year. The results of the research indicate that instructional practices are inconsistent within and among primary classrooms. Additionally, student growth in foundation skills was inconsistent between measures, with some students demonstrating growth but not gaining as expected according to criterion referenced-benchmark scores and national norms. Performance in one measure, ORF, was supported by teachers' reported confidence in teaching the skill and instructional time spent on it. The study concludes with recommendations for increasing consistency of instructional practices and all staff's understanding of effective instructional practices and data analysis.

CHAPTER 1

Introduction

In October 2022, the National Center for Educational Statistics (NCES) released data from the 2022 National Assessment for Educational Progress (NAEP) Reading Assessment. This assessment, administered every two years to a sampling of 4th and 8th graders nationwide, provides data regarding students' reading proficiency and informs national policy. While a slight decline in proficiency was expected due to the impact of the COVID-19 pandemic on instruction and learning, a longitudinal review of scores is disheartening. Despite the federally-mandated No Child Left Behind and the Every Student Succeeds Act to increase reading proficiency and federally sponsored research in reading instruction, 4th graders in 2022 fared no better than their peers who took the assessment in 2005. The NCES reports that scores were "not significantly different in comparison to 1992" (United States Department of Education, n.d.). In Pennsylvania, where proficiency levels had hovered slightly above the national average for many years, only 34% of students taking the NAEP Reading Assessment were at or above proficiency, exactly where students scored in 2002.

Considering Hernandez (2011), who found that students not reading proficiently by third grade are four times as likely not to graduate with their grade-level cohort, 66% of students in Pennsylvania who took the NAEP will likely not graduate on time. While PSSA data for third graders is more encouraging, with 52.4% of students scoring proficient or advanced on the 2022 administration (Pennsylvania Department of Education, 2023), we must ask ourselves as educators whether we are satisfied with sending only half of our students on to fourth grade with the skills to be successful.

Background

In the Dover Area School District, 59% of the district's third graders scored proficient or advanced on the 2022 PSSAs. Additionally, the number of students identified as economically disadvantaged exceeds 40%, a statistic that only decreases a non-proficient reader's likelihood of graduating on time (Hernandez, 2011). The Dover Area School District has experienced a decline in its third-grade PSSA scores each administration since the 2016-17 school year. District benchmark data indicates little growth across administrations, with most students still performing at the basic or below basic on the annual PSSAs. Additionally, diagnostic assessments in both second and third grade indicate that, while students make gains in language, vocabulary, reading literature, and reading informational texts, they make minimal gains (average 2%) in reading foundations. Students' readiness for third grade is decreasing each year as evidenced by fall diagnostic data.

The Dover Area School District Comprehensive Plan 2020-23 has identified the goal to “Establish a district system that ensures the consistent implementation of effective instructional practices across all classrooms in each school” (Dover Area School District, 2020). While all administrators are conducting both formal and informal observations with feedback aligned to Danielson's Framework for Teaching regularly, effective instructional practices specific to foundational reading skills have not been defined. While the district continues to establish instructional foci for students receiving Tier 2 and Tier 3 intervention, there has been little focus ensuring the implementation of sound instructional practices within Tier 1. There is little evidence of consistent implementation of effective instructional practices concerning reading across all classrooms.

In addition to the current superintendent of schools establishing a goal for all third-grade students to be scoring “proficient” or better on the PSSAs, The American Rescue Plan (ARP) Act Elementary and Secondary School Education Relief (ESSER) State Reserve funds require that 8% of an LEA’s allocation be utilized for Reading Improvement and Acceleration with an emphasis on structured literacy. In order to use these funds efficiently, there must be both an understanding and expectation of effective instructional practices across district classrooms.

Capstone Focus

This research project will determine the instructional practices currently being utilized to teach foundational reading skills to all kindergarten through second-grade students. It will explore the critical foundational reading skills and the effective practices in teaching, such as indicated in the literature. Information will be gathered to determine how foundational reading skills are currently being taught within the Dover Area School District. Student assessment data will be collected and analyzed to ascertain which instructional practices may contribute to student growth and achievement in foundational reading skills. Additionally, the research project will establish what training and support has been provided to teachers specific to the instruction of foundational reading skills.

The research project is concurrent with the district’s creation of English Language Arts curriculum K-12 and the exploration of core resources. It will conclude with recommendations for future practices, training, and supports for core reading instruction across all district kindergarten through second-grade classrooms.

Research Questions

In considering the need and focus of this project, the following research questions were established:

1. What instructional strategies and methods are used to teach foundational reading skills in the Dover Area School District?
2. How do students perform on reading diagnostic and benchmark assessments in kindergarten through second grade?
3. How do teachers use assessment data to drive instruction?

Data will be collected utilizing a mixed-methods approach. A survey of kindergarten through second-grade teachers will gather information about teachers' perceptions and use of instructional practices. Classroom observations and follow-up interviews will be conducted to gather additional quantitative and qualitative data concerning instructional practices and decision-making. Fall, winter, and spring diagnostic and benchmark assessments will provide quantitative data on student performance in foundational reading skills across a calendar year. These data will be analyzed for overall growth and trends/patterns within core skills.

Expected Outcomes

In relation to the research questions, there is expected to be a greater understanding of the instructional practices in the district's primary classrooms relative to reading instruction. These results will be shared with administrators to inform a type of fidelity checklist to be used for both walk-throughs and formal observations, in addition to professional development needs. The research will also result in disaggregating student performance in individual domains on diagnostic and benchmark assessments. This data

will be shared with teachers and administrators to bolster further discussions in instructional practices and potential resources to support instruction. Lastly, a synthesis of assessment practices will identify the need for further professional development and supportive measures to provide for meaningful discussions and decision-making.

Fiscal Implications

The fiscal implications will be minimal because of Pennsylvania's adoption of a structured literacy initiative and establishment of Training and Consultation (TaC) teams funded through IDEA-B. Training relative to these initiatives to districts participating in the Lincoln Intermediate Unit consortium is provided at no cost. The district may choose to use selected professional development days within the calendar to provide this training for professional staff. Administrators' training may be provided at no cost over the summer months or during the school year.

As the Dover Area School District employs six reading specialists at the elementary level who support teachers in the classroom, the district may provide additional coaching training for these individuals. Given the current hourly rate plus benefits within the professional contract, the cost of this training would be approximately $5,000, which may be paid through Title II funds. Again, as a TaC initiative, the LIU would not charge. The district may also choose to include the reading specialist assistants in its teacher training given that a distant goal of this project, and the current goal of the district, is to establish consistency in effective instructional practices. Four training days for the six assistants, six hours each, would cost the district approximately $3000. These fees, again, may be paid through Title II funds.

Concerning resources, all primary classrooms currently have instructional materials and resources which are evidence-based and support foundational reading skills instruction. It is not the intent of this research to recommend changes in materials. Therefore, a cost will not be calculated for new teaching materials. However, in any given year, consumables must be ordered. Assuming the district continues to utilize Fundations®, and utilizing enrollment data and current pricing, these consumables are estimated at $17,660. Again, this is not a new cost and would have been included in the annual budget for the Office of the Assistant Superintendent.

Summary

This project will answer three research questions relevant to the instruction of foundational reading skills in grades kindergarten through second grade in the Dover Area School District. Answers to these questions will provide information regarding instructional practices, student performance, and use of assessment data to drive instruction in the district's primary classrooms.

The research will begin with a literature review to comprehensively understand historical practices in foundational reading instruction. It will continue with a collection of quantitative and qualitative data through surveys, classroom observations, interviews, and student assessments.

Answers to the research questions in this project will provide the Dover Area School District with valuable information regarding instructional reading practices in primary classrooms across all elementary buildings. Data collected will support administrators in decision-making relevant to supervising reading instruction and professional development needs.

CHAPTER II

Review of Literature

Since 1992, there has been no statistical difference in fourth graders' performance on the NAEP Reading Assessment, with only 32% of those tested in 2022 scoring proficient or advanced (Institute of Education Sciences, 2022). Despite ongoing research in best practices for reading and national reports and federally sponsored initiatives, the United States' fourth-grade reading performance remains stagnant. An analysis of the Reading First Initiative that grew out of No Child Left Behind (NCLB) legislation in 2001 and cost the nation $6 billion indicated that there were no significant changes in first-grade students' reading except for small gains in decoding (Snow & Matthews, 2016).

NCLB initiatives, grounded in scientifically based reading research, required explicit and systematic instruction in the five components of reading instruction as outlined in the National Reading Panel’s report of 2000: phonemic awareness, phonics, fluency, vocabulary, and comprehension (Goldberg & Goldenberg, 2022; Stewart, 2004). The Every Student Succeeds Act of 2015 further supported evidence-based reading instruction. Nevertheless, the nation's students continue to not make progress.

The "Reading Wars" have resulted in many suggested best instructional practices, as the pendulum has swung back and forth over the last 50+ years (Semingson & Kerns, 2021). School districts follow the trends and the research, hoping they are making the right decisions. The Dover Area School District is no exception. It, too, has struggled to move the needle of reading proficiency over the last ten years, particularly in third grade.

For this reason, this researcher is choosing to examine the instructional practices for foundational reading skills within grades kindergarten through grade two.

This literature review begins with an explanation of foundational reading skills and their impact on reading achievement. Next, the researcher provides an overview of how students learn to read, including developmental milestones and development theories. The third section of the literature review explores the most notable approaches to reading instruction, such as Orton-Gillingham, Whole Language, and Structured Literacy. Programs and curricula being implemented within the Dover Area School District's K-2 classrooms, and based on these approaches, are reviewed, in addition to suggestions for evaluating programs for effectiveness.

Given that fidelity of implementation requires teacher preparation, the researcher reviews the literature associated with teachers' content knowledge, the impact of professional development on teacher readiness, and the impact of professional development on student growth and achievement. Lastly, the focus moves to critical components of teachers' instructional practices, a synthesis of what is known about how students learn to read, best approaches to instruction, quality programs and curriculum, and teacher competency and preparedness.

Foundational Reading Skills

Essential Components of Reading Instruction

In 2000, the National Reading Panel published its seminal report, a meta-analysis of the literature concerning reading research. The report recommended "The Big Five" as essential components to reading instruction: phonemic awareness, phonics, fluency, vocabulary, and reading comprehension. These components established for educators the

key areas for instructional focus in literacy to be taught with various emphases relative to developmental readiness and grade level. They also influenced federal policies such as No Child Left Behind and its successor, the Every Student Succeeds Act.

Phonemic awareness, the ability to recognize that spoken words are made of individual sounds called phonemes and then manipulate those sounds, has been identified as one of the most effective competencies in relation to reading development (Ehri, 2020; Ehri et al., 2001; National Reading Panel & National Institute of Child Health and Human Development, 2000). Phonics is then an instructional practice of teaching letter-sound correspondence, which builds upon a student's phonemic awareness and leads to the formation of words. This combination of phonemic awareness and phonics is often known as the alphabetic principle.

As students become proficient in reading words, they begin to combine words to read sentences, paragraphs, and longer texts. This ability to read words in a text quickly and accurately and use appropriate expression is known as fluency, oral reading fluency (ORF) when reading aloud. Assisting students in reading fluently is their oral and reading vocabulary. While oral vocabulary, the words one uses when speaking and listening, often creates the bridge between speaking and reading, it is reading vocabulary, the understanding of words' meanings, uses, and structures that facilitates comprehension (Indrisano & Chall, 1995; National Reading Panel & National Institute of Child Health and Human Development, 2000).

Reading comprehension is the convergence of ideas presented in a text and a reader's background knowledge. It is complex and requires the application of prerequisite skills. When these prerequisites, or foundational skills, are weak, the reader is forced to

use abundant energy to simply make sense of the symbols on the paper, leaving little for the more intensive processes of creating meaning (Learning Point Associates, 2004).

Foundational Reading Skills

The Pennsylvania Academic Standards for English Language Arts PreK – 5 identifies book handling, print concepts, phonological awareness, phonics and word recognition, and fluency as foundational skills. By grade 2, there is no longer an instructional focus on the initial development of the first four skills listed, but rather their application through fluency in more complex texts (Pennsylvania Department of Education, 2014). Within these skill areas, there are both constrained and unconstrained skills. Constrained skills have a floor and ceiling in terms of acquisition, such as identifying the 26 letters of the alphabet or isolating and pronouncing sounds. Unconstrained skills, such as reading fluency, are relative and can be acquired and honed over time. As students read more complex texts, they apply their constrained and other skills in new ways to create meaning (Paris, 2005; Snow & Matthews, 2016).

Regarding the foundational skills recognized by the Pennsylvania Department of Education, book handling is a constrained skill, consisting of turning pages, holding a book right-side-up, and identifying a book's parts. The alphabetic principle begins with print concepts, initially with distinguishing between letters and numbers, naming upper- and lowercase letters, and understanding that what is spoken can be written using combinations of those letters.

As students learn to identify letters, they also begin to receive instruction in phonological awareness, which has been determined to play a causal role in an individual's learning to read (National Research Council, 1998). Phonological awareness

is comprised of a group of skills whereby students develop an ability to manipulate sounds in spoken language. Phonemic awareness, a subset of phonological awareness introduced earlier, focuses on recognizing and manipulating individual phonemes. Instruction includes teaching a variety of tasks such as isolating, blending, deleting, adding, and substituting phonemes, as well as segmenting words in phonemes, and blending of onset-rimes, whereby an initial sound and the letters that follow in one syllable words (Learning Point Associates, 2004). Other skills under the phonological awareness umbrella include counting syllables, identifying rhyming and alliteration, and segmenting words. Skills are typically introduced from simple to complex and continue to develop through third grade (Institute of Education Sciences, 2016).

Phonological awareness connects the oral and the visual and sets the stage for phonics and word reading. Students with a well-developed alphabetic principle have demonstrated an ability to decode 70% of one-syllable words (Baker et al., 2018). While word reading, the ability to read familiar words with automaticity is essential, it is just as, if not more, important for students to be able to use phonological decoding to read unfamiliar words, as this is a skill that will be utilized as texts become more complex and vocabulary more content-specific (Adams & Osborn, 1990; Learning Point Associates, 2004; White et al., 2021).

As students develop the ability to decode words, they begin to string words into sentences whereby meaning is created. Oral reading fluency is often measured in words correct per minute, and a review of data indicates a positive relationship between this measure and reading achievement scores in fourth graders taking the NAEP reading assessment in 2018. On average, students who scored proficient on the reading

assessment read twice and many words correct per minute on an oral reading fluency assessment (White et al., 2021).

Impact of Foundational Reading Skills on Reading Achievement

Research indicates a systemic effect on the acquisition of reading skills as literacy develops. Letter-naming speed in kindergarten predicts reading fluency success in first grade (Schatschneider et al., 2004). Students identified as "at-risk" in kindergarten are less skilled in phonemic awareness, and students later identified with dyslexia show deficiencies in phonemic awareness and word decoding almost immediately at the onset of formal instruction (Schaars et al., 2017). Rapid auto-naming of words and the ability to recognize letter-sound patterns in words impact fluency, spelling, vocabulary, and reading comprehension (National Reading Council, 1998; Paige et al., 2019).

While fluency, vocabulary, and reading comprehension are essential components of reading, and their instruction has a place within the primary classroom, it is clear that learning to read must begin with a substantial set of skills developed through phonemic awareness and phonics instruction. Goldberg and Goldenberg (2022) suggested the following:

> Developing adequately as a reader requires much more than foundational skills. Consider a building. Laying the foundation is obviously not enough if you want to live or work in it. But without a solid foundation, you're either going to have a very shaky building or none at all. (p. 627)

Learning to Read

Oral Language

Oral language is a communication system using spoken words. Its development begins as receptive language initially, as children learn to associate meaning with the words being spoken to and around them, and then moves to expressive, whereby the child uses those words to communicate with others. Much research has been done to study the importance of oral language development, with studies linking oral language ability to students' success in alphabetic principle proficiency in preschool and kindergarten (Marulis & Neuman, 2010; Morris, 1993; Storch & Whitehurst, 2002). Additionally, students who develop strong oral language early demonstrate greater reading achievement in third and fourth grade as new vocabulary is introduced. Students with less-developed oral language, particularly those identified as economically disadvantaged, struggle to make gains even with vocabulary-specific intervention (Marulis & Neuman, 2010; Storch & Whitehurst, 2002). This phenomenon speaks to the need for language-rich experiences for all students at an early age (Adams & Osborn, 1990; National Reading Council,1998.

Emergent Literacy

Before students can understand what they read, and certainly before they can read words, they must understand that print, the symbols on a page, convey meaning. Exposure and experiences with print impact a student's ability to learn to read more so than socio-economic factors, intellectual ability, gender, or age (Adams & Osborn, 1990), again supporting the need for language-rich experiences. Identified as code-related skills, print concepts include multiple skills: word spacing and print direction, recognizing,

naming, and writing letters and the sounds they represent, recognizing of rhymes, recognizing and manipulating phonemes, emergent writing, and emergent/pretend reading. Instruction in these skills bridges oral language and written language. Storch and Whitehurst (2002) found a direct relationship between students' kindergarten code-related ability and their grade 1 reading ability.

Ehri et al. (1987) suggested a four-phase word reading development model. This phase theory begins with the pre-alphabetic phase, whereby readers depend on visual or context clues to determine words rather than letter-sound relationships. This is then followed by a partial alphabetic phase in which readers use what they know about letters and sounds to read familiar words. The complete alphabetic phase is when readers have learned to decode and can apply this skill to read and write words from memory. During the last consolidated phase, readers have developed a more expansive lexical memory and use that memory to decode and write multi-syllabic words (Ehri, 1987, 1992, 2020; Ehri & Wilce, 1985; Learning Point Associates, 2004). As students become more skilled in their phonological awareness, decoding, and sight word recognition, their automaticity in word reading increases; thus, leading to increases in reading fluency (Scarborough, 2001).

Developmental Milestones

Chall's Stages of Reading Development, introduced more than four decades ago, continues to provide educators a roadmap, from birth to adulthood. According to Chall (1983), readers at Stage 0 are within the Pre-Reading Stage. This time between birth and formal education (approximately age 6) aligns with Ehri's pre-alphabetic stage (Ehri & Wilce, 1985), in which readers develop oral language and early understandings of

phonemic awareness and print concepts. During Stage 1, typically between the ages of 6 and 7, readers develop phonological awareness and begin to connect letter-sound relationships and spelling. Readers age 7-8 enter Stage 2 and use their decoding skills to read a text and begin to formulate meaning by incorporating background knowledge with decoding skills. Sentences and texts remain relatively simple and predictable. Stages 3, 4, and 5 build upon what has been learned in Stages 0-2 whereby readers are using skills to learn new knowledge through various texts and viewpoints. Then, readers are exposed to more complex sentence and text structures, and the ability to decode words supports vocabulary acquisition (Chall, 1983; Indrisano & Chall, 1995).

The National Research Council, in its 1998 Report, suggested areas of instructional focus for foundational reading skills in the primary grades. In kindergarten, students develop letter knowledge and phonological awareness. First-grade instruction includes phonemic awareness, spelling-sound conventions, sight word identification, and independent reading. Moving to second grade, students apply the alphabetic principle to build automaticity to create meaning when reading texts (National Research Council, 1998).

Identifying Potential Reading Difficulties

Although these phases of emergent literacy and stages of reading development are typical for many readers, some individuals do not progress as seamlessly. Researchers have used these identified phases and stages to study which skills may lead to reading difficulties. In its review of 25 years of research, Pfost et al. (2014) found that there is no statistically significant pattern of deficits that explains the expanding gap between successful and poor readers' achievement. That is, readers who start with reading success

continue to experience success, while those who struggle initially continue to struggle. However, research has supported general factors leading to difficulty in reading, including neurological deficiencies, exposure and opportunities, and ineffective instruction and curriculum (National Reading Panel & National Institute of Child Health and Human Development, 2000).

The discrepancy model, a model used to identify specific learning disabilities with a significant discrepancy between an individual's measured cognitive ability and measured achievement, contributes to the understanding that neurological factors impact a student's ability to read proficiently. In a study of students identified with dyslexia, a form of a specific reading disability, brain images have indicated differences in subjects' automatic integration of letter and speech sounds as compared to those without dyslexia (Blomert & Froyen, 2010). In the same study, brain images of older individuals who participated in years of intervention exhibited the same deficiencies.

It has been proselytized that the more students read, the better readers they will become. In their longitudinal study, Ecalle and Magnan (2002) found that students' ability to organize phonemes into smaller segments grew with increased exposure and practice.

The Merriam Webster Dictionary defines "ineffective" as "not producing an intended effect." Therefore, to say instruction and curriculum are ineffective is to say that when provided or utilized, the instruction and curriculum are not producing the intended effect of student learning. Instruction or curriculum may be ineffective because it does not meet the needs of the learner. Storch and Whitehurst (2002) have noted that literacy skills will impact reading achievement at different stages of development. Regardless of

the stage, the longer a student receives ineffective instruction, particularly in foundational reading skills, the more difficult it will be to remediate. Skill gaps will widen due to students not having the core skills needed for higher-level skills such as vocabulary acquisition and reading comprehension (Lyon, 1996; National Reading Council, 1998; Scarborough, 2001; Schatschneider & Torgesen, 2004; Storch & Whitehurst, 2002). Olson (2011) concluded that the effect of remediation of foundational skills on reading achievement after the third grade was limited.

Instructional Approaches

Orton-Gillingham

The Orton-Gillingham approach to reading instruction was originally conceptualized by Dr. Samuel Orton in 1937. This approach emphasizes explicit, systematic, sequential, multi-sensory, and phonics-based instruction. Orton, a neuropsychiatrist and pathologist, surmised that, for a patient to fully create a link between print and meaning, there needed to be some other type of stimuli. Hence, the benefit of multi-sensory instruction (Orton, 1929). In 1960, Anna Gillingham and Bessie Stillman developed this approach into a curriculum where skills are explicitly and directly taught in a sequential manner. Frequent assessment determines mastery of taught skills before moving on to the next. This approach became popular with the inception of No Child Left Behind, which required the implementation of scientific, evidence-based approaches to reading instruction (Ritchey & Goeke, 2006). The Orton-Gillingham approach has influenced the popular Barton Reading Program, Wilson Reading System, and the Sonday System.

In studying the effects of the Orton-Gillingham approach on students not at-risk for reading difficulties, students at risk, and students with identified reading disabilities, there were notable improvements in first graders' word study, word reading, comprehension, and total reading scores on the Stanford Achievement Test. This was not replicated in second and third-grade results (Ritchey & Goeke, 2006). Oakland et al. (1998) found gains for students in grades 1 through 4 identified with dyslexia in decoding nonsense words, word recognition, and reading comprehension when instructed with an Orton-Gillingham approach focused on the alphabetic principle for two years as compared to those instructed with an alternate approach. The study also found that despite gains, students remained below average in word recognition but approached average in nonsense word decoding and comprehension.

Natural Language

In 1976, Goodman and Goodman proposed another approach to reading. The Natural Language approach to reading, the predecessor to Whole Language, describes "sequential instruction in those <reading> skills is as pointless and fruitless as instruction in the skills of a proficient listener would be to teach infants to comprehend speech" (Goodman & Goodman, 1976, p. 474). They purported that readers learn from whole to part rather than part to whole, and that learning to read was personal and social, a skill developed out of a need to communicate. The Goodmans also suggested that reading comprehension was dependent upon the meaning of the text for the reader and that print literacy skills were a natural extension to language development. This philosophy would later be expanded upon with the ushering in of the Whole Language Approach.

Simple View of Reading

Unlike the name suggests, the Simple View of Reading (SVR) does not diminish the complexity of learning to read. Instead, it breaks apart the task of learning to read into two components and can be described using the formula R = D x L. Or, the task of reading well (R), comprehending what is being read, is a product of the reader's skills in decoding (D) and language comprehension (L). Mathematically explained, if one of the factors (D or L) is weak, the product will be weak (20 = 4 x 5). Conversely, the product will be strong if both factors are strong (25 = 5 x 5). If one of the factors is 0, or is a significantly underdeveloped skill, reading comprehension will be significantly diminished (Hoover, & Gough, 1990; Hoover & Tunmer, 2018). Using this equation, the instructional implications of the simple view of reading are such that instruction in decoding will only positively impact reading if there is equal importance placed on the instruction of language comprehension.

Whole Language

As previously mentioned, an outgrowth of Natural Language, the Whole Language Approach was a grassroots effort of the late 1980s and 1990s to bring authentic literacy experiences into the classroom (Pearson, 2004). Goodman, who vilified the systematic and sequential approach to reading instruction wrote in 2001:

> By the time they [students] have satisfied their instructors that they can produce grunts for letters, blend sounds, sound out words, syllabicate, match words that have beginning, middle or final sounds, and attack, perceive, identify, recognize, analyze, and synthesize words, many of them will have lost all confidence in their ability to get sense from print. They will be the victims of overskill. (p. 312)

The Whole Language Movement, or Approach, was grounded in the constructivist theory of Piaget whereby learners create meaning through experiences and Vygotsky's social constructivism theory which emphasized literacy as a social construct (Goodman, 1992). It emphasized the reader making sense of what he was reading, being provided choices of what to read and write, and engaging in experiences with peers as fellow readers and writers (Au et al., 1997; Goodman, 1992; Pearson, 2004). This convergence of literacy and literature also changed the role of the teacher to that of a facilitator. Goodman believed this non-scripted curricular philosophy empowered teachers and gave them the voice that had been left out of the research. Rather than whole group instruction as the norm, teachers provided mini-lessons based on student needs and facilitated readers' and writers' workshops instead of explicit instruction in skills and strategies. (Pearson, 2004).

Whole Language was not without its critics. Chall (1983) asserted that whole language "research" was not evidence-based but rhetorical, and warned of the negative impact of instruction in the primary grades lacking a phonics focus. As authentic literature became the vehicle through which skills emerged, phonics and vocabulary development were de-emphasized and de-prioritized. However, with the establishment of the No Child Left Behind Act of 2001, the whole language era ended.

Balanced Literacy

The need for a more balanced approach to reading instruction, with both skills instruction and authentic experiences, was supported by the National Reading Panel (National Reading Panel & National Institute of Child Health and Human Development, 2000). Pressley et al. (2002) cited key components of balanced literacy instruction:

phonemic awareness, word recognition, vocabulary, comprehension strategies, self-monitoring, multiple opportunities for reading, making connections, and process writing. Also vital to this approach is the element of motivation. Direct instruction is provided through mini-lessons as well as meaningful literature-based activities. Small group instruction allows for scaffolding as students become more independent and struggling readers are immersed in literacy-rich experiences (Au et al., 1997; Pressley et al., 2002). Balanced literacy does not prescribe a specific set or type of instructional practices. When asked to list their most commonly used strategies and practices, an educators' survey provided Pressley and his team with more than 300 variations (Pressley et al., 2002).

Structured Literacy

Characterized by explicit and systematic instruction, structured literacy is an approach that necessitates scientifically-based practices, practices observed in Orton-Gillingham programs such as those previously mentioned. Popularly known as the Science of Reading, structured literacy emphasizes the explicit instruction in foundational skills for all students as core instruction. This approach brings again to light Chall's (1983) resolute stance that reading instruction must be grounded in research. Hence, structured literacy is not a singular approach but an amalgamation of almost a century of research on instructing students to become proficient readers (Semingson & Kerns, 2021).

In its meta-analysis of reading research, the National Reading Panel reported that systematic and explicit instruction is the “most reliably effective approach” (Learning Point Associates, 2004, p. 1). *Systematic* instruction refers to instruction in which (1) skills and concepts are taught in a planned and logical sequence, (2) there are clearly

defined behavioral objectives, (3) activities are planned and purposeful and include multiple opportunities for the application of learned skills, and (4) there are frequent assessments to inform instruction (Learning Point Associates, 2004, p. 1). A teacher who uses *explicit* instruction communicates clearly to students what they are learning and why and models how to use the skill (Learning Point Associates, 2004; Spear-Swerling, 2018). Foorman (1998) found that students receiving direct, explicit instruction performed better in word reading than their peers who participated in instruction where phonics was embedded. Additionally, structured literacy is characterized by a high degree of teacher-student interaction in which the teacher consistently uses formative assessment to determine student needs and provides immediate, corrective feedback rather than allowing the student to continue erroring (Spear-Swerling, 2018).

Essential skills taught through this systematic and explicit approach are purposefully sequenced based on research in brain development and causal relationships between skills and achievement. They include phonemes, letter-sound relationships, syllable patterns, morphemes, vocabulary, sentence structure, paragraph structure, and text structure (Spear-Swerling, 2018). Research has concluded that instruction in phonological awareness is most impactful when merged with explicit and systematic phonics instruction (Duke & Block, 2012; National Reading Panel & National Institute of Child Health and Human Development, 2000).

Direct instruction in the alphabetic principle also leads to greater achievement in both decoding and passage comprehension (Foorman et al., 1998). In her meta-analysis of research, Erhi (2020) found that explicit phonemic awareness instruction and

systematic phonics instruction were more effective than whole-word, or skills-embedded instruction, as proposed in whole language and balanced literacy approaches.

Socio-cultural Theory

While not dismissing other theories or approaches, the socio-cultural theory, linked closely with Vygotsky's social constructivism theory, purports that educators cannot ignore the impact of motivation and the influence of social constructs on reading development (Gregory, 2016). According to this theory, motivation to read is created out of a need to engage with others socially and supported by those of some influence in the reader's culture. For some, this may be a sibling or parent, while in others, it is an elder in a church group or a teacher (Au et al., 1997; Dehqan & Samar, 2014; Gregory, 2016). Research reviewed by the National Reading Panel noted that students across grade levels who engaged in repeated oral reading guided by teachers, parents, or peers demonstrated gains in word recognition, reading fluency, and comprehension (National Reading Panel & National Institute of Child Health and Human Development, 2000). This finding was supported by Dehqan and Samar's more recent research in which reading comprehension was bolstered in those receiving scaffolded support by teachers and peers through peer discussions, feedback, and group learning (Dehqan & Samar, 2014).

Programs and Curricula

Evaluating Instructional Materials

Regardless of the current educationally and or politically-endorsed approach, school districts are faced with the task of choosing instructional materials that support the curriculum and will lead to student growth and achievement. In Pennsylvania, the reading

curriculum is driven by the Pennsylvania Core Standards of 2014, a set of standards derived from the Common Core Standards introduced in 2010.

Section 2221 of the Every Student Succeeds Act defines comprehensive literacy instruction that "includes developmentally appropriate, contextually explicit, and systematic instruction," as well as "age-appropriate, explicit, systematic, and intentional instruction in phonological awareness, phonic decoding, vocabulary, language structure, reading fluency, and reading comprehension" (Every Student Succeeds Act, 2015). Therefore, school districts receiving state funding must be mindful of these regulations in selecting instructional materials.

The National Reading Panel (2000) recognized four “pillars” of an effective reading program. These pillars included “valid and reliable assessments, instructional programs and aligned materials, aligned professional development, and dynamic instructional leadership (pp. 2-3). Furthermore, Slavin et al. (2009) suggested that effective programs include the five core components of reading instruction (phonological awareness, phonics, fluency, vocabulary, and comprehension), with beginning reader programs facilitated by extensive professional learning opportunities for teachers, group/cooperative learning activities for students, and foci on teaching phonics and phonemic awareness. However, simply adding phonics alone as a focus does not increase reading achievement. The other components, as listed, must be present (Slavin et al., 2009). Through an analysis of the effectiveness of published programs, Snow and Matthews (2016) found that the research for the success of these programs is inconclusive and that educators should focus, rather, on implementing practices that promote student success. In other words, educators must determine what a student needs

and then identify and utilize effective instructional practices that meet those needs. Purchased programs are merely resources to support instruction.

Concerning elements of instructional materials, in a study of 114 classrooms in 32 Title I schools, Foorman et al. (2003) found that curricular materials with highly scripted lessons and more phonemic awareness instruction resulted in better letter and sound recognition for students in kindergarten. However, for first graders, reading and spelling achievement was more robust for those students whose teachers utilized less scripted materials and provided less phonemic awareness instruction. Additionally, using highly scripted materials resulted in more significant achievement for struggling readers, while using less-scripted materials resulted in greater achievement for high-performing students.

Research has suggested that more than 18 hours per year of phonemic awareness instruction, and more than 30 consecutive minutes of phonemic awareness instruction, negatively impact student reading outcomes, with 10-18 hours of instruction having an effect size of .86 (Ehri et al., 2001). Additionally, in their reports on the impact of the Reading First initiative proselytized by No Child Left Behind, which heavily emphasized phonics instruction, Gamse et al. (2008) and Moss et al. (2008) found little on first-grade decoding and no impact on comprehension. In considering the research, educators must select instructional materials and programs that allow for a balance of foundational reading skills instruction.

In order to address the five components of effective reading instruction within the core, or Tier 1, instruction in the primary grades, the Dover Area School District utilizes

the following programs: Fundations®, Heggerty Phonemic Awareness, and Journeys. Additionally, the kindergarten teachers supplement with KinderLiteracy®.

Fundations®

Fundations® is a supplemental program created by Wilson Language and designed for grades kindergarten through third grade to address phonemic awareness, letter recognition, phonics, syllable types, and affixes. Fluency, vocabulary, and comprehension activities are embedded as students gain skills, but they are not the focus of instruction. Supplemental to a core literacy program, Fundations® can be included in Tier 1 instruction for 25-30 minutes daily for all students. For struggling students, Fundations® may be used as a targeted intervention in Tier 2 for an additional 30 minutes of instruction three to five times per week. It may also be used for students who require intensive intervention (Tier 3) or who have specific learning disabilities in reading. In this case, Fundations® is to be taught in a small group or one: one setting and paired with a literature-based reading program and decodable text practice for an additional 30 to 60 minutes (Robinson & Wahl, 2004; United States Department of Education, 2010).

This systematic, multi-sensory program is research-based, utilizing the same principles as its parent program, Wilson Reading System. Throughout a lesson, students engage in highly structured and sequential activities such as skywriting, tapping out sounds, writing letters, mimicking teacher models, building words with sound cards, manipulating letter tiles, and marking words. Teachers consistently model for students and provide immediate, corrective feedback. Each level of Fundations®, of which there are three, builds upon the previous such that skills are introduced and practiced incrementally and to mastery (Goss & Brown Chidsey, 2012; Robinson & Wahl, 2004).

Despite its publishing in 2002, there is limited research on Fundations®' effectiveness. The U.S. Department of Education's What Works Clearinghouse conducted a research study in 2010 and found that no studies met their criteria for review. Goss and Brown-Chidsey (2012) compared Reading Mastery, a direct instruction program, to Fundations®. In the study, first-grade students participated in Tier I instruction with Fundations®. Based on DIBELS screener results, students deemed at-risk received an additional 30 minutes of instruction four times per week in a small group setting with either Reading Mastery or Fundations®. While all students made gains, the Reading Mastery intervention group scored higher than their peers in the Fundations® intervention group in a nonsense word fluency assessment, where students must use their decoding skills to read words. The researchers opined that this difference in performance may have been due to Fundations® providing less repetition and practice than Reading Mastery. Additionally, the fidelity of implementation may have been compromised given that Reading Mastery is highly scripted, whereas Fundations® has a variety of activities, each with its own set of instructions that may be interpreted (Goss & Brown-Chidsey, 2012).

Heggerty

Heggerty Phonemic Awareness is a curriculum developed by former first-grade teacher, Dr. Michael Heggerty, in 2003. Its programs provide 35 weeks of explicit and systematic instruction for all students in both phonological and phonemic awareness. The curriculum, most recently updated in 2020, provides for sequential, scripted instruction in rhyming, onset fluency, blending, isolating phonemes, segmenting, adding phonemes,

deleting phonemes, substituting phonemes, alphabet knowledge, and language awareness (Heggerty & VanHekken, 2020).

Heggerty Phonemic Awareness supplies teachers with detailed lesson plans, with each daily lesson only intended to last 10-12 minutes. While a Tier 1 curriculum, it also allows for lessons to be taught in small groups for targeted instruction. Like Fundations®, Heggerty is multi-sensory and includes hand motions specific to skills, such as segmenting or blending Heggerty and VanHekken (2020). The curriculum is not scripted and, therefore, allows for teacher interpretation.

Like that of Fundations®, research is minimal. The U.S. Department of Education's What Works Clearinghouse website does not list Heggerty within its literacy programs, nor does it include it in any reports regarding phonemic awareness. One published study, conducted by Al-Bataineh and Sims-King, was limited to one classroom of 18 kindergarten students in central Illinois. Results of the study, where all students were provided daily instruction using the Heggerty Phonemic Awareness program, indicated that 72% of the students were reading at a level that exceeded state expectations for kindergarten students when given the winter benchmark and that 89% of students either maintained or improved their performance from the fall benchmark (Al-Bataineh & Sims-King, 2013).

Schwartz (2019) conducted a comparative study of Fundations® and Heggerty in two first-grade classrooms as partial fulfillment of his doctoral program. It should be noted that Heggerty was paired with Words Their Way, a word study program published by Savvas, to provide spelling and phonics instruction. His results indicated that all students, including those considered at-risk for dyslexia, showed more significant growth

in letter-sound automaticity, nonsense word fluency, and blending when receiving instruction with Fundations® versus Heggerty and Words Their Way. Swartz surmised that the absence of phonics instruction and the visual components provided in Fundations® impacted student performance in the latter group (Schwartz, 2019).

Journeys

Published by Houghton Mifflin-Harcourt, Journeys 2017 is a kindergarten through grade 6 reading program. According to the publisher's website, "Journeys is a comprehensive K-6 English language arts program. It provides an instructional system for reading both literature and informational texts, for acquiring foundational reading skills, and for developing mastery of speaking, listening, and writing" (Houghton Mifflin-Harcourt, 2022). In reviewing Journeys' scope and sequence for this study, the kindergarten program provides foundational skills instruction in phonological awareness, phonics, letter names, concepts of print, high-frequency words, and fluency. In first grade, phonological awareness and concepts of print are eliminated and replaced with phonemic awareness lessons. Second-grade lesson foci are a continuation of first-grade. Text-based comprehension, speaking and listening, vocabulary, language, and writing lessons are included at all three grade levels (Houghton Mifflin-Harcourt, n.d.).

Resendez and Azin (2013) focused on achievement of a cohort of 700 students in grades K-2 (and 1-3) during 2011-2013 in six elementary schools. In answering “Do reading/language arts skills improve over the course of participating in the Journeys program?” students demonstrated gains in vocabulary, comprehension, spelling, and word analysis. The exception to this was special education students who did not show gains in word analysis. The research does not include data on the reading words subtest which

was included in the assessment (Iowa Test of Basic Skills – Form C) used to determine growth.

An additional study conducted included 650 students in grades 1 through 5 in 15 schools. The study asked educators to choose one unit of study from the Journeys program they would teach during the second semester (winter-spring) of the 2015-16 school year. Pretests and post-tests were created by ERIA curriculum experts and administered by the researchers. Students in grade 1 exhibited gains of a medium effect size (.56). Students in grade 2 exhibited gains of a small effect size (.49). Unfortunately, this study did not disaggregate data to allow for a deeper analysis of student performance (Educational Research Institute of America, 2016).

KinderLiteracy®

Developed by teacher Tara West, KinderLiteracy® is a popular curriculum found on Teacherpayteacher.com and espoused on West's website, littlemindsatwork.org, and Facebook page of the same name with 167,000 followers. According to West's website, this 35-week "whole group literacy program" grew out of the author's experience with close reads and inspired her to write lesson plans for close reads centered around popular children's books (West, 2017).

KinderLiteracy® lessons are organized by weekly themes with daily lesson plans, essential questions aligned to Common Core Standards, learning targets for students, phonemic awareness objectives, shared reading, independent practice, and writing (West, n.d.). While KinderLiteracy®'s focus is comprehension, there is no explicit connection to or instruction of foundational skills. There has been no published research to date regarding this program.

Teacher Preparation

Content Knowledge

With reading instruction being increasingly heralded as a science, teachers responsible for its instruction must be schooled in instructional strategies and content knowledge. With foundational reading skills, content knowledge includes understanding brain and skills development, print concepts, and phonemic and phonological awareness (Didion et al., 2020; Lyon, 1996; Moats, 2009; National Research Council, 1998). Moats and Foorman (2003) suggested, "Even with a structured program, teachers need specific and explicit linguistic knowledge to recognize and address the needs of all children on the continuum of reading and language proficiency" (p. 24).

In the era of the current Every Student Succeeds Act, legislators across the country are catching on with dozens of states implementing structured literacy policies. Pennsylvania just recently passed Act 55, which establishes programs for in-service teachers in structured literacy and teacher preparation requirements relative to the teaching of reading (Act 55 of 2022, 1949/2022).

A wealth of research suggests that those teaching our youngest students to read are not secure in their content knowledge. In a study of teachers in New Zealand, Arrow et al. (2019) found that teachers taught what was given to them but lacked an understanding of why they were teaching it. This same study found that teachers felt more confident in teaching comprehension and vocabulary than phonemic awareness, phonics, and fluency. There was little correlation between the two when comparing assessed teacher knowledge and teacher perception of that knowledge.

Moats and Foorman (2003) conducted a four-year, longitudinal study in low-performing, high-poverty urban schools. In surveying teachers' knowledge, they established a "modest predictive relationship" between this knowledge, student reading achievement levels, and teacher-observed competence. Surveys of kindergarten through fourth grade teachers indicated a weak understanding of phonological and phonemic awareness. One-third of second and third-grade teachers did not know how to improve reading fluency, and almost one-half of third and fourth grade teachers could not diagnose core reading difficulties in written or oral language. Open-ended question responses were rarely accurate or well-articulated.

Seven hundred twenty-two kindergarten through third-grade teachers in northern California with an average of 11.97 years of experience were surveyed by Cunningham and her team. Specific to phonological awareness, teachers were asked to count the number of phonemes in words. 20% of respondents got all questions incorrect, 30% earned a score of 50%, and less than 1% could score 100%. In a phonics knowledge survey, teachers identified regular and irregular spelling patterns and conventions of the English language. Concerning these two tasks, only 11% of respondents earned scores of 100% when identifying spelling patterns, and less than 1% earned scores of 100% relative to conventions of the English language. Overall, teachers in this study overestimated their understanding of core knowledge when compared to the actual results of knowledge surveys (Cunningham et al., 2004).

Bos et al. (2001) conducted research on 252 preservice and 286 in-service teachers in the Midwest, Southwest, and Northeast regions of the United States. As the other two studies highlighted, both preservice and in-service teachers lacked an

understanding of phonological awareness. When feeling prepared to teach reading to struggling or at-risk learners, both groups responded that they felt only "somewhat" prepared.

Effect of Professional Development on Teacher Readiness

If teachers lack the confidence to teach struggling readers and the content knowledge needed to teach all readers, districts must invest in effective professional development. While there is no one best way to prepare educators to teach reading (Hoffman & Pearson, 2000), what researchers have agreed on is that professional development must be ongoing, embedded, and supported (Dennis & Hemmings, 2019; Ehri & Flugman, 2017; Hudson et al., 2021; National Research Council, 1998; Stein et al., 2008).

Dennis and Hemmings (2019) explored the impact of job-embedded professional development on a single teacher. This professional development consists of a review and analysis of videotaped lessons of the subject's guided reading groups over a four-month period, as well as feedback and iterative discussions between the subject and the researcher. The subject grew in his pedagogical knowledge and his ability to teach more explicitly (Dennis & Hemmings, 2019).

In examining the impact of year-long mentoring for kindergarten through third-grade teachers in explicit and systematic phonics instruction preceded by a summer institute, Ehri and Flugman (2017) observed that teachers made gains in their phonics instruction. Of note was that second-grade teachers were less likely to teach the specific phonics program when their mentor was absent than their kindergarten and first-grade colleagues. Stein et al. (2008) found that teachers were more likely to implement a

program with fidelity when the helper/mentor was present. The results of the Ehri and Flugman (2017) study were also remarkable in impact on teacher attitude toward explicit phonics instruction. Teachers of kindergarten and first grade increased both their acceptance of the phonics program and decreased their resistance to learning over the year. For second and third-grade teachers, however, their acceptance (low) and resistance to change (high) remained stagnant. Despite this resistance, students within classes where mentoring was present, regardless of grade, showed increases in decoding and reading comprehension as compared to classes without a mentor (Ehri & Flugman, 2017).

In its recommendations regarding professional development for teachers, the National Reading Council (1998) endorsed continuous support from both colleagues and specialists and highlighted the importance of self-reflection to improve practice. These recommendations continue to be supported in more recent research. Goldberg and Goldenberg (2022) have suggested that teachers must be involved in reading instruction research to bridge the gap between research and practice.

Effectiveness of Professional Development on Student Growth and Achievement

Hattie has repeatedly stated the impact of high-quality teachers. In 2016, he emphasized Collective Teacher Efficacy as the new top-rated influence, or the belief of teachers in their ability to effect positive change, with an effect size of 1.57 (Hattie, 2017). As Mathes et al. (2005) concluded, students with skilled teachers with less scripted programs are able to make similar gains to those teachers with more substantially scripted programs. Piasta et al. (2009) found that student performance decreased as time with a teacher of weaker skills increased. Therefore, when considering professional

development, the ultimate effect of that professional development must be focused on student growth and achievement.

In a meta-analysis of the effects of teacher professional development on student achievement, Didion et al. (2020) did not find any one type of professional development method that impacted student achievement more than another. However, multiple researchers have found that some form of professional development positively affects student achievement. In Ehri and Flugman (2020), despite poor teacher attitude, students in grades 2 and 3 still made gains in phonics when their teachers were provided with ongoing professional development. Didion et al. (2020) meta-analysis concluded that students whose teachers received professional development performed better in reading assessments than those with teachers who had not.

Hudson et al. (2021) analyzed 14 studies on teacher preparation, training, and student achievement. They found moderate to large effect sizes on student performance in phonological awareness assessments. The same study found that in 13 studies related to phonics instruction, there was a significant effect size on student achievement; not enough data could be collected to determine the effect size on morphological awareness performance. The researchers concluded that the gains observed may translate to overall gains in word-reading ability.

Finally, Scanlon et al. (2008) researched the effectiveness and differences among three experimental groups: professional development for Tier 1 kindergarten teachers, small group, Tier 2 intervention for at-risk students, and professional development and Tier 2 intervention. Results indicated that overall student performance increased as teacher expertise increased and that the number of students identified as at-risk decreased

as the year went on. Specifically, for the treatment which only included professional development for the Tier 1 teacher, the number of students identified as at-risk was reduced by 50% (Scanlon et al., 2008). Therefore, professional development provided to classroom teachers will have a more far-reaching positive effect earlier on student achievement than interventions aimed at small populations once deficits have been identified.

Instructional Practices

Time

It is common to hear teachers sharing that they do not have enough instructional time during the school day. At the primary level in the Dover Area School District, schedules are impacted by Morning Meetings, lunch, specials, recess, intervention, and Closing Circle daily, leaving teachers with approximately four hours and 35 minutes for core instruction (English Language Arts, math, science, and social studies).

Although one would assume that increased instructional time would result in increased achievement, a review of the literature did not uncover any studies that could specify how much time should be allotted for reading instruction. In their investigation into the relationship between teaching the alphabetic principle and phonemic awareness, Foorman et al. (2003) saw a marked difference in the performance of students who only received 45 minutes of literacy instruction daily and those who received 90. However, "marked" was not defined quantitatively. As Rehman (2021) and Ahmadi (2021) have identified, it is not necessarily the amount of time allotted but rather how that allotted time is used.

Ehri et al. (2001) reviewed the meta-analysis findings of the National Reading Panel evaluating the effects of phonemic awareness instruction and discovered that the effect sizes for phonemic awareness instruction were more significant when the annual time spent on such instruction ranged between five and 18 hours. The researchers did indicate that this should be interpreted with caution given that time spent must be sufficient to meet the needs of diverse learners. The popular Heggerty curriculum, if adhering to its 10-12 minutes daily over 35 weeks, exceeds the maximum recommended hours by 11 hours.

Duke and Block (2012) uncovered that kindergarten and first-grade teachers spent half their allotted instruction time focused on word recognition and phonics instruction with limited time on vocabulary. This was of concern given that the decreased time spent in science and social studies at the primary grades to increase reading instruction time has impacted older students' vocabulary acquisition. Furthermore, Duke and Block's research built upon that of Ehri et al. (2001) in that primary teachers spent far more time than recommended on phonological awareness tasks, one of which was phonemic awareness. While specific time allotments are not supported in the research, it must be emphasized that time spent only on constrained skills stymies growth in others which may inhibit the widely accepted simple view of reading in that without language comprehension, decoding alone cannot support reading comprehension.

Grouping Structures

It is a general practice that reading instruction takes place in a blend of whole-group and small-group structures. Students participating in interventions do so in small groups within or outside of the regular classroom. Given that students acquire skills at

different rates, teachers must implement flexible grouping strategies to focus on individual needs (Foorman et al., 2003). This is especially important for students entering school with significant deficits, where more time spent in small groups at the instructional level proves more effective than time in whole-group instruction (Juel & Minden-Cupp, 2000).

The benefits of small group reading instruction include increased explicit instruction, emotional/social support, more intensive given the teacher-to-student ratio, and more student-teacher interactions (Foorman & Torgesen, 2001). While these characteristics are observed in Tier 2 and Tier 3 intervention groups once a student has been identified as at-risk, educators must consider the implications of using this type of grouping proactively and purposefully. Marulis and Neuman (2010) found that students' oral language improved more in whole group instruction than in small or individualized groups.

Instructional Activities

In 1998, the International Reading Association and the National Association for the Education of Young Children offered a joint statement regarding best instructional practices when teaching young students to read and write. Their recommendations for instructional activities in kindergarten through grade 2 included daily read-alouds and individual reading, balanced literacy, daily writing, small group instruction and practice, engaging and challenging curriculum, and adapted strategies based on the needs of the student (International Reading Association and National Associate for the Education of Young Children, 1998).

That same year, the National Reading Council published its report. It purported that activities essential to initial reading include students reading to gain meaning, having "frequent and intensive opportunities to read," becoming aware of letter-sound relationships, learning about writing words, and developing phonemic awareness and oral language (National Reading Council, 1998, p. 3). As in most of the literature, explicit instruction is emphasized. The report further asserted that success hinged on four conditions: cognitive and sensory abilities of students, positive literacy experiences before entering school, supportive and positive models, and a culture for learning (National Reading Council, 1998).

In 2000, the National Reading Panel followed with its report and recommendations of best practices. It established the five core pillars of reading instruction (phonemic awareness, phonics, fluency, vocabulary, and comprehension) and provided instructional suggestions for each based on its meta-analysis of the research. Common themes emerged in the Panel's recommendations for each of the five pillars: explicit and systematic instruction, support in making connections between the student and the new content/skill, multiple opportunities for practice, shared experiences/group learning, modeling and student-teacher interaction, frequent assessment, and multi-sensory activities.

While the above recommendations are appropriate for all readers, there has been a great deal of research specific to best practices for struggling or at-risk readers. Teaching to a student's Zone of Proximal Development, where learning can happen without frustration, has received significant attention (Connor et al., 2007; Florida Center for Reading Research, 2022; Juel & Minden-Cupp, 2000). Phonics instruction must be paired

with phonemic awareness and vice versa (Baker et al., 2018; Juel & Minden-Cupp, 2000; National Reading Panel & National Institute of Child Health and Human Development, 2000). Instruction for struggling readers must also go beyond phonics and phonological awareness. While struggling readers need intensive phonics instruction, focusing only on phonological awareness, phonemic awareness, and phonics, will not allow students to develop fully as readers, and will, therefore, not close the skills gaps between struggling and proficient readers (Indrisano & Chall, 1995; Juel & Minden-Cupp, 2000; McCardle et al., 2001).

Explicit Instruction

As previously defined, explicit instruction is when the teacher clearly states the skill or strategy being taught and models how it is used effectively. The Florida Center for Reading Research just published its most recent components of effective instruction in 2022, and further explains that explicit instruction includes using "precise instruction" (Florida Center for Reading Research, 2022, p. 1). Every major report listed in this review has cited the importance of explicit instruction as a research-based strategy in young students' acquisition of foundational reading skills (Institute of Education Sciences, 2016; National Reading Council, 1998; National Reading Panel & National Institute of Child Health and Human Development, 2000). In Juel and Minden-Cupp's (2000) research, students who received the most explicit instruction in sounding out and blending made the most progress. Connor et al. (2007) discovered that students with the lowest scores in letter and word reading at the beginning of first grade made compelling gains when provided with explicit instruction in the alphabetic principle.

Additionally, Morris (1993) found that in kindergarten classrooms where students received explicit instruction, 84% of students could demonstrate concepts of words in text compared to 50% of those who had not received instruction at 50%. 71% were able to segment words as compared to only 17% in the comparison group. In studying vocabulary development of kindergarten students, Marulis and Neuman (2010) found that explicit vocabulary instruction yielded larger effect sizes than implicit instruction (1.11 vs. .62). When explicit instruction was paired with application activities, the effect size was even more significant (1.21).

Assessment

Regardless of the amount of time allotted, grouping structures, instructional activities, or explicit vs. implicit instruction, the efforts are futile if students are not achieving or growing. It is imperative that students are assessed frequently and their data be carefully analyzed to determine whether the implemented instructional practices are meeting their needs. For beginning readers, growth should be monitored frequently in the alphabetic principle, phonemic awareness, and phonics, as early detection of deficits will lead to early intervention. The longer students struggle with foundational skills, the more significant of an impact there will be on reading comprehension, as students are not able to cognitively engage in activities where those foundation skills are prerequisites (McCardle et al., 2001; Schaars et al., 2017; Schatschneider & Torgesen, 2004).

Paige et al. (2019) suggest that summative assessments generally do not gauge a student's proficiency in essential reading subskills, nor do educators genuinely understand the impact of these essential skills on summative assessment performance. Therefore, assessments must be frequent and skill-focused, with student instructional needs being

determined from multiple data points (Foorman & Moats, 2004; McCardle et al., 2001). Foorman and Moats (2004) also found that students were most appropriately identified as being at-risk when a team of professionals conducted data analysis. Filderman et al. (2021) further asserted that there is a positive relationship between teachers receiving data analysis training and identifying struggling readers. However, of concern from this study was that professional development specific to data-driven instructional decision-making only predicted teachers' use of the data for students receiving math intervention. Peters et al. (2021) determined in that same year that the use of data-based decision-making, while it may lead to differentiated instructional practices in the general education classroom, did not significantly impact performance for struggling readers. If assessment, and data derived from assessment, are to be used to drive instruction that drives student achievement and growth, it is critical that this instructional practice receive attention commensurate to selecting an instructional approach, programs and curricula, and instructional activities.

Summary

Reading instruction in the primary grades receives much attention in the literature. Over the last 90 years, researchers have suggested multiple approaches and practices to facilitate learning to read, with a sizeable focus on struggling readers. Today, the Science of Reading framework has grown in its popularity due to research in best approaches for students with dyslexia. However, the majority of students learn to read in a large-group, general education setting. Only after failure to make progress in this core setting are students identified as needing additional supports.

Ainsworth et al. noted in 2012, "The search for the ultimate literacy strategy is perhaps as elusive as the everlasting explanation for the Holy Grail. Educators are always trying to find better strategies; yet, these are often misguided endeavors (Ainsworth et al., 2012, p. 79.) Rather than looking to find something new, it is the intent of this study to determine what instructional practices and strategies are being used in the primary classrooms of the Dover Area School District for all students and how students are performing given these practices. Understanding foundational reading skills, research-based effective approaches and practices, and teacher preparation will provide focus to the research and a lens through which to examine the findings.

Chapter III

Methodology

The review of the literature revealed that philosophical approaches to reading instruction have changed multiple times over the last century. Most recently, former Pennsylvania Governor Wolf signed Act 55 of 2022 into law, mandating that the Pennsylvania Department of Education establish a plan for professional development and applied practice in structured literacy. This mandate forces all LEAs to provide training to professional staff in structured literacy and all teacher preparation programs to do the same for its teacher candidates (Pennsylvania Department of Education, 2023). Given this mandate, this research will inform the Dover Area School District administration of the current instructional practices within the primary grades specific to reading, as well as teacher perspectives, and identify professional learning needs relevant to reading instruction.

This chapter outlines the purpose of the action research project and establishes context with a thorough description of its setting and participants. The research plan outlines the research design and data collection methods, which are further explained in detail, including an account of specific data collected relevant to the research questions. The chapter ends with a report on how validity was established through methods that supported credibility, transferability, dependability, and confirmability.

Purpose

The focus of this action research was to explore the key foundational reading skills and effective practices in teaching, such as indicated in the literature in grades kindergarten through second grade in the Dover Area School District. Three research

questions were answered through data collection and analysis. The project researched Dover Area School District primary grade teachers' current perceptions and understanding of instructional practices, as well as training and support provided to teachers specific to the instruction of foundational reading skills. The researcher observed actual instructional practices within the classroom setting. Additionally, the researcher examined diagnostic and benchmark data for all kindergarten through second-grade students in the Dover Area School District for the 22-23 school year.

The Dover Area School District Comprehensive Plan for 2020-23 identified "Establish a district system that ensures the consistent implementation of effective instructional practices across all classrooms in each school" as a goal (Dover Area School District, 2020). Furthermore, in examining data from the last three years, the current Comprehensive Plan Committee observed that elementary student performance on the ELA PSSA remains below pre-pandemic levels. Thus, the committee has determined that the district will establish a comprehensive literacy plan to include high-quality instruction in English Language Arts in elementary classrooms, focusing on Structured Literacy, to be included in the 2023-2026 Comprehensive Plan.

While the disruption of learning caused by the COVID-19 pandemic must be recognized, Grade 3 student performance on the PSSA was below 70% before 2020. Specifically, proficient and advanced proficient performance was 65.5% in 2015, 58.9% in 2016, 70.2% in 2017, 69.4% in 2018, and 65.4% in 2019. When state assessments resumed, third-grade students' proficient and advanced proficient performance for 2021 was 60.9% in 2021 and 58.7% in 2022. Historical fall diagnostic Exact Path data since 2019 indicates that student readiness for third-grade reading has declined and that student

gains in foundational reading skills during first and second grade are minimal. Additionally, performance is not commensurate with gains in other tested areas such as vocabulary, reading literature, and reading informational texts.

Given the Dover Area School District's continued focus on literacy, this research will provide information through answers to the following research questions to guide administrative decision-making.

1. What instructional strategies and methods are used to teach foundational reading skills in the Dover Area School District?
2. How do students perform on reading diagnostic and benchmark assessments in kindergarten through second grade?
3. How do teachers use assessment data to drive instruction?

The Literature Review discussed the century-old "Reading Wars," competing philosophies, and suggestions of what "good teaching" is with respect to reading instruction. With the amendments to Chapter 49 of Title 22 of the Pennsylvania Code as of April 23, 2022, the newly created Structured Literacy Program Framework will become practice for all public schools in the Commonwealth for the 2023-24 school year (Pennsylvania Department of Education, 2022). The desired outcome of this research will be to provide specific data relative to current instructional practices in reading within kindergarten, first, and second grades to support the district's implementation of this framework in the coming years.

Setting and Participants

The Dover Area School District is located approximately 30 miles southwest of the state capital, Harrisburg. Serving both the Dover Borough and Dover Township, the

42-square-mile district is a mixture of rural and suburban communities. One high school, grades 9-12, a middle school, grades 6-8, four elementary schools, grades K-5, and a K-12 Dover Cyber Academy provide educational services to the district's more than 3,200 students.

District staffing consists of 244 professional staff, 209 support staff, two school social workers, three certified school psychologists, and 21 administrators. Specific to this study, two elementary schools have two reading specialists each, and two elementaries have one reading specialist each. These individuals provide in-class and pull-out support to struggling readers through Title I or Tier 2 intervention. Additionally, each elementary school has a dean/intervention specialist who provides Tier 3 reading intervention.

As of February 2023, the Dover Area School District's average percent of economically disadvantaged students was 51.7%, with one elementary school, Weigelstown Elementary, at 65.2%. The English Language Learner population for the district is 2.3%. 16.8% of students districtwide receive special education services and supports, while 2.4% receive gifted services and supports, and 2.4% are considered youth experiencing homelessness or are in foster care. 77.6% of Dover students are Caucasian, 12.5% are Hispanic, 4.8% are two or more races, 4.2% are Black, .6% are Asian, and .2% are American Indian/Alaskan Native (Future Ready PA Index, n.d.).

Impacting this study is the district's transfer of several elementary teachers to different buildings and/or different grade levels over the last two years. In January 2021, the Pennsylvania Supreme Court ruled to permit Washington Township to secede from the Dover Area School District, resulting in a move of approximately 200 students to the

Northern York County School District, including 100 students from the North Salem Elementary School, in July of 2021. As a result, most North Salem teaching teams were reduced from three teachers to two. An enrollment study that began in 2021 revealed that the Weigelstown Elementary enrollment would be significantly increasing over the next five years due to new housing developments. Therefore, in the summer of 2022, borders for the North Salem and Weigelstown elementaries were realigned, moving more than 100 students from Weigelstown to North Salem for the 22-23 school year, thus requiring additional teacher transfers to support the growth of one school and loss of another. This, and additional requests for transfers, resulted in six teachers in grades kindergarten through second grade throughout the four elementary buildings being new to teaching or new to their grade level for the 2022-2023 school year.

It should also be noted that, relative to the Washington Township secession, the district has experienced a net loss of more than $4 million in revenue annually. This loss, coupled with rising healthcare costs and PSERS contributions, has created a financial burden the district has never experienced and will likely impact programming as the district adjusts to its new financial parameters.

An additional phenomenon impacting this study is the turnover in administrators at both the building and central office levels. Since 2021, there have been changes to three out of four elementary principals, the superintendent and assistant superintendent, as well as three out of six secondary administrators. These changes have affected support provided to teachers for reading instruction, as well as expectations for student performance. The current superintendent has a goal of reading proficiency for all third grade students.

Participants in this study included teachers in grades kindergarten through second grade. Upon approval from the Institutional Review Board, an email was sent to these teachers with a link to a teacher survey via Google Forms. An informed consent was included in the form which required the teacher's approval to proceed. If the individual disagreed, the survey automatically thanked the individual for their time and closed. Teachers in kindergarten through second grade also received letters sent to them individually regarding a classroom observation and semi-structured interview. These letters explained participation details and a place for individuals to agree to participate via handwritten signature.

While students did not directly engage in this research, performance data was retrieved three times during the school year through district-level reports. These reports were redacted by the district data manager or teacher lead (ESGI) in order to remove any personally identifiable student and teacher information and ensure anonymity.

Research Plan

Data collection began on October 22 based on receipt of IRB approval (Appendix G) and written approval to conduct research received on July 11, 2022 from the Dover Area School District superintendent (Appendix F). The researcher initiated an informed consent and an online survey of classroom teachers in kindergarten through second grade, as noted in Appendices A and B. The researcher emailed teachers using their school-based email on October 5, 2022, briefly explaining the request and a link to a Google Form. This Google Form, entitled *Teacher Survey: Classroom Teachers' Practices and Perceptions Regarding the Instruction of Foundational Reading Skills in the Primary Grades (K-2)*, began with Informed Consent, the acceptance of which provided access to

the survey questions. Due to the limited number of participants per grade level and the desire to preserve anonymity, teachers were only asked to identify themselves by grade taught.

In order to maximize transparency and support for participation, the researcher contacted the Dover Area Education Association's co-president, an elementary teacher, on October 7, 2022, to inform her of the research and offer a review of the approved survey questions and settings, which ensured that email addresses and personally identifiable information would not be collected. The researcher emailed reminders to the teachers on October 14, 2022, October 24, 2022, and November 9, 2022. The survey was closed on November 12, 2022. Before starting the survey, the researcher met with building principals to discuss the forthcoming research. Additionally, an email was sent to principals on October 16 to remind them that the survey results and subsequent observations would be kept strictly confidential and could not be shared with them.

Of the 35 teachers to whom the survey was distributed, 17 participated. As explained previously, teachers were transferred between buildings and grade levels due to shifting enrollments. Six current kindergarten through grade two teachers were either new to teaching or their grade level at the start of the 2022-23 school year, leaving only 29 teachers with one or more years of experience. Additionally, one veteran teacher left for FMLA unexpectedly, which reduced the number of teachers with experience teaching reading at these grade levels to 28. The researcher received emails from four of the seven inexperienced teachers indicating they felt they needed more experience to complete the survey. Ultimately seven kindergarten, seven first-grade, and three second-grade teachers completed the survey.

Also, in October 2022, letters of informed consent, provided in Appendix C, were mailed to each kindergarten, first, and second-grade teacher at their school buildings. These letters requested participation in a classroom observation and semi-structured interview following the observation. Informed consent letters were returned to the researcher in provided envelopes through inter-school mail. Upon return of the letters, the researcher emailed each prospective participant to arrange for a mutually agreed-upon date and time for an observation based on the teacher's instructional schedule. These agreed-upon dates and times were documented in calendar invitations. Semi-structured interviews, using questions provided in Appendix D, were also scheduled in this manner. Observations began in November 2022 and concluded in January 2023. Ten teachers participated in the observation and semi-structured interviews: four kindergarten, five first grade, and one second grade.

In addition to teacher surveys and observations, the researcher gathered core instructional materials to familiarize herself with the materials and expectations written by the publishers. The materials reviewed included teacher manuals for Heggerty *Phonemic Awareness*, *Fundations®,* and Houghton Mifflin Harcourt's *Journeys.* The research also examined an overview of Tara West's *KinderLiteracy®.* This exercise provided further insight into the programs and support for how to complete program-specific checklists during classroom observations.

According to the Dover Area School District's Assessment Calendar, diagnostic and benchmark data collection occurred three times during the school year. Approval to gather this data had been previously approved by the superintendent, as noted in Appendix F. Fall, winter, and spring assessment windows were established in the summer

of 2022 in order to gather student performance data using Acadience benchmark assessments for all students in grades kindergarten through second grade and ExactPath diagnostic assessments for students in grades one and two. Upon closure of the assessment windows, the data manager redacted the districtwide data to remove student and teacher names and provided the electronic files as spreadsheets to the researcher.

The ESGI was utilized to gather benchmark data for kindergarten students four times during the school year. This data was downloaded and redacted by a kindergarten teacher who serves as the data manager for this assessment. On February 22, 2023, the researcher met with this kindergarten teacher to learn more about the configuration of the ESGI and its reports, as this assessment is unique to one grade level.

Research Design, Methods, & Data Collection

This action research used a mixed-methods approach. This approach was chosen based on the need to provide a more in-depth understanding of reading instruction in the primary grades through the intersection of both quantitative and qualitative data and data collection. Student performance cannot be explained fully with only benchmark and diagnostic data. Instead, the information related to instructional planning and practices provides context to the performance and allows the researcher to form a more complete answer to the research questions, thus leading to more substantiated conclusions (Hendricks, 2017; Mertler, 2022).

This action research began with retrieving and reviewing archived diagnostic and benchmark data for students in kindergarten through second grade and third-grade PSSA data in order to determine a research focus and create a research proposal in July 2022. Research questions were generated based on this focus and included examining

instructional strategies and methods used in the instructional of foundational reading skills, analyzing student performance on reading diagnostic and benchmark assessments, and determining how teachers use assessment to drive instruction.

Upon IRB approval on October 4, 2022, the researcher distributed an informed consent for a survey, Appendix A, to kindergarten through second-grade teachers to gather information about teachers' perception and use of instructional practices and assessment, Research Questions 1 and 3. This 25-question survey provided both quantitative and qualitative data for analysis. Table 1 provides a classification of each survey question as it relates to the research questions.

Table 1

Classification of Survey Questions, Appendix B

Question(s)	Type of question(s)	Purpose
1	Multiple choice: grade level	Disaggregate data
2-4	Multiple choice: quantitative data	Research Question 1
5	Open-ended: quantitative, "other" response	Research Question 1
6	Open-ended: qualitative, station rotation	Research Question 1
7	Grid: quantitative data, frequency of core components instruction	Research Question 1
8-13	Open-ended: quantitative data, materials used to teach core components	Research Question 1
14	Open-ended: qualitative data, teaching materials provided by the district	Research Question 1
15-16	Likert-type scale: quantitative data, teacher perceptions of reading instruction	Research Question 1
17	Grid: quantitative data, teacher professional learning	Research Question 1
18	Multiple choice/multiple answers: quantitative data, types of assessments	Research Question 3
19	Open-ended: quantitative, "other" response	Research Question 3
20	Grid: quantitative data, teacher use of Assessments	Research Question 3
21	Open-ended: qualitative data, teacher use of assessments	Research Question 3
22	Open-ended: qualitative data, data analysis	Research Question 3
23	Grid: quantitative data, teacher use of data	Research Question 3
24	Likert-scale: quantitative date, teacher perceptions of reading instruction	Research Questions 1 and 3
25	Open-ended: optional qualitative data	Research Questions 1 and 3

Classroom observations were conducted from November 2022 through January 2023 to gather additional quantitative and qualitative data on instructional practices and strategies. A letter of informed consent, Appendix C, was sent to all kindergarten, first, and second-grade teachers. Upon receipt of the informed consent, the reviewer scheduled the classroom observations with the teacher. Data were gathered utilizing four separate checklists as provided in Appendix E. Three of these checklists were developed by the researcher based on the fidelity of implementation checklists provided by the publishers of both Heggerty and Fundations®, with format and items streamlined for easy data collection. The researcher developed an additional checklist to document instructional practices and strategies separate from those prescribed through the Heggerty, Fundations®, and Journeys programs and supported by the literature. All checklists allowed for the collection of both quantitative and qualitative data.

Observations were followed by semi-structured interviews through which additional qualitative and quantitative data relative to instructional decision-making and Research Question 3 was obtained. A semi-structured format was used to create consistency among questions and interviews while allowing the researcher to ask probing questions should a participant's response warrant such (Appendix D). Interviews were conducted via Zoom to allow for recording upon participants' consent. The researcher also took anecdotal notes during the interviews to record additional thoughts or prompt additional questions.

Quantitative data collection for Research Question 2 included the ESGI, Acadience, and ExactPath assessments administered in the fall, winter, and spring of the 2022-23 school year in kindergarten, first, and second grades (Table 2). An additional

baseline assessment of the ESGI is conducted at the start of kindergarten (Table 3). This data collection led to the researcher comparing student data against established local or national norms. To ensure confidentiality and the safety of the students (minors), all data were collected using the assessment tools' reports systems by the district data manager or kindergarten teacher serving as ESGI data manager. The data manager removed all identifiable information from the reports, including names, identification numbers, and teachers, leaving only grade levels and scores. Once this information was removed, the data manager sent the redacted reports and data sets to the researcher as a spreadsheet for sorting and analysis.

Table 2

Data Collected Per Assessment Period, Acadience and Exact Path

	Fall Administration	Winter Administration	Spring Administration
Acadience Kindergarten	RCS FSF LNF	RCS FSF LNF PSF NWF-CLS NWF-WWR	RCS LNF PSF NWF-CLS NWF-WWR
Acadience Grade 1	RCS PSF NWF-CLS NWF-WWR	RCS PSF NWF-CLS NWF-WWR ORF WC ORF Retell	RCS PSF NWF-CLS NWF-WWR ORF WC ORF Retell
Acadience Grade 2	RCS ORF WC ORF Retell	RCS ORF WC ORF Retell	RCS ORF WC ORF Retell
Exact Path Grade 1	Overall Performance Reading Foundations	Overall Performance Reading Foundations	Overall Performance Reading Foundations
Exact Path Grade 2	Overall Performance Reading Foundations	Overall Performance Reading Foundations	Overall Performance Reading Foundations

Note. RCS = Reading Composite Score, FSF = First Sound Fluency, LNF = Letter Naming Fluency, PSF = Phonemic Segmentation Fluency, NWF-CLS = Nonsense Word Fluency, Correct Letter Sounds, NWF-WWR = Nonsense Word Fluency, Whole Words Read, ORF WC= Oral Reading Fluency, Words Correct

Table 3

ESGI Data Collection with Baseline Assessment Administration

ESGI	Baseline	Fall	Winter	Spring
	Identify Rhyming Words Count and Segment Syllables Blend Syllables	Identify Rhyming Words Segment Onset and Rime Blend Onset and Rime	Produce Letter when Given Sound Produce Rhyming Words Blend Phonemes in CVC Words Segment Phonemes in CVC Words	Produces Letter when Given Sound Produce Rhyming Words Blend Phonemes in CVC Words Segment Phonemes in CVC Words

Note. CVC = Consonant Vowel Consonant

With respect to this research plan, fiscal implications are minimal. Surveys were developed using Google Forms, a web-based free tool application that also allowed for sorting within a Google sheet. The researcher developed observation data collection tools using fidelity checklists readily available electronically by the publishers of Fundations®, Heggerty, and *Journeys*. Participants completed the survey via Google Forms at times convenient for them. Likewise, interviews following observations were scheduled based on teacher availability, generally during a teacher's planning period or before or after school. Compensation was neither offered nor expected. Classroom observations were conducted during regular school hours, requiring no additional planning from the teacher participants. Benchmark and diagnostic data were collected from reports included in the assessment packages already purchased by the school district. Therefore, the only cost to

the district to replicate this research plan would be to purchase assessment packages which include downloadable reports and a spreadsheet program, should the district not wish to utilize the Google platform.

Validity

Mertler (2022) describes validity as "the extent to which the data collected accurately measure what they purport to measure" (p. 203). Given that this research was conducted using a mixed-methods approach, the researcher scrutinized the validity of both quantitative and qualitative methods and data utilizing trustworthiness criteria: credibility, transferability, dependability, and confirmability (Gay et al., 2009; Lincoln & Guba, 1985).

In order to establish credibility given the complexity of the problem being studied, the research project included data collection from a survey, classroom observations, semi-structured interviews, and student benchmark and diagnostic assessments. This triangulation provided a comprehensive examination and analysis of instructional practices in reading at the primary level. Semi-structured interview question responses were significant in providing perspective for phenomena observed in both classroom observations and in the assessment data. Additionally, respondent validation was used during the semi-structured interviews to ensure accurate observation data. The researcher reviewed observation notes with each participant, allowing changes and soliciting additional information the participant deemed relevant. Lastly, the researcher engaged in negative case analysis with respect to assessment data which was not supported by classroom observation and survey data, as well as survey data which was not supported by classroom observation data.

Transferability accounts for the degree to which the research results may be used by and relevant to another researcher and within other settings (Hendricks, 2017; Mertler, 2022). The setting of this research project has been described thoroughly to illuminate the context in which the study has taken place. While not all districts may face the considerable loss in revenue that the Dover Area School District faces, they experience administrative and staff turnover and fluctuations in enrollment. Additionally, given the impact of poverty and reading proficiency on student success, researchers may find the Dover Area School District's percentage of economically disadvantaged students particularly useful in planning similar studies (Hernandez, 2011).

The participants of this study were limited to kindergarten, first, and second-grade teachers with the indirect participation of students in these same grade levels through their benchmark and diagnostic data. Although building configurations vary from district to district, these grade levels are common. Lastly, the programs used to measure student performance, namely Acadience, Exact Path, and ESGI, provide a discrete set of norms unique to their products which may influence another researcher's choice of data sources.

Similar to this research being transferable, it is also dependable in its capacity to be replicated. Multiple data sources were used to collect quantitative and qualitative data, including surveys, observations, semi-structured interviews, and student performance reports on benchmark and diagnostic assessments. These data collection methods can be implemented within any school setting and at no cost. Fidelity checklists for specific programs, such as Fundations® and Heggerty, were obtained via an internet search and adapted by the researcher to collect data relevant to the research questions.

Classroom observation and semi-structured participant interviews are consistent with current supervision and evaluation models within most school settings in Pennsylvania. All professional staff in the Commonwealth must participate in the form of observation annually, with pre- and post-observation meetings occurring with the staff's supervisor. While not evaluative, the procedures outlined in this research are commensurate with current supervisory practices.

Because this research study involved human participants, it was expected that flexibility in coordinating observations and interviews would be necessary. Teachers who completed the informed consent for the observation and semi-structured interview were contacted directly by the researcher and asked to provide dates and times when an observation would be possible. In order to gather accurate data that could be generalized across classrooms, the observations needed to take place when reading instruction typically occurred during the school day, suggesting that instructional practices and student response to those practices would be consistent regardless of the observation date. Additionally, the researcher collected student benchmark and diagnostic data at the close of the established assessment windows. While student absences may have resulted in data not being collected for those students, this is a natural occurrence in schools, and assessments conducted individually after a window has closed for the general population reduce the standardization provided during the actual administration.

In order to ensure that the research was free of bias, the researcher took numerous steps to confirm anonymity and accuracy. The teacher survey was structured so that access to the survey was not permitted until the individual read and agreed to the informed consent. The settings were such that participants' email addresses were not

collected, and no personally identifiable questions were asked. Additionally, the settings and questions were provided to the co-president of the professional association to confirm confidentiality and ensure harm-free participation. Observation and interview data were collected using a coding system that included the grade level and an additional symbol (e.g., K-1, 1-A, 2-B) to remove personally identifiable information. Copies of observation and interview notes were made available to individual teacher participants for review. Individual student performance data was collected from reports generated directly by the assessment programs. These reports were downloaded by the district Data Manager or kindergarten data manager and redacted prior to being sent to the researcher. All student and corresponding teacher information was removed, leaving only grade level and performance data. Reports for overall performance specific to foundational reading skills at each grade level were also generated directly from the assessment programs, eliminating the opportunity for data manipulation.

Furthermore, upon conclusion of this research, all electronic data will be printed and secured in a confidential location with all other physical artifacts, such as observation sheets and interview notes. Electronic documents, including the Google Form through which survey data was collected, and stored data will be permanently deleted unless district administration should request this data for future use. If so, the requested items will be provided for storage in another separate electronic location and then deleted from the researcher's files.

Summary

While a review of the literature did not identify a single best approach to reading instruction in the primary grades, it did identify instructional practices that have led to

student growth and achievement. The design of this research was intended to reveal which practices are being utilized in the kindergarten, first-grade, and second-grade classrooms in the Dover Area School District, as well as how students are performing, given the current instructional practices. Specifically, the research sought to answer the following:

1. What instructional strategies and methods are used to teach foundational reading skills in the Dover Area School District?
2. How do students perform on reading diagnostic and benchmark assessments in kindergarten through second grade?
3. How do teachers use assessment data to drive instruction?

This Methodology chapter provided details of the purpose, setting, participants, research plan, research design and data collection, and assurances of validity. The mixed-methods approach, as described, intended to utilize both qualitative and quantitative methods of data collection in order to provide data leading to a comprehensive understanding of instructional practices. The next chapter will present the specific data gathered and an analysis of that data relevant to the research questions.

Chapter IV

Data Analysis and Results

This chapter includes action research results investigating the instructional practices in primary classrooms in the Dover Area School District relative to foundational reading skills. Qualitative and quantitative data was collected from teacher surveys, direct classroom observations, semi-structured teacher interviews, and diagnostic and benchmark data from kindergarten through second-grade students during the 2022-2023 school year. The collected data will provide an impression of the instructional practices being used in the primary classrooms and how students respond to these practices, as indicated in the benchmark and diagnostic assessment data collected three times throughout the school year.

The data collected served to answer the following questions:

1. What instructional strategies and methods are used to teach foundational reading skills in the Dover Area School District?
2. How do students perform on reading diagnostic and benchmark assessments in kindergarten through second grade?
3. How do teachers use assessment data to drive instruction?

This chapter will present information through graphs, tables, charts, and narrative text which has been gathered specifically to answer these questions.

Data Analysis

A teacher survey was created using a Google form. When the window for participation was closed, the researcher utilized the “View in Sheets” function, which converted all responses to a spreadsheet format. The researcher created additional

spreadsheets and calculated percentages or noted narrative responses relevant to each grade level per question to disaggregate the data into grade levels. Data from this survey informed Research Questions 1 and 3.

With respect to classroom observations, informing Research Question 1, all data was collected using checklists and field notes. The researcher coded each classroom according to grade level (1A, 1B, etc.) and created spreadsheets for each of the four checklists. Data from the checklists were entered by hand. Field notes were also entered into the spreadsheets to code themes relative to the specific program or general observations as necessary. Data from semi-structured interviews were sorted and analyzed similarly, with interview notes given the same code as the respective classroom observation notes. Data were entered into spreadsheets, coded by themes, and provided information for Research Questions 1 and 3.

In order to collect and analyze student performance data relative to Research Question 2, the district data manager downloaded grade-level data for each of the benchmarking periods. The data were redacted, removing all identifiable student and teacher information, and sent to the researcher via Microsoft Excel software. The researcher combined each of the data sets from each building into one sheet per grade level, per benchmarking period. Excel sorting functions were utilized to sort data into assessment-specific reporting categories, with student performance within each being hand- and electronically tallied. Trends in data were highlighted for comparison among assessments.

After all data were analyzed relative to their respective research questions, the researcher began the triangulation process, examining highlighted themes and trends and

re-examining data sources to support or refute findings. Additional spreadsheets were created and coded according to relationships among data.

Results

Teacher Survey Results

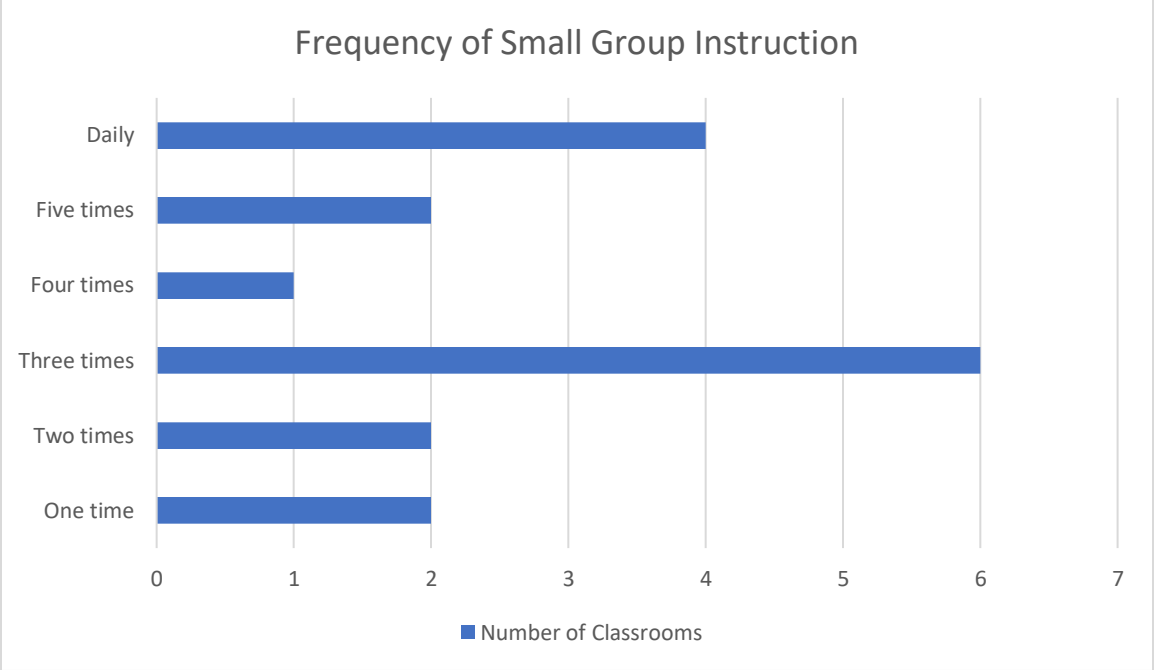
Kindergarten, first, and second-grade teachers were invited to complete a 25-question survey regarding their practices and perceptions regarding foundational reading skills instruction. Responses provided data for Research Questions 1 and 3. Surveys were created using Google Forms and structured to not retain personally identifiable information through questions asked or the Google settings. Informed consent was provided within the form itself. Of the 35 teachers to whom the survey was distributed, 17 participated: seven kindergarten teachers, seven first-grade teachers, and three second-grade teachers.

The first part of the survey focused on the English Language Arts instructional block, its length, how it is used, and how often the key components of reading instruction are taught. With respect to the number of daily minutes devoted to reading instruction, seven teachers reported more than 120 minutes, four reported 106-120 minutes, 2 reported 91-105 minutes, one reported 76-90 minutes, two reported 61-75 minutes, and one reported 46-60 minutes. In disaggregating this data by grade level, it was discovered that in kindergarten, time spent on reading instruction ranges from 61 to more than 120 minutes daily. In first grade, it ranges from 76 to more than 120 minutes daily. In second grade, it ranges from 46 to 120 minutes daily.

Questions three and four asked teachers to share how often they provide small group reading instruction and its purpose. Figure 1 details how often teachers reported they engaged in small-group instruction.

Figure 1

Frequency of Small Group Instruction per Six-Day Cycle



Further analysis revealed that the frequency at which small group instruction is provided is highly variable within kindergarten and first grade. Of the seven kindergarten teachers who responded, three teachers reported that they provided small group instruction daily; one responded four times per cycle, one responded twice per cycle, and two responded once per cycle. These data are inconsistent with the direct classroom observations in which small group instruction was observed in all four kindergarten classes and semi-structured interviews, which indicated that teachers provide small group instruction as part of their Daily 5. These results were similar to those derived from first-grade responses in which only one teacher responded that he/she provides small group

instruction daily. However, direct observation and interview data indicate otherwise. In second grade, three teachers indicated that they provide small group instruction three times per cycle, while one indicated five times per cycle.

Regarding the purpose of small group instruction, 14 respondents indicated that they provide both initial instruction of new skills and remediation/practice of taught skills. Two responded that they used it only for remediation/practice, and one teacher indicated, in response with "other" and further explained in question five, that she conducts enrichment activities for students in addition to initial instruction and remediation/practice.

Question six asked teachers to describe the activities in which students are engaged in "station rotation" when not meeting with the teacher (Table 4). In kindergarten, students are most often engaged in word work, writing, reading to self, listening to reading, and reading to someone. In four kindergarten classrooms, teachers reported that students utilize preloaded apps on their iPads. None of the kindergarten respondents reported using Exact Path. In first grade, students mainly engage in word work, Exact Path, reading to self, writing, and reading to someone. Three first-grade teachers reported that students listen to reading, and four reported using apps other than Exact Path. Of the second-grade teachers who responded to the survey, all teachers reported students reading to self, doing word work, writing, and listening to reading most often when working independently. Two of the respondents reported students using Exact Path and reading to someone. None of the second-grade teachers reported that students use any app other than Exact Path.

Table 4

Station Rotation Independent Activities per Grade Level

Activity	Kindergarten	First Grade	Second Grade
read to self	6	5	3
word work	7	6	3
writing	7	5	3
listen to reading	5	3	3
Exact Path	0	6	2
read to someone	5	5	2
another app	4	4	0

Note. Numbers indicate the total number of classrooms reporting activity use.

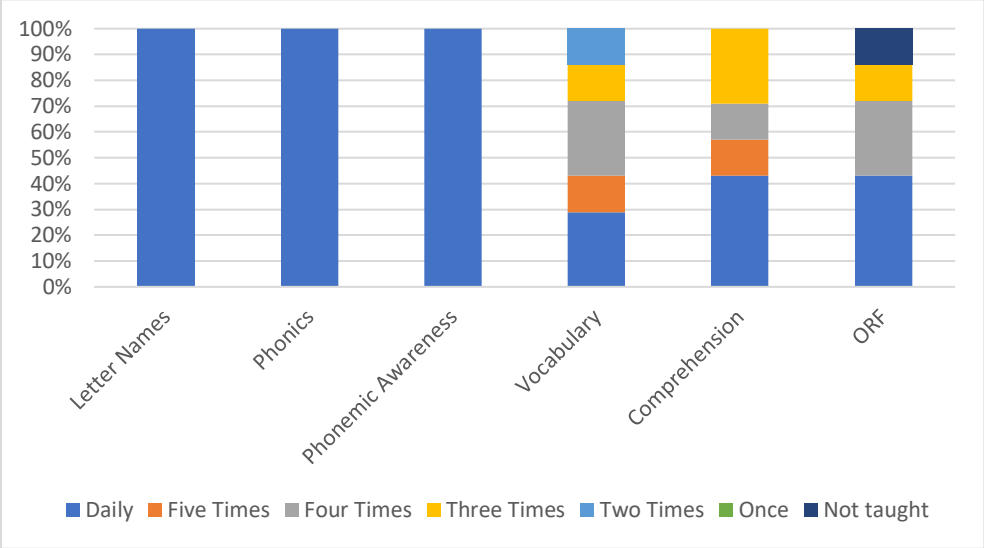
Questions seven through 14 asked teachers to share information about the teaching of the core components of reading instruction: letter names, phonics, phonemic awareness, vocabulary, comprehension, and oral reading fluency. In the survey, each component was defined to ensure a clear and consistent understanding of the components across respondents.

In question seven, teachers were to quantify how often per six-day cycle they taught each core component. Of the six, phonics was reported as being taught most frequently, with 13 of 17 teachers reporting daily instruction, and four of 17 reporting instruction five times per cycle. Phonemic awareness instruction was reported as being taught daily by 12 of 17 teachers and five times per cycle by four teachers. One second grade teacher reported that she does not teach phonemic awareness at her grade level.

Other core components yielded highly variable results. Figures 2 through 4 represent the frequency of instruction of each of the core components at each grade level.

Figure 2

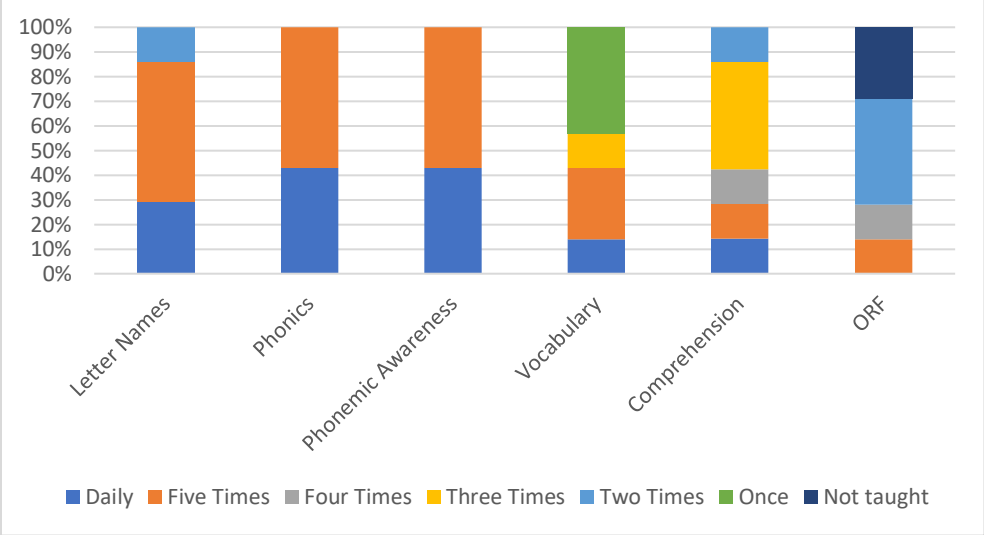
Frequency of Core Components of Reading Instruction in Kindergarten



Note. ORF = Oral Reading Fluency

Figure 3

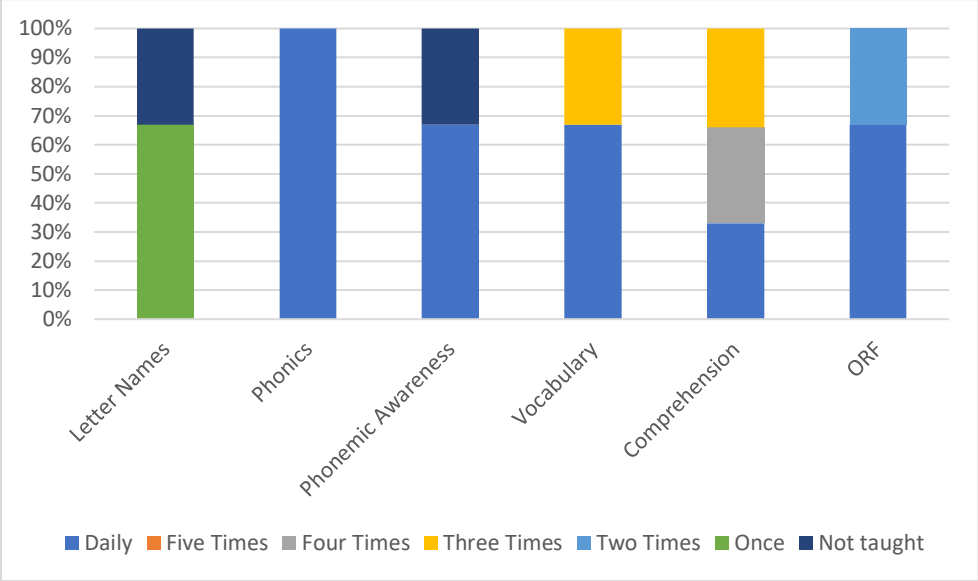
Frequency of Core Components of Reading Instruction in First Grade



Note. ORF = Oral Reading Fluency

Figure 4

Frequency of Core Components of Reading Instruction in Second Grade



Note. ORF = Oral Reading Fluency. Only three second grade teachers responded to the survey as compared to seven each in kindergarten and first grade.

Teachers were asked to list what materials they used to teach specific core components in questions eight through 14. Concerning teaching Letter Names, 16 of 17 teachers stated they used Fundations®, and 7 of 17 stated they also used Heggerty materials. Six teachers reported using other materials, such as games and teacher-created activities in addition to the district-provided Fundations® and Heggerty, two of whom specifically listed Tara West materials (creator of KinderLiteracy®). The teacher who said she did not teach Letter Names at this level responded with Not Applicable.

All teachers reported using Fundations® to teach Phonics, with five teachers sharing that they also use Heggerty, two also using Tara West materials, and one also using a variety of songs and games. Heggerty materials were reported as being used in all classrooms to teach Phonemic Awareness. Nine teachers also use Fundations®, and three

kindergarten teachers reported using KinderLiteracy® in addition to Heggerty. The teacher who said she did not teach Phonemic Awareness at this level responded with Not Applicable.

The results of questions regarding the vocabulary and comprehension instruction were discernible based on the grade taught. Kindergarten teachers all reported using KinderLiteracy® to teach vocabulary, with two kindergarten teachers also listing informational texts and FOSS Science materials. All teachers in first and second grade reported using Journeys to teach vocabulary, with one teacher listing trade books and another listing Teacher-Pay-Teacher materials.

Comprehension materials results were similar to vocabulary, with all kindergarten teachers reporting using KinderLiteracy®. All first and second-grade teachers reported using Journeys stories. Two first-grade teachers use trade books and leveled readers in addition to Journeys stories, and two second-grade teachers use Teacher-Pay-Teacher materials. One second-grade teacher also reported using decodable readers.

Concerning Oral Reading Fluency (ORF), materials varied at all levels. At the kindergarten level, one teacher had reported she does not teach ORF and, therefore, responded with Not Applicable to this question. Of the remaining kindergarten teachers, two reported using KinderLiteracy®; one reported using leveled readers; one reported using Heggerty; and two who had responded with a frequency with which they teach ORF wrote Not Applicable. Because this was an anonymous survey, it was not possible for the researcher to contact the respondents for clarification.

Question 14 was open-ended, asking if teachers believed they had enough materials to teach reading provided by the district. Eleven teachers responded that they

believe they have been provided enough materials. Four teachers responded that they agreed with enough materials but would like more. They were unsure that there are enough materials to teach vocabulary. They feel there needs to be more planning and collaboration time and insufficient time to teach everything. A kindergarten teacher reported she had bought most of her materials except for Fundations® and Heggerty, while another kindergarten teacher believes there is a need for additional decodables.

Question 15 asked teachers to rate their confidence level in teaching the six core components of reading. Again, each component was defined within the survey for clarification. In kindergarten, teachers felt most confident in teaching Letter Names and Phonics, with all seven teachers responding "very confident" in their ability to teach these components. First-grade teachers also felt most confident in these two components, with five teachers feeling "very confident" in teaching Letter Names and four feeling "very confident" in teaching Phonics. There was no consistency in confidence among the three second-grade teachers.

Kindergarten teachers felt equally confident in their abilities to teach Phonemic Awareness, Vocabulary, and Comprehension, with four teachers responding "very confident" and three teachers responding "confident" in each category. There were mixed responses to the teaching of Oral Reading Fluency, with one teacher selecting Not Applicable due to not teaching ORF at this level and another rating herself as "not confident." First-grade teachers felt least confident in the teaching of vocabulary, with five teachers indicating they are "confident" and two indicating they are "somewhat confident." Responses to other components were mixed. In second grade, one teacher

marked that she is “not confident” in teaching any of the six core components. Responses to other components were mixed seen in Table 5.

Table 5

Teachers’ Levels of Confidence in Teaching the Core Components

Component	Very Confident %	Confident %	Somewhat Confident %	Not Confident %	N/A %
Kindergarten					
Letter Names	100	---	---	---	---
Phonics	100	---	---	---	---
Phonemic Awareness	57	43	---	---	---
Vocabulary	57	43	---	---	---
Comprehension	57	43	---	---	---
ORF	29	43	14	---	14
First Grade					
Letter Names	71	14.5	14.5	---	---
Phonics	57	43	---	---	---
Phonemic Awareness	43	43	14	---	---
Vocabulary	---	71	29	---	---
Comprehension	14	86	---	---	---
ORF	14	43	29	14	---
Second Grade					
Letter Names	33.3	---	---	33.3	33.3
Phonics	---	33.3	33.3	33.3	---
Phonemic Awareness	---	33.3	---	33.3	33.3
Vocabulary	33.3	---	33.3	33.3	---
Comprehension	---	33.3	33.3	33.3	---
ORF	---	33.3	33.3	33.3	---

For question 16, teachers rated their need for professional learning opportunities in each of the six core components as the following: not having a need for professional learning, welcoming professional learning, liking professional learning, or needing professional learning. None of the teachers responded that they needed professional learning opportunities in the six areas. Two kindergarten teachers believed they did not need professional learning opportunities in any areas of reading instruction. For Letter

Names, 14 of the teachers feel they do not need professional learning opportunities, two would welcome such, and one teacher does not teach Letter Names at her level. Ten of 17 teachers do not feel they need professional learning opportunities in Phonics while seven would welcome it. Phonemic Awareness had mixed results, with seven teachers feeling they did not need professional learning opportunities, eight would welcome it, one would like it, and one reporting she does not teach Phonemic Awareness at her level. For both Vocabulary and Comprehension, five teachers do not feel they need professional learning opportunities, nine would welcome professional learning opportunities, and three would like professional learning opportunities. Lastly, three teachers do not believe they need professional learning opportunities in ORF, nine would welcome it, four would like it, and one teacher does not teach ORF at her level.

Question 17 asked teachers to share the sources of professional learning opportunities in which they have engaged independent of the Dover Area School District for each core component. Teachers could select the Lincoln Intermediate Unit, PaTTAN, a college or University Class, Professional Reading, or Other Source. Seven of the 17 teachers have engaged in professional learning opportunities only through college or university classes, three teachers have utilized other sources, and one teacher has only engaged in professional reading. Both the LIU and PaTTAN have been used minimally, with three teachers engaging in LIU trainings for Letter Names, Phonics, and Phonemic Awareness, and one teacher engaging in PaTTAN training for Letter Names, Phonics, Phonemic Awareness, and Vocabulary.

The survey's focus turned to assessment and data in questions 18 through 23. Question 18 asked teachers to indicate what types of assessments they use to measure

growth and achievement. 100% of respondents indicated they use formative, non-graded assessments. 100% also use observation. 64.7% use some form of a skills checklist. 82.4% use summative assessments, 76.5% use diagnostic assessments, and 88.2% use benchmark assessments. Eight teachers use all listed types of assessments to measure student growth and achievement. Four first-grade teachers use most assessments, with two indicating they do not use diagnostic assessments, and three indicating they do not use skills checklists. Two of the three second-grade teachers do not use benchmark assessment data or skills checklists to measure student growth and achievement. One second-grade teacher indicated that she only utilizes formative, non-graded assessments and observation. There were no responses to question 19, as it asked for an explanation had a teacher responded with "other" in question 18.

Question 20 inquired about the frequency at which teachers reviewed data collected from each assessment type. 13 of the 17 respondents reviewed at least one data set daily, with observation data being reviewed most frequently (daily for 76% of teachers). Diagnostic assessment data are reviewed less frequently than all other assessments, with eight teachers reporting they review it quarterly or after the assessment is given, four teachers reviewing it monthly, four teachers reviewing it weekly, and one teacher not reviewing it due to not using the assessment type. All first-grade teachers reported reviewing observation data daily and summative assessment data weekly. In all assessment categories, the results for kindergarten and second-grade teachers were highly variable. However, all teachers indicated they reviewed each of the utilized data sources at least quarterly. Kindergarten teachers reported reviewing assessment data more often

than their first and second-grade colleagues, with more frequent review daily and 2-3 days per week.

Teachers were asked in question 21 to describe circumstances under which they would review individual student data more frequently than indicated in question 20. Of the 14 optional responses, all teachers review data more frequently for struggling students. Six teachers review data more frequently for students who need to be challenged, and one teacher specifically mentioned reviewing data for students referred for learning support.

Question 22 inquired about teachers' use of a protocol when reviewing or analyzing student data. Fourteen teachers responded to this optional question. Four teachers listed a data protocol used by the data teams, and two teachers listed conducting item analysis. The remaining responses listed did not answer the question, with several teachers listing how data may be used once analyzed and one responding that she seeks help from the reading specialist. One teacher responded that this question was not applicable.

The last survey question with respect to assessment and data asked teachers to share how they used student data after analysis. Purposes that teachers identified as "most frequent" were creating small groups (16/17 respondents), planning for small group instruction (15/17 respondents), and providing data for additional supports such as intervention groups, Title I, or special education (13/17 respondents). 11 of 17 teachers also use data most frequently to plan for whole group instruction, and 10 use it to reflect on their instructional practices. Providing performance updates to parents yielded six "most frequently" responses, nine "occasionally" responses, and two "rarely" responses.

Eight teachers reported using data to plan for individual student practice most frequently; seven use it for this purpose occasionally; one teacher uses it rarely, and one never uses it to plan for individual students. Lastly, eight teachers use data to collaborate with colleagues most frequently, while six use it occasionally, and three use it rarely to collaborate.

Question 24 asked teachers to use a Likert scale to respond to five opinion questions. Data was analyzed for group responses as well as grade-level responses. Most teachers believe that they have enough materials and appropriate materials for teaching reading, with 16 responding that they strongly agree or agree with having enough materials and 15 responding that they strongly agree or agree that the materials they have are appropriate for the skills they teach. 13 teachers strongly agree or agree that they have enough time to teach reading. At the same time, four disagree or strongly disagree with that statement. Twelve teachers strongly agree or agree that they receive support and feedback for their reading instruction, while five teachers disagree. With respect to being provided enough time to review and analyze data, one teacher strongly agrees, six agree, six disagree, and four strongly disagree. Grade-level analysis is provided in Table 6.

Table 6

Grade-Level Responses to Belief Statements

Statement	Strongly Agree %	Agree %	Disagree %	Strongly Disagree %
Kindergarten				
1. Enough time for reading instruction	57	43	---	---
2. Enough materials	43	57	---	---
3. Materials are appropriate for skills	43	57	---	---
4. Enough time for data analysis	---	43	28.5	28.5
5. Support and feedback	14	57	29	---
First grade				
1. Enough time for reading instruction	29	43	14	14
2. Enough materials	29	71	---	---
3. Materials are appropriate for skills	29	57	14	---
4. Enough time for data analysis	14	28.3	28.3	23.3
5. Support and feedback	14.5	71	14.5	
Second grade				
1. Enough time for reading instruction	---	33.3	33.3	33.3
2. Enough materials	---	66.7	33.3	---
3. Materials are appropriate for skills	---	66.7	33.3	---
4. Enough time for data analysis	---	33.3	33.3	33.3
5. Support and feedback	---	33.3	66.7	---

The survey's final question asked respondents to provide additional feedback regarding reading instruction. Four teachers provided individual responses. One teacher thanked the researcher for the opportunity to participate in the study and stated they were open to meeting with the researcher regarding their reading instruction. Due to the

anonymity of the survey, it is unknown whether this respondent also participated in the data collection process' classroom observation and interview portion. One teacher responded that they feel they have enough time to teach reading but not enough time for small group instruction. Another shared that they have begun using "more of a Science of Reading approach" this year for small-group instruction. The last teacher would like professional development in the Science of Reading, more access to decodable readers, and more time to prepare materials.

Classroom Observation Results

Ten teachers in grades kindergarten through second provided informed consent for the researcher to observe reading instruction. All teachers observed have been teaching at their respective grade levels within the Dover Area School District for at least five years. Data collected provided evidence to inform Research Question 1: What instructional strategies and methods are used to teach foundational reading skills in the Dover Area School District? Data was collected using four separate checklists, three of which were specific to the Fundations®, Heggerty, and Journeys programs being used, and one was a form for general best instructional practices derived from a review of the literature (Appendix D). The Journeys checklist was not utilized for the kindergarten observations because the program was not used at that level.

Heggerty. Heggerty is a Phonemic Awareness, explicit instruction curriculum used for whole-group instruction in all kindergarten, first, and second-grade classrooms in the Dover Area School District. The researcher created a checklist by adapting a publisher-created fidelity checklist. This curriculum was observed being utilized in nine out of ten classrooms. In the tenth classroom, Heggerty was on the schedule but not

observed during the time allotted for reading instruction. In the nine classrooms where Heggerty was used, all teachers used the manual and the lesson sequence as written. Eight out of nine teachers provided explicit directions for each skill practiced, and five out of nine provided examples for each skill prior to engaging in practice with the students. Six teachers were observed delivering error correction, which consisted of stopping the students, restating the direction, providing an example, and trying again. The publishers of Heggerty suggest that a lesson should take no longer than 15 minutes. All classrooms met this criterion, with times ranging from seven to 12 minutes. Student engagement in the lesson, particularly with the hand motions, increased when teachers provided reminders of the need to make the hand motions, modeled the hand motions throughout the lesson, and instructed with an animated tone of voice.

Fundations®. Fundations® is a multi-sensory, explicit instruction curriculum used as a primary resource for whole-group phonics and spelling instruction in kindergarten, first, and second grade. Like Heggerty, the researcher collected data using a checklist derived from publisher-created fidelity checklists available on the internet. Also similar to Heggerty, Fundations® was observed in nine out of ten classrooms, with the tenth classroom listing Fundations® as part of the schedule. Given the checklist, all nine teachers were observed implementing the components of the lesson with fidelity. When student materials were necessary, all students were able to access them independently with minimal loss of instructional time (< 2 minutes). Nine out of ten classrooms had Fundations® posters and sound cards on display.

All nine teachers provided explicit directions for each lesson segment, and four of the nine teachers provided examples before the guided practice. Five teachers were

observed providing error correction immediately. According to the publisher of Fundations®, a lesson should take no more than thirty minutes daily. Eight of the nine classrooms were able to stay within this limit, ranging between eight and 23 minutes. In the second-grade classroom, the lesson was 38 minutes. Instructional time was lost due to student behavior and the need for the teacher to provide redirection often.

Journeys. This program was observed in all first and second-grade classrooms. A data collection sheet was developed based on the Journeys program's components to observe each classroom consistently. Journeys was used for whole group instruction in all six first and second grade classrooms. In two classrooms, program elements were also used during small group instruction. Considering the core components of reading instruction, comprehension instruction was observed in all six classrooms, while vocabulary instruction was observed in four. Phonics instruction was observed twice, fluency once, and phonemic awareness once. Letter naming instruction is not a component of the Journeys program.

Similar to the observations of Heggerty and Fundations® instruction, the researcher also noted explicit directions, examples, and error correction. Two teachers provided explicit directions for activities, and three provided examples/models before starting the activity. No teachers were observed providing error correction during whole-group instruction. In three classrooms, students used the student text, with one classroom of students having to share as the teacher reported she did not have enough student texts. Three classrooms also used leveled readers from Journeys during small group or independent reading. Four teachers used Think Central, the online version of Journeys in

lieu of student texts. There is no recommended duration for Journeys instruction. Therefore, the actual number of minutes was not tracked as a criterion of fidelity.

General observations. The researcher also kept general observation notes to gather additional qualitative and quantitative data regarding instructional practices. Notes were taken on a checklist observation form with space for field notes and then transferred to a spreadsheet.

Four kindergarten classrooms were directly observed during their designated reading blocks. Class sizes were 22, 18, 15, and 19 students. In first grade, class sizes were 18, 19, 16, 18, and 20 students. The second-grade class had 21 students. These class sizes were commensurate with other district kindergarten, first, and second-grade classrooms. All classrooms featured wall displays relevant to reading. Nine out of ten classrooms displayed Fundations® posters and cards; nine classrooms had word walls for sight words or heart words; seven classrooms had a version of the Daily 5 activities; three classrooms had sound walls; three classrooms had specific trick word displays; one classroom had a Vowel Valley; and the second-grade classroom had posters for syllables and core vocabulary. All classrooms had student texts organized into bins by level.

Classroom observations supported the variable time allotted to reading instruction indicated in the teacher survey. In kindergarten, the reading block ranged from 85 minutes to 160 minutes. In first grade, it ranged from 75 minutes to 180 minutes. The second-grade classroom had 130 minutes allotted for reading instruction. Within these blocks of time, students in eight out of ten classrooms engaged in select activities from The Daily 5, a literacy framework developed by Boushey and Moser in 2006 and includes the following five activities: read to self, read to someone, listen to reading,

work on writing, and word work (Boushey & Moser, 2014). During this independent work time, students also met with the teacher in small groups. In one kindergarten class, students only engaged in "read to self" for 80 minutes while the teacher pulled students to conduct progress monitoring and baseline assessments for a new student. Small group instruction was not observed in the second-grade classroom. Word work consisted of independent and paired multi-sensory activities in three of the four kindergarten classrooms where a full Daily 5 menu was utilized. Word work in all first grade classrooms consisted of a series of worksheets.

In three first-grade classrooms, an additional independent activity, students working on Exact Path, was observed. Exact Path is a diagnostic/prescriptive learning tool created by Edmentum and utilized in second through eight grade classrooms in the Dover Area School District. Three times per school year, Exact Path diagnostics are administered on student iPads, and individual learning paths are created based on students' performance. Students may work on these learning paths when in the classroom. ABCmouse, an educational app, was also observed in two of the four kindergarten classrooms as an alternate independent activity during the Daily 5.

In all first-grade classrooms and two of three kindergarten classrooms in which Daily 5 activities were observed, activities were pre-selected by the teacher. In one kindergarten classroom, students were provided a visual checklist and responsible for selecting their activities and marking off their accomplishments. The observer interviewed five students in the classroom about this process, and each student was able to explain what they were to do with respect to selecting and marking their activities.

Another five students were interviewed regarding the activities they chose, and all five were able to explain the directions and purpose of the activities.

In the kindergarten class in which students were instructed to read to self for eighty minutes, each student had his/her bin of materials consisting of a Fundations® journal and three or four leveled readers. The observer moved about the room during this time and was engaged by four students, each asking to read aloud. The observer sat on the floor with each student and listened to them read, modeling and prompting them to use learned strategies from Heggerty and Fundations®. All four students required support. Intervals of time on task were taken for 40 of the 80 minutes. On average, 36% of students appeared on task during the 40-minute collection window when not engaged with the teacher or observer.

During the time in which students received small group instruction or worked on Daily 5 activities, students in some classrooms were pulled for support. In two kindergarten classrooms, students were called individually into the hall to work on skills with parent volunteers for approximately five minutes each. Skills were determined by the teacher using data from the ESGI benchmarks, skills checklists, and observation. Students were later pulled in small groups to receive formal intervention with the reading specialist or her aide during whole-group literature time. In another kindergarten classroom, a building aide came into the classroom and ran a second small group session in tandem with the classroom teacher using lessons created by the teacher. Two of the five first-grade teachers did not have additional adult support during this portion of reading instruction. Another two had students leave the classroom for formal Tier 2 (Title I) intervention with the reading specialist, replacing their independent work. In the last

first-grade classroom, students were pulled from the classroom during whole-group instruction to receive Title I support. No students received intervention in the second-grade classroom during the observation period.

Due to the districtwide implementation of Fundations® and Heggerty in all kindergarten through second-grade classrooms, direct, explicit instruction was observed in nine out of ten classrooms. Of the nine classrooms, eight teachers followed the lesson script verbatim. One teacher followed the script but inserted additional verbiage, repeating it in their own words. In the tenth classroom, neither Fundations® nor Heggerty instruction was observed, although the Fundations® journal was used to record words copied from the board that were identified as "words of the week." While error correction was previously noted as being observed in both Heggerty and Fundations® lessons, two kindergarten teachers also used an errorless teaching procedure. This procedure is typically used when working with students with Autism or Intellectual Disabilities. This prompt/transfer/distract/check technique allows teachers to correct student errors immediately by providing them with the correct answer (prompt), having the students repeat it (transfer), moving on to something else (distract), and then coming back to the concept on which the student errored to check for retention (check).

In six classrooms, students worked with one or more partners to complete tasks. Kindergarten students worked in partners during Daily 5 activities, whereas students in first and second grade worked together to complete Journeys-related tasks.

Six of the teachers used a form of "think-pair-share" in which the teacher posed a question, and the students then talked with a partner while the teacher listened to the

groups discuss. After listening to the groups, the teacher called on groups to share who had correct answers.

In addition to think-pair-share, nine out of ten used a variety of means to check for understanding. All nine used observation during whole and small group instruction, moving about the room to listen to students or observing motions and mouths while in whole group and watching intently as students completed tasks while in small group. One teacher used individual whiteboards to check for understanding, while another used random questioning. All Pupil Responses (thumbs up/thumbs down; number of fingers raised) were used in one classroom for students to self-assess their readiness for the next activity. In two of the kindergarten classrooms, teachers played a version of "I Spy," where the teacher would call out an initial sound or letter or spell a color word, and students had to find a matching object in the rooms quickly. Random students were called on to share what they had chosen.

While teacher modeling is an expectation when teaching a Heggerty or Fundations®, the observer also noted how often teachers explicitly provided models for students during small group sessions, Journeys lessons, and other literature-based activities. Of the eight classrooms in which small groups were observed, kindergarten teachers modeled what the students were to do an average of four times per 15-minute session. First-grade teachers modeled an average of three times per 15-minute session. During first-grade Journeys lessons, while all teachers provided directions for each activity, two of the four teachers modeled the expectations. In the three kindergarten classes where literature-based activities were observed, the lesson focused on listening

for words with key sounds. All three teachers modeled finding the sounds and saying the words for students to repeat.

Notably, in one first-grade classroom, the teacher often referred to Heggerty and Fundations® protocols when using the Journeys program, specifically when introducing new vocabulary and when coming upon multi-syllabic words in the text. The teacher would pause and direct students to "get out their choppers" as they segmented and blended the word parts as a class. If 100% participation was not observed, the teacher would remind the students again of the expectation and repeat the activity. This practice was observed only in this one classroom.

Semi-structured Teacher Interview Results

A secondary component of the classroom observation was a semi-structured interview (Appendix E) conducted with each teacher participant via Zoom. Interviews were recorded with permission, and questions/discussions transcribed following the interview. Transcriptions were available to teachers for review. Four pre-determined questions were asked, with opportunities for teachers to provide additional information as desired.

The first question asked teachers to explain their process in planning for reading instruction, specifically addressing how they use data in the process. All teachers shared that they follow the scope and sequence/scripts from both Fundations® and Heggerty. Three of the four kindergarten teachers said they follow the themes in KinderLiteracy®. Four first-grade teachers and the one second-grade teachers said they follow the Journeys scope and sequence, while one of the first-grade teachers shared that she provides extension activities for writing due to Journeys' limited focus on writing. One first-grade

teacher said that she “picks and chooses” what she uses from Journeys since “Journeys is a bear” with “too many components.”

In describing the data sources used when planning for reading instruction, responses varied among participants and within grade levels (Table 7). The Dover Area School District has determined common assessments to be administered at various times throughout the school year. Acadience™ benchmarks in foundational reading skills are administered three times per school year as benchmark assessments. Progress monitoring data from Acadience™ is also gathered on an interval basis depending on the level of intervention the students receive. Exact Path diagnostic assessments are administered three times per year to students in first through eighth grades, with reports available to teachers for students who engage in their prescribed pathway activities independently. Heggerty, Fundations®, and Journeys have end-of-unit summative assessments which are to be used by all teachers.

Table 7

Data Sources Used to Plan for Reading Instruction by Number of Interviewed Teachers

Assessments	Kindergarten	First Grade	Second Grade
Acadience™	1/4	4/5	0/1
Exact Path	---	1/5	0/1
ESGI	4/4	---	---
Journeys unit tests	---	3/5	1/1
Fundations unit tests	1/4	3/5	1/1
Heggerty unit tests	1/4	1/5	0/1
Observation	4/4	0/5	0/1
Freckle	0/1	1/5	0/1
Next Steps/Guided Reading	0/1	1/5	0/1

While one first-grade teacher did acknowledge the use of Exact Path data, she also commented that she feels the reports give “some good data,” but she does not feel very confident in using it due to a lack of training, a sentiment echoed by another first-grade colleague. Another first-grade teacher stated that she uses Freckle and Next Step in Guided Reading (NSGR) data instead of Exact Path because she has not been trained in Exact Path and “no one has told them” how to use the data from Exact Path. One kindergarten teacher commented that while she administers the Fundations® and Heggerty assessments, she does not use the data in her planning because they are “too much like benchmarks,” not providing the immediate data she gets through observation.

The second question asked of teachers was, “Do you collaborate with anyone to plan for instruction? If so, with whom do you plan? How often do you collaborate? All participants commented that they formally planned with their grade-level colleagues within their buildings at least once per week, except for the second-grade teacher, who responded three times per month. One kindergarten and one first-grade teacher shared that they also plan on a rotating weekly basis with the reading specialist, dean/intervention specialist, and ESL teacher. Two first-grade teachers and the second-grade teacher shared that they meet twice monthly for “student success” meetings with their grade level colleagues, school counselor, dean/intervention specialist, principal, and other rotating staff, but those meetings focus primarily on behavior rather than instruction.

Next, teachers were asked how they adjust their planned instruction for struggling students. All teachers shared that they adjust their small group instruction to focus on areas they observe or the data reveals to be an area of need. One first-grade teacher commented that she would adjust whole-group instruction, specifically repeating a lesson in Fundations® or Heggerty, if she noticed most students were struggling. One kindergarten teacher shared that she monitors and adjusts both small group and whole group instruction “on the fly” when she observes her students not acquiring or retaining new skills as expected.

The last question asked teachers to share information regarding progress monitoring practices, specifically the frequency, support from others, instructional activities for those not being progress monitored, and how the data is used if different from their responses for adjusting planned instruction. Progress monitoring is completed

in grades kindergarten through five using Acadience™ and scheduled according to students' performance on triennial benchmarks. Eight out of ten respondents confirmed they were using this protocol, with students performing in the "blue" or above benchmark not being progress monitored, those in the "green" or at benchmark being progress monitored monthly, and those in the red or yellow who are below and well below benchmark being progress monitored bi-weekly. Students receiving tiered intervention from the reading specialist or dean/intervention specialist are monitored weekly. Eight of the ten teachers commented that they receive no assistance in progress monitoring their students who do not receive interventions. Two kindergarten teachers are assisted by reading or building aides. All teachers shared that the individual providing the intervention progress monitors those who received tiered intervention. All teachers also shared that students engage in Daily 5 activities while the teacher conducts progress monitoring, with one teacher explicitly stating that students engage in "read to self."

During the classroom observations, the researcher documented students leaving for 30 minutes of Title I or reading support services during the English Language Arts block in two kindergartens and four first-grade classrooms. In the two kindergarten classrooms and one first-grade classroom, students leaving missed whole group instruction in which the core component of comprehension was the focus. A question was developed to inquire about this practice, specifically, "How often do students receive Title 1 or reading support, and how is it determined when they will leave?" Of the six classrooms where this was observed, all six teachers commented that those students receive 30 minutes daily of Tier 2 support five days per six-day cycle. All six teachers also shared that the times for this support was given to them without input and based on

the collective needs of the building. Further inquiry revealed that when students miss core comprehension instruction, one teacher had a formal plan for "catching them up" on Fridays. The others did not.

Benchmark Data Results

Benchmark data for the 22-23 school year was used to answer the second research question: How do students perform on reading diagnostic and benchmark assessments in kindergarten through second grade?

ESGI. ESGI is a one-to-one, customizable benchmarking tool used by all Dover Area School District kindergarten teachers. Students are first administered a baseline assessment and subsequent benchmarks per quarter to measure the acquisition of core skills. The program includes reports which allow teachers to conduct item analysis for each sub-assessment.

Four untimed assessments are administered at baseline and every quarter for all kindergarten students: Upper Case Letters, Lower Case Letters, Letter Sounds, and Sight words. Percentage correct was calculated for each class per marking period (Table 8.)

Table 8

Mean Growth of Students with 100% Accuracy for Yearlong ESGI Assessments

	Baseline	End of Year	Growth
Upper Case Letters (26)	50.7	98.8	+48.1
Lower Case Letters (26)	44.9	98.6	+53.7
Letter Sounds (26)	41.8	97.7	+55.9
Sight words (67)	11.5	71.9	+60.4

Nineteen additional untimed assessments are administered at various times throughout the school year at the discretion of the kindergarten teacher, although there are suggested administration periods (quarters) for each. Reports are generated to indicate the percentage of accuracy for each student on each assessment. Teachers administer a baseline assessment to each student and record performance on subsequent benchmarks measuring the same skill. Because these administrations are left to teacher discretion, some teachers may elect to only administer one subsequent benchmark depending on individual student performance while others may administer several. Therefore, the data represented is not indicative of true growth across standard administrations or end-of-year proficiency (Table 9).

Table 9

Student Accuracy in Standards Based on Final ESGI Administration

Suggested Administration Period/Skill	Mean Student Accuracy/Final Administration
Quarter 1	
Identifies rhyming words	77
Identifies parts of a book	88
Concepts of print	80
Counts and segments syllables	75
Blends syllables	89
Answers questions about key details in the text	79
Identifies the role of the author and illustrator	67
Quarter 2	
Answers questions about key details in the text	87
Identifies rhyming words	86
Segments onset and rime	75
Blends onset and rime	74
Quarter 3	
Produces letter when given sound	91
Produces rhyming words	82
Blends phonemes in CVC words	89
Segments phonemes in CVC words	92
Answers questions about key details in the text	95
Quarter 4	
Informational text: identifies main idea and retells key details	86
Literature: answers questions about the text	88
Produces letter when given sound	98

Note. Numbers shown are percentages of accuracy.

Acadience™. Acadience™ is a universal screening assessment tool that measures the acquisition of foundational literacy skills. These timed benchmark assessments are administered by trained school personnel three times per school year. Additionally, students who require intervention are also administered Acadience™ progress monitoring weekly or biweekly. Only benchmark data was collected for this research study focusing on core instructional practices for all students.

Scores are reported as raw scores and benchmark status descriptors: well-below benchmark, below benchmark, at benchmark, and above benchmark. Some assessment results are also reported in National Percentile Rank (NPR). Students scoring above benchmark have a 90-99% probability of meeting early literacy goals; those at benchmark have a 70-85% probability of meeting early literacy goals; those below benchmark have a 40-60% probability of meeting early literacy goals; and those well-below benchmark have a 10-20% probability of meeting these goals. Cut points and benchmark goals for each administration indicate how students are expected to perform at each administration, assuming core instructional support for students initially scoring at or above benchmark and strategic instructional support for students initially scoring below or well-below benchmark (Good & Kaminski, 2011). Therefore, while students' raw scores may increase over the three administrations, they may not increase enough to meet the expected cut scores and benchmark goals for the students in the spring.

Kindergarten students were administered four assessments: First Sound Fluency (FSF), Letter Naming Fluency (LNF), Phoneme Segmentation Fluency (PSF), and Nonsense Word Fluency (NWF). Each assessment is given a one-minute time limit. The FSF benchmark was administered during the fall and winter, requiring the assessor to say

a word aloud for the student to then say the first sound they hear. Of the 223 students assessed, 89 showed growth from the fall to the winter, as defined by moving from one status to another. The most significant growth was observed in students moving from well-below benchmark status to at-benchmark status (32 students) followed by those who moved from well-below benchmark to below benchmark (24 students.) 65 students maintained their status from the fall to the spring, while 69 students demonstrated negative growth. Of the students who demonstrated negative growth, 43 scored above benchmark in the fall and moved to either at or below benchmark.

The LNF assessment, in which students read from a randomized list of upper- and lower-case letters in one minute, was administered in the fall, winter, and spring. All students experienced growth from the fall to the spring benchmark, naming a mean of 13.9 letters in the fall and 43.2 letters in the spring. Despite this growth, National Percentile Ranks declined for 109 students from the fall to the spring administrations. One hundred thirty-six kindergartners were considered at or above benchmark in the spring.

The PSF assessment required students to say the sounds they heard in the words read by the assessor in one minute and was administered in the winter and the spring. 61 of the 223 students assessed demonstrated growth, moving from one benchmark status to another, while 69 demonstrated negative growth. Ninety-three students remained within the same status from winter to spring. Notably, 90 students were at benchmark during the winter administration. Twenty-two of these students grew to above benchmark status, 44 remained at benchmark, and 24 fell below benchmark.

To assess basic phonic understanding, students were administered the Nonsense Word Fluency (NWF) and were assessed on their ability to produce the individual sounds of the nonsense word (Correct Letter Sounds or CLS) and blend the individual sounds into a word (Whole Words Read or WWR) during the winter and spring. Regarding the NWF-CLS, 42 students showed gains in moving from one benchmark status to another, while 80 showed losses. One hundred one students maintained their benchmark status. Of the 85 students who were at benchmark on the initial winter administration, 41 fell below benchmark. Similarly, 42 students tested above benchmark in the winter, and 28 were able to maintain this status in the spring. Concerning the NWF-WWR, the kindergarten group saw an increase from 1.7 to 4 whole words read correctly. 101 of the 223 students could not read any whole words in both the winter and the spring assessments.

Overall student performance is represented by a Reading Composite Score (RCS). In the spring of 2023, 47 students were above benchmark, 65 were at benchmark, 71 were below benchmark, and 40 were well-below benchmark. (See Table 10.) Based on the initial assessment status, 86 students made gains, 80 maintained status, and 57 experienced losses relative to expected growth.

All first-grade students were assessed for both LNF and PSF in the fall of the year. Regarding LNF, students scored a mean of 37.6 letter names, with 50% scoring within the average band of 25th to 75th percentile. With respect to PSF, 15% of first graders were well-below benchmark, 40% were below benchmark, 23% were at benchmark, and 22% were above benchmark.

Nonsense Word Fluency, both Correct Letter Sounds (CLS) and Whole Words Read (WWR), was assessed during all three administrations for first graders. With

respect to the NWF-CLS, 72 of 238 students showed gains in moving from one benchmark status to another, while 71 showed losses. Ninety-five students maintained their benchmark status. Of the 28 students who were at benchmark in the fall, 15 fell below or well-below benchmark status. When students were assessed for WWR in the fall, no students were well-below benchmark. At the spring administration, 55 students were well-below benchmark. In total, 55 students showed gains in moving from one benchmark status to another, while 108 exhibited losses.

Beginning with the winter administration, all first graders were assessed for Oral Reading Fluency (ORF) Correct Words Per Minute (WC) and Accuracy to measure advanced phonics skills and fluent reading of connected text. During this assessment, students are asked to read three different grade-level passages in one minute each while the assessor marks for errors such as substitutions, omissions, and hesitations that last longer than three seconds. If a student hesitates for more than three seconds, the word is marked as incorrect. The total number of words read correctly is calculated for each timing, with the median of the three used as the total score. Students are only administered all three passages if they can read at least 10 words correctly in the first passage (Good & Kaminski, 2011).

From the winter the spring administrations, 31 students grew in their benchmark status relative to their median words read correctly (WC), and 22 decreased. The remaining 185 maintained their status, with 95 students well-below benchmark, 14 below benchmark, 15 at benchmark, and 61 above benchmark. Accuracy is calculated using the following formula:

$$\frac{\text{median words correct}}{\text{median words correct + median errors}}$$

Forty-four first graders showed gains, while 24 showed losses, and 170 maintained their status. Of the 170, 86 remained well-below benchmark, 7 remained below benchmark, 20 remained at benchmark, and 56 remained above benchmark.

If students read at least 40 words correctly, they were also asked to retell the passage in one minute. Responses were scored according to the number of connected words in the retelling related to the story from the first word spoken and the number of details provided. Of the 238 students assessed, 115 were asked to provide at least one retelling during the winter and spring administration, indicating that they had read at least 40 words correctly in one passage. Sixty-three students did not provide a retelling during either administration, indicating they had not read at least 40 words correctly in one passage. Six students provided retellings only during the winter administration, and 54 students did so only during the spring. Benchmark status descriptors were given only at the spring administration. Of the 169 students who provided retellings during the spring administration, 63 were below benchmark, 13 were at benchmark, and 91 were above benchmark with respect to retellings with numbers of words related to the passage. Of the 115 students with winter and spring retell scores, 46 advanced from below to at benchmark, 21 remained below, 120 remained at benchmark, and eight moved from at benchmark to below benchmark. For these students, retell quality was also assessed but not given a benchmark descriptor for first-grade students. Fifty improved the quality of

their retellings, 22 students performed more poorly during the spring, and 43 maintained the same quality.

Overall student performance is represented by a Reading Composite Score (RCS). In the spring of 2023, 66 first-grade students were above benchmark, 46 were at benchmark, 29 were below benchmark, and 97 were well-below benchmark (Table 10). Based on the initial assessment status, 81 students made gains, 105 maintained status, and 33 experienced losses relative to expected growth.

Students in second grade are administered NWF and ORF. The NWF is administered only during the fall, while the ORF is administered during the fall, winter, and spring. Of the 219 students who completed the NWF-CLS, 72 were well-below benchmark, 62 were below benchmark, 39 were at benchmark, and 46 were above benchmark. Concerning NWF-WWR, 59 were well-below benchmark, 54 were below benchmark, 52 were at benchmark, and 54 were above benchmark.

For the ORF-WC, 27 students advanced in their benchmark status from fall to spring, 43 declined, and 149 maintained their status. Of these 149, 65 remained well-below benchmark, 23 below benchmark, 11 at benchmark, and 49 above benchmark. A total of 125 students were below or well-below benchmark in the spring. Calculated accuracy yielded results of 43 students advancing, 51 declining, and 125 maintaining. Of those 125 who maintained their benchmark status, 40 students remained well-below, 11 remained below benchmark, 15 remained at benchmark, and 54 remained above benchmark.

Regarding the ORF retellings, 171 second graders were given the opportunity to provide retellings during all three administrations, indicating that 48 students could not

read 40 words correctly per minute in any passage across all three administrations. Of the 171 who were, 50 students made gains in their benchmark status, 47 had losses, and 74 maintained their status. Of those 74 who maintained, 19 were well-below benchmark, 23 were below benchmark, 14 were at benchmark, and 18 were above benchmark. Retell quality was assessed during the winter and spring. Of the 195 students who at least at winter and spring retell scores, 46 advanced from below to at benchmark, 21 remained at below benchmark, 120 remained at benchmark, and eight moved from at benchmark to below benchmark.

Overall student performance is represented by a Reading Composite Score (RCS). In the spring of 2023, 50 second-grade students were above benchmark, 50 were at benchmark, 50 were below benchmark, and 69 were well-below benchmark. (See Table 10.) Based on the initial assessment status, 31 students made gains, 128 students maintained status, and 60 experienced losses relative to expected growth.

Table 10

Acadience™ Reading Composite Scores by Grade Level

Grade	Students Well-Below Benchmark	Students Below Benchmark	Students At Benchmark	Students Above Benchmark
Kindergarten				
Fall	78	46	43	56
Spring	40	71	65	47
First Grade				
Fall	125	45	26	42
Spring	97	29	46	66
Second Grade				
Fall	68	23	71	57
Spring	69	50	50	50

Exact Path. Exact Path is an online diagnostic prescriptive assessment administered three times per year in first through eighth grades in the Dover Area School District, the results of which place students on individualized learning paths based on performance. For this study, only first and second-grade results will be analyzed. Diagnostic results are reported in scale scores, National Percentile Ranks, and grade-level performance descriptors. Before analyzing the data, the researcher removed all data for students who did not take all three benchmarks to limit independent variables, leaving data only for those students who had participated in all three diagnostic administrations.

In first grade, 231 students participated in the fall, winter, and spring diagnostic assessments. Of those 231, 26 showed negative growth in their scale scores from fall to winter, and 53 showed negative growth from winter to spring. 10 of the 53 students completed the assessment in less than the recommended 10-25 minutes. Based on their scale scores, students are assigned grade-level performance descriptors based on expected performance in the spring of first grade (Table 11).

Table 11

First Grade Performance on Exact Path Diagnostic Assessments

Descriptor	Fall	Winter	Spring
Below Expectations	47	33	38
Approaching Expectations	88	77	76
Meets Expectations	87	102	88
Exceeds Expectations	9	19	29

Note. Numbers represent the number of students performing at that level at that time.

Exact Path produces a Skills Performance Report, which breaks down student performance into performance on specific skills assessed during each administration. In

first grade, Reading Foundations skills include Sounds in Words, Phonics and Word Analysis 1, Phonics and Word Analysis 2, Phonics and Word Analysis 3, and Reading Text Fluently. (See Appendix I for descriptors of each skill.) Performance on these skills in each diagnostic assessment yields results indicating whether students are not ready for the skill, struggling with the skill, have mastered the skill, are practicing the skill (within their current prescribed learning path), or have placed above and do not require practice. Table 12 presents students at all three administrations who were not ready for a skill compared to those placed above or "tested out" of a skill.

Table 12

First Grade Performance on Exact Path Reading Foundations Skills

Skill	Fall Percentage	Winter Percentage	Spring Percentage
Sounds in Words			
Not Ready	71	10	0
Placed Above	3	65	88
Phonics and Word Analysis 1			
Not Ready	90	34	12
Placed Above	0	23	57
Phonics and Word Analysis 2			
Not Ready	94	67	41
Placed Above	0	23	57
Phonics and Word Analysis 3			
Not Ready	97	73	43
Placed Above	0	13	16
Reading Text Fluently			
Not Ready	97	84	81
Placed Above	0	13	16

In second grade, 216 students participated in all three Exact Path assessments during the 22-23 school year. Of those 216, 26 showed negative growth in their scale scores from fall to winter, and 42 showed negative growth from winter to spring. 17 of the 42 students took less than the recommended 30-60 minutes to complete the assessment. Based on their scale scores, second grade students are assigned grade-level performance descriptors based on expected performance in the spring of second grade (Table 13).

Table 13

Second Grade Grade-Level Performance on Exact Path Diagnostic Assessments

Descriptor	Fall	Winter	Spring
Below Expectations	30	38	26
Approaching Expectations	111	73	65
Meets Expectations	43	71	86
Exceeds Expectations	32	34	39

Note. Numbers represent the number of students performing at that level at that time.

With respect to the Skills Performance Report, second grade Reading Foundations skills include Less Common Vowel Teams, Silent Letters, Word Analysis 1, Word Analysis 2, Word Parts, Unusually Spelled Words, and Reading Text Fluently. (See Appendix I for descriptors of each skill.) Like first grade, performance on these skills in each diagnostic assessment yields results indicating whether students are not ready for the skill, struggling on the skill, have mastered the skill, are practicing the skill (within their current prescribed learning path), or have placed above and do not require practice. Table

14 shows students at all three administrations who were not ready for a skill as compared to those who were placed above or "tested out" of a skill.

Table 14

Second Grade Performance on Exact Path Reading Foundations Skills

Skill	Fall	Winter	Spring
Less Common Vowel Teams			
Not Ready	73	11	2
Placed Above	11	67	95
Silent Letters			
Not Ready	NT	NT	5
Placed Above	NT	NT	95
Word Analysis 1			
Not Ready	84	29	9
Placed Above	4	39	76
Word Analysis 2			
Not Ready	NT	NT	21
Placed Above	NT	NT	76
Word Parts			
Not Ready	89	52	22
Placed Above	4	35	58
Unusually Spelled Words			
Not Ready	90	58	36
Placed Above	4	35	58
Reading Text Fluently			
Not Ready	97	58	37
Placed Above	4	35	58

Note. Numbers represent number of students within the percentile band. NT = Not Tested

Discussion

The purpose of this research was to answer the following questions:

1. What instructional strategies and methods are used to teach foundational reading skills in the Dover Area School District?
2. How do students perform on reading diagnostic and benchmark assessments in kindergarten through second grade?
3. How do teachers use assessment data to drive instruction?

Data collected from teacher surveys, classroom observations, teacher interviews, and student performance reports in the ESGI, Acadience™, and Exact Path provide multiple data points needing triangulation and discussion.

Research Question 1

Data with respect to instructional strategies and methods were collected through teacher surveys, classroom observations, and teacher interviews. Teachers reported highly variable blocks of time allotted for reading instruction during the school day, ranging from 46 to more than 120 minutes. This variability was confirmed during classroom observations, where reading instruction ranged from 85 to 160 minutes. While research on time spent on reading instruction is limited, research does support instructional activities which focus on the five core components of reading rather than just constrained skills or those that have a finite quantity of items/skills to be acquired, such as letter naming, phonics, and high-frequency word lists.

Ehri et al. (2001) concluded that the effect size of phonemic awareness instruction is greatest when the annual hours spent is between five and 18. Direct classroom observations yielded an average of 10 minutes per day using the Heggerty curriculum or

30 hours in a 180-day school year. Heggerty publishers promote no more than 15 minutes per day. Duke and Block (2012) further found that kindergarten and first-grade teachers focus half of their instruction on word recognition and phonics instruction instead of vocabulary. Observation data supported this research in that vocabulary instruction was observed in one kindergarten classroom and was reported to be taught between two and six times per cycle as compared to phonics being daily. In first grade, vocabulary instruction was observed in four out of six classrooms. In considering the average time spent on phonics via Fundations® daily (16 minutes) and the average time on phonemic awareness via Heggerty (10 minutes), and considering the focus of Daily 5 activities which are generally 30 minutes daily, students in kindergarten through second grade are receiving a significant amount of instruction and practice in these two foundational components daily.

With respect to oral reading fluency, in which students apply their understanding of these foundational skills. At the same time, only three of 17 teachers reported they do not teach oral reading fluency, this component was not observed in any classrooms. One classroom did engage in choral reading, but there was associated instruction or feedback provided to students. This skill begins to be assessed in the winter of first grade via Acadience™. Because oral reading fluency was not observed, how teachers move students from the understanding to the applying phase of their foundational skills cannot be determined.

A review of the literature indicated a need for flexible grouping structures within the classroom to address student needs (Foorman et al., 2003; Foorman & Torgesen, 2001; Juel & Minden-Cupp). Small group instruction was observed in eight out of 10

classrooms as part of the Daily 5. During this small group instruction, teachers provided explicit instruction in phonemic awareness and phonics using data derived from various assessments. Whole group instruction was observed in nine out of 10 classrooms using Fundations®, Heggerty, and Journeys programs. Fidelity checks for Fundations® and Heggerty revealed that all nine teachers provided instruction with relative fidelity. (One teacher did not use either, although both were listed as part of the daily agenda.) Using Heggerty, teachers utilized all components and followed the lesson outline and script with 100% accuracy. However, only six of the nine teachers provided error correction during the lesson. Using the lesson outline and script was done with similar fidelity in Fundations®. However, only four of nine teachers provided examples before students practiced a skill, and five of nine provided error correction. Providing examples and error correction are key elements of explicit instruction, but omission of this could impact student acquisition and retention of skills.

Observation data of whole group Journeys instruction revealed similar practices: examples and models were provided to students in three out of six classrooms, error correction was not provided in any classroom, and explicit directions, another key element of explicit instruction, were only given in two of six classrooms.

All teachers reported consistency of Daily 5 activities in their classrooms, although this was not observed the second-grade classroom. Activities include opportunities supported by the National Reading Council (1998) and National Reading Panel (2000), such as reading to self, word work, writing, listening to reading, reading to someone, and student-teacher interaction.

According to the Pennsylvania Training and Technical Assistance Network (2018), within the MTSS/RtI framework, Tier 2 is instruction aimed at providing intervention in addition to the core, or Tier 1 instruction, for struggling readers. In this study, the researcher observed students in two kindergarten classrooms and one first-grade classroom being pulled for intervention for 30 minutes during whole-group, core instruction time. In three additional first-grade classrooms, students were pulled for intervention for 30 minutes during the time allotted for Daily 5, which is where small-group instruction takes place. In this case, intervention, which focuses only on phonological awareness, phonemic awareness, and phonics, is supplanting rather than supplementing core instruction. When asked how and when students receive missed instruction, only one teacher had a plan for this ("catch-up" time on Fridays). Research indicates that instruction for struggling readers must go beyond phonological awareness, phonemic awareness, and phonics in order for students to develop as readers (Indrisano & Chall, 1995; Juel & Minden-Cupp, 2000; McCardle et al., 2001). The current procedure for pulling students for intervention in the observed classrooms fails to observe both the practices of RtI and research.

Related to teachers' perceptions of instruction, teachers were asked to identify their confidence levels in teaching the core components of reading and their need for professional learning opportunities. While reports of confidence levels varied relative to the reading component, and at least one teacher indicated they were not confident in teaching a component, no teacher indicated a need for professional learning opportunities. However, some teachers indicated they "would welcome" or "would like" professional development in each component. Because phonemic awareness and phonics

are being taught primarily through scripted programs, it may be the belief that professional development is unnecessary. However, given that small group instruction does not rely on these programs, it is imperative that teachers possess both the knowledge and the confidence to teach these skills in the absence of a script. Additionally, a review of the literature indicates that many teachers overestimate their understanding of content (Arrow et al., 2019; Cunningham et al., [WTD1] 2004; Moats & Foorman, 2003). Given the mandatory training in Science of Reading, this topic requires further discussion.

Planning for instruction questions revealed some inconsistencies. All teachers reported following the lesson plans in Heggerty and Fundations® for whole-group instruction. Three of four kindergarten teachers follow Tara West's KinderLiteracy® themes, and four of five first-grade teachers and the second-grade teacher follow the Journeys scope and sequence. One first-grade teacher picks and chooses what she wants to use from Journeys because of the overwhelming number of components, and another first-grade teacher shared that she creates additional writing opportunities due to the lack of emphasis in Journeys. In looking at data used to plan instruction, the four kindergarten teachers reported using the ESGI tool and daily observation. They do not use Acadience™ data or summative assessments. First-grade teachers primarily use Acadience™ data and the summative assessments from Journeys and Fundations®. The second-grade teacher only uses summative assessments from Journeys and Fundations®. This lack of consistency in planning for instruction, coupled with a reported lack of formal time for instructional collaboration, is problematic because not all students may receive the instruction they need to become proficient readers.

Research Question 2

The second research question asked, "How do students perform on reading diagnostic and benchmark assessments in kindergarten through second grade?" Yearlong data from the ESGI, Acadience™, and Exact Path assessments were collected and analyzed.

Kindergarten students were assessed using the ESGI and Acadience™. When analyzing comparable skills assessments from both benchmarks, there was a significant performance discrepancy, possibly due to ESGI assessments being untimed, whereas Acadience™ is timed. If students have not been practicing for automaticity, it is likely that their Acadience™ scores appear depressed. Based on the ESGI, 98.8% of all kindergarten students can name all upper-case letters, and 98.6% can name all lower-case letters. However, on the spring administration of the LNF in Acadience™, only 136 of 223 students were considered at or above benchmark.

Similarly, according to ESGI data, 75% of kindergarten students could segment onset and rime with 100% accuracy, and 92% could segment phonemes in CVC words with 100%. In the corresponding Acadience® PSF assessment, 165 students performed at or above benchmark in the spring, and for the NWF-CLS, only 95 students were at or above benchmark. With respect to blending onset and rime, ESGI indicated 74% of kindergarten students could perform this task with 100% accuracy. 89% could blend phonemes in CVC words with 100% accuracy. Compared to these ESGI assessments, the results of the spring NWF-WWR established that 102 students could not blend any sounds to produce nonsense words.

The discrepancies in these data sets are significant in that while students are learning, they are not learning these essential reading skills to automaticity which will impact their ability to learn and apply more complex phonics patterns. The work of Adams and Osborn (1990) and White et al. (2021) reminds us that automaticity and the ability to decode nonsense words sets a foundation for students to read more complex, unfamiliar words independently, thus impacting comprehension.

Another consideration is the teacher choice variable in the ESGI administration, except for the yearlong skills of upper- and lower-case letter naming, letter sound naming, and sight words. For all other skills, assessment periods were suggestions, and the number of times a teacher would retest a student on a skill was not established. Therefore, the end-of-year totals for students demonstrating 100% accuracy in each skill may be skewed, as the totals were calculated from the last time the student's score was recorded, which could have been during the second marking period or the fourth. This variability in deciding when to stop assessing a student may have also impacted the students' Acadience™ scores, given that scores may only indicate acquisition rather than retention. If students did not continue to practice known skills before they were secure, this may explain as to why kindergarten students experienced losses in their benchmark status.

First and second-graders are assessed in both Acadience™ and Exact Path. In addressing comparable skills between the two assessments, 55% of students were below or well-below benchmark in PSF in the fall, which is the only time this subtest is administered. In Exact Path, 71% of assessed students were considered "not ready" for Sounds in Words. There is evidence to support that students did receive instruction in

these skills given that at the spring Exact Path administration, 88% of students placed above the need for instruction in this skill.

Acadience™ NSW-CLS yearlong data indicates that an equal number of first-grade students experienced gains as losses, and whereas no students were well-below benchmark in NSW-WWR in the fall, 55 students were well-below in the spring. In reviewing the Reading Foundations Skills Performance (Table 12), progress in Phonics and Word Analysis appears to have slowed as more advanced phonics skills were assessed. If benchmark status in Acadience™ is based on expected level of performance at an assessment period, these data points indicate that while students are learning, they are not learning at the rate expected of first grade students.

ORF is the ability for students to apply decoding skills to read connected text. ORF was assessed in the winter and spring assessment windows. In the spring, 109 students were considered below or well-below benchmark in their ability to read a grade-level passage fluently. Additionally, as the retelling portion of the ORF was based on a student's ability to read 40 or more words correct per minute, 63 first grade students were unable to meet this expectation during both the winter and spring administration. While there is no equivalent subtest in first grade for Exact Path, the Skills Report noted that 81% of first graders were not ready to read text fluently based on their assessed skills. In reviewing the frequency with which teachers reported they teach ORF, the number of teachers who would welcome or like professional development in ORF, and classroom observation notes in which ORF instruction was not observed, first-grade performance in ORF may be due to a lack of explicit instruction.

While overall student growth was seen in both Acadience™ and Exact Path data, 52.9% of students were considered below or well-below benchmark in Acadience ™ basic reading skills, and 49.3% were below expectations or approaching expectations as they leave first grade.

Second-grade students were only administered the NWF-CLS and NWF-WWR in the fall, with 132 students falling below or well-below benchmark for correct letter sounds and 113 falling below or well-below benchmark for whole words read. This lack of skill supports students' initial performance on Exact Path Reading Foundation skills in which 73% were not ready for Less Common Vowel Teams, and 84% or more were not ready for all other second-grade foundational reading skills. However, a review of the Exact Path Skills Report indicates that second-grade students did improve in their decoding as there were significant decreases in the number of students not ready for skills and increases in students who were placed above or tested out.

ORF performance for second graders was similar to first graders in that 125 students were below or well-below benchmark at the spring administration, with 88 students remaining at this status through all three administrations. In considering the criterion for the retelling of reading at least 40 words correctly per minute in a passage, 48 second graders, or 22%, were unable to meet this expectation throughout the school year.

Overall performance in Acadience™ for second grade (Table 10) suggests that second-grade students experienced more losses than gains, with an increase of 28 students falling to below and well-below benchmark. There were conflicting results in overall Exact Path performance, with 50 students advancing from below or approaching

expectations to meeting or exceeding expectations. As all assessments are timed in Acadience™, scores may be depressed but support the lack of automaticity in basic reading skills. Given a lack of second-grade teacher participation in this study compared to kindergarten and first grade, additional research is necessary.

As a general observation with respect to all students' performance in Acadience™, there is a noticeable trend in students who are performing at or above benchmark initially in all subtests to lose ground. This is especially seen in kindergarten in NWF-CLS, PSF, and FSF, in first grade in NWF-CLS and NWF-WWR, and in second grade ORF. This is a phenomenon worthy of exploration to determine why students who have demonstrated proficiency in these skills cannot maintain this level for subsequent assessments.

Research Question 3

The final research question explored how primary teachers in the Dover Area School District are using assessment data to drive instruction. To answer this question, information was collected through the anonymous teacher survey and post-observation interviews. Survey data regarding how data is used after analysis was further supported by interview responses. Most teachers use the data to create small groups and plan for small-group instruction. Thirteen of seventeen teachers in the survey also mentioned they provide data to inform decision-making for additional services such as Tier 2 intervention, Title I, and special education evaluations. While eleven of seventeen survey participants noted they use data most frequently to plan for whole group instruction, no teachers interviewed mentioned this as a purpose of data analysis. This could be due to the reliance on the Heggerty, Fundations®, and Journeys programs for much of the whole group instruction.

According to survey data, all respondents use both formative assessment and observation data most frequently, followed by summative assessment data, benchmark assessment data, and diagnostic assessment data. The frequency of data review is relative to the administration of the assessment. However, teachers indicate they review data more often for students who are struggling or who need to be challenged. When asked about a protocol for reviewing data, only four survey participants indicated they used one, with the remaining respondents incorrectly answering the question. This is concerning given that the Dover Area. School District established a districtwide data protocol in 2018.

Kindergarten teachers shared in semi-structured interviews that they use ESGI and observational data to plan instruction. Although they administer Acadience™ benchmarks for all students and progress monitoring for a select group of students, the data does not inform instruction. Four out of five interviewed first-grade teachers use Acadience™ data, and three of five use summative assessments from Journeys and Fundations® to plan for instruction. Despite administering the Exact Path diagnostic assessments and having the expectation of using the prescribed learning paths with their students, only one of five first-grade teachers interviewed uses data from Exact Path, with two commenting that they were not provided professional development to use the learning paths or the data effectively, and one further commenting she uses other assessments instead. The second-grade teacher only uses summative assessment data from Journeys and Fundations® to plan instruction. Given the data analysis conducted by this researcher regarding student performance on Acadience™ and Exact Path, this lack

of data analysis on the part of the teacher is problematic in that teachers rely on minimal data points to plan for instruction.

According to the research, the use of minimal sources of data, particularly summative as a sole source, does not provide the data necessary to identify specific skill gaps (Foorman & Moats, 2004; McCardle et al., 200; Paige et al., 2019). Therefore, if this group of educators is representative of the entire primary cohort of teachers in the Dover Area School District, there may be students whose needs are not being met as the data relevant to those needs has not been analyzed. Student performance on Acadience™ and Exact Path assessments support this assertion. Survey data indicate that teachers do not feel they have enough time to analyze data. This, coupled with the concern for not having time to collaborate with colleagues, may also be impacting the degree to which data is analyzed.

Summary

The data analysis has provided multiple levels of insight into the instruction of foundational reading skills in the primary grades. In answering Research Question 1, survey results, teacher interviews, and classroom observations revealed consistencies in implementing of Fundations® and Heggerty programs and the practice of small group instruction during the Daily 5. Inconsistencies were noted in the use of key elements of explicit instruction, time devoted to reading instruction and planning for instruction. While teachers' reported confidence in teaching core components of reading varied, none felt they needed professional development. It was also noted that students are losing core instruction time to attend intervention groups without opportunities to receive that core instruction.

With respect to Research Question 2 and how students in kindergarten, first, and second grade are performing on benchmark assessments, the researcher analyzed data from the ESGI, Acadience™, and Exact Path. Data for students not participating in all yearlong assessments were removed from the collection sheets. Analysis revealed that there is little relationship between ESGI and Acadience™ data and that students' proficiency in foundational kindergarten reading skills, as noted in the ESGI, differs significantly from that measured by Acadience™. One explanation that may indicate discrepancies with Exact Path Data may also be that Acadience™ assessments are timed whereas the other assessments are not. While data indicate that some students are progressing, they are not demonstrating automaticity. Additionally, some students testing initially at or above benchmark are losing ground as the year progresses. Performance in ORF is of particular concern, and teachers' instructional practices support this performance.

Inconsistencies were also noted when analyzing data for Research Question 3 regarding how teachers use assessment to plan for instruction. Most teachers did not understand data protocol and commented they did not have enough time to analyze data. Additionally, when sharing what assessment data they used to plan for instruction, most utilized minimal data points, relying primarily on observation and summative assessments rather than Acadience™ and Exact Path data which revealed specific skill gaps.

The next chapter will draw further conclusions to answer the three research questions and identify the study's limitations. As this data analysis has uncovered additional questions relative to reading instruction, the next chapter will also provide

recommendations for practice and future studies to guide the Dover Area School District in solidifying core instructional practices related to foundational reading skills.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The research presented in this project answered three questions related to the core instruction of foundational reading skills in the Dover Area School District. A review of the literature provided an historical overview of reading skills instruction in the primary grades throughout the last century. In contrast, the data analysis and results provided a detailed view of the current instructional practices within the district and related student performance data. Discussing the research findings drew connections among the research questions, literature, and collected data.

This chapter will present conclusions drawn from the research, including the potential application of the findings and fiscal implications of such application. It will also discuss the limitations of the research and conclude with recommendations for future study.

Conclusions

This research project sought to answer questions relative to the core instruction of foundational reading skills in the primary grades (K-2), including instructional practices to teach skills, how students perform with respect to the skills taught, and how teachers use assessment to drive instruction.

Research Question 1

The first research question examined the instructional strategies and methods for teaching foundational reading skills. Data analysis revealed that teachers in each grade level (kindergarten, first, and second) consistently use instructional materials, particularly Heggerty, Fundations®, and Journeys. There was also consistent fidelity of

implementation of both the Heggerty and Fundations® programs in cases where Heggerty and Fundations® were observed. All teachers used some version of the Daily 5 in which students participated in independent and occasional paired activities when not meeting in a small group with the teacher. All teachers also reported using small group instruction to address skill deficits revealed through data collection. Teachers across grade levels teach letter names, phonics, and phonemic awareness with similar frequency and are most confident in their instruction of letter names, phonics, phonemic awareness, and comprehension. Overall, teachers are least confident in teaching oral reading fluency.

No teachers feel they "need" professional learning opportunities concerning foundational reading skills. All kindergarten teachers feel they have enough time to teach reading and that the materials they have are appropriate. All kindergarten and first-grade teachers feel they have enough materials to teach reading. All kindergarten teachers also reported using the ESGI and observation to collect student data.

While there were consistencies noted in practices, there were many inconsistencies. These inconsistencies included the time allotted daily for reading instruction, the frequency of small group instruction, and the frequency of instruction in vocabulary, comprehension, and oral reading fluency. With respect to practices related to data collection and analysis, there was a high degree of variability in the sources of data used and the protocols used to analyze data. The levels of instructional confidence in all areas varied among second-grade teachers. There was less consistency in implementing Journeys specific to program elements in both first and second grades. Teacher modeling prior to student practice was also inconsistent. When students are pulled for additional

support, intervention time varies among the classes, with some students missing small group instruction and others missing initial core instruction. There was a mixed response to teachers feeling they have enough time to collaborate instructionally with colleagues, enough time to analyze data, and that they receive support and feedback relative to their instruction.

An overall impression with respect to the strategies and methods used to teach foundational reading skills is that there is not "consistent implementation of effective instructional practices across classrooms," as has been a goal of the Dover Area School District for more than a decade (Dover Area School District, 2020). While primary teachers are teaching some of these skills using research-based explicit instruction principles, these principles are isolated to the Heggerty and Fundations® programs provided to the teacher and only used consistently when teaching phonemic awareness and phonics within these programs. There exist inconsistencies in applying these skills in other areas of instruction and when using other programs, the frequency in which skills are taught, and the confidence teachers possess in teaching these skills.

Research Question 2

The second research question focused on student performance on diagnostic and benchmark assessments, particularly the ESGI in kindergarten, Exact Path in grades one and two, and Acadience™ in all three grades. When examining data from these assessments, one must understand the difference in types of assessments when analyzing data, as well as the conditions under which the assessments are administered.

The ESGI, a benchmark tool used by kindergarten teachers, is a series of untimed skills-based assessments administered by the teacher. In reviewing yearlong data for each

assessment, the researcher found inconsistencies in administering baseline assessments and the frequency with which teachers continued to assess students in specific skills. End-of-year data is not entirely based on year-end achievement, as some teachers stopped formally assessing students using the ESGI on specific skills midway through the school year. Additionally, year-end data on the ESGI does not align with year-end Acadience™ data. This may be a function of the timed element of all Acadience™ skills assessments or the lack of ongoing assessment to ensure skills retention. The latter may explain the number of students experiencing negative growth, particularly those who were at or above benchmark.

Students' performance on the Acadience™ ORF assessments in first and second grade is commensurate with teachers' reported lack of confidence in the teaching of ORF and their reported frequency of ORF instruction. This performance is also aligned with the number of students deemed "not ready" for reading text fluently on the spring benchmark in Exact Path in first grade (81%) and second grade (37%).

While overall performance comparisons between Acadience™ and Exact Path assessments must be made with caution due to Exact Path's additional assessment of text-based literature and informational text skills, when disaggregating results by skills, the data suggest that students in both first and second grade are making gains in their foundational reading skills but not at the expected rate within a normed sample. First-grade students in Acadience ™ saw an overall improvement of 15% from fall to spring in students who were well-below and below benchmark in the fall, whereas second-grade students saw an overall loss of 12%. However, in Exact Path, first-grade students' overall performance from the below and approaching expectations only increased by 2% from

fall to spring, whereas second graders increased by 16%. An examination of foundational reading skills performance in both assessments indicates that approximately half of the first and second-grade students are not secure in these skills after a year of instruction.

Research Question 3

The last research question investigated how teachers use assessment to drive instruction. Through the teacher survey and the semi-structured interviews, teachers shared that they use data most often to plan for small-group instruction but feel they do not have enough time to analyze data. Responses also indicated that most teachers do not understand how to analyze data effectively given their lack of understanding of a data protocol. Despite research to the contrary, teachers are using minimal data points when planning for instruction. Thus, essential information about students' skills acquisition is omitted during instructional planning and may contribute to students' lack of growth or regression.

Effectiveness

The data collection methodology and instruments effectively produced data to inform the three research questions. A mixed-methods approach allowed for both quantitative and qualitative data to be collected, analyzed, and triangulated to provide a deeper understanding of phenomena and lead to further research questions.

Data was collected through surveys, direct classroom observations, and semi-structured interviews for the first research question regarding instructional strategies and methods. Data from the classroom observations and interviews either supported or refuted that which was reported through the surveys. Additionally, survey data provided a

broader perspective of instructional practices than the classroom observations due to the number of participants (10 observed versus 17 survey participants).

Data collected for each of the assessment periods were disaggregated by skill, allowing the researcher to examine performance in each skill in isolation and then compare it to overall performance to answer research question two. Multiple reports provided data points to be compared across administrations and between assessments in that performance in many foundational reading skills could be tracked in both ESGI and Acadience™ and both Acadience™ and Exact Path. This permitted the researcher to consider assessment design as a factor impacting performance as well as explore patterns in the data.

Survey and interview responses yielded data specific to the third research question regarding how teachers use assessment to drive instruction. Like results concerning instructional practices, data collected from interviews were used to support or refute what was reported in the surveys. Interviews also allowed the researcher to explore the survey questions in more depth and clarify generalized responses. Data used to answer this question included data analysis procedures and an understanding of best practices related to data analysis.

Application

The data collected through this research project provided an awareness of foundational reading skills instruction within the primary grades in the Dover Area School District. The newly drafted Comprehensive Plan for the Dover Area School District prioritizes establishing a comprehensive literacy plan. Therefore, the suggested application of this research, and subsequent implications, will align with this priority.

The conclusions drawn with respect to instructional strategies indicate significant inconsistencies in the primary classrooms. Therefore, it is suggested that the district create professional learning opportunities for all primary teachers and paraprofessionals, including learning support teachers, paraprofessionals, reading specialists, reading aides, and principals, in the Science of Reading and any instructional programs used. As per Act 55 of 2022, schools in Pennsylvania are now mandated to provide professional development in scientifically based reading research. This training should include an overview of the research so that professionals understand the impact of high-quality, systematic instruction on student progress, in addition to focused instruction and guided practice in the teaching of the five pillars of reading instruction: phonemic awareness, phonics, vocabulary, comprehension, and oral reading fluency. Principals must actively participate in this training to provide ongoing support to the teachers through fidelity checks and continued professional learning opportunities.

In addition to training in the Science of Reading, teachers and principals should be provided “refresher” (for current practitioners) or initial professional development in implementing programs such as Heggerty and Fundations®. Given that the district will pilot a new English Language Arts program during the 23-24 school year, district leadership should plan to provide training in the selected program before teacher implementation. In considering teachers’ inconsistencies in the use of various elements of Journeys, special attention should be paid to determining the required elements of the program in accordance with the English Language Arts curriculum.

A review of the literature indicated that teachers were more likely to implement new practices with fidelity when provided continuous mentoring or support (Ehri &

Flugman, 2017; Stein et al., 2008). Therefore, to provide ongoing support, principals should be trained to conduct fidelity checks of effective reading instruction. This training should be done in concert with Science of Reading and program training and give principals opportunities to participate in inter-rater reliability, where principals are able to practice conducting fidelity checks together prior to doing so individually. During the first year of implementation, principals may wish to conduct instructional rounds, whereby a pair or group of principals conduct walkthroughs together utilizing fidelity checklists and then discuss their observations. Additionally, all elementary learning support teachers participated in a year-long training in the Science of Reading during the 22-23 school year. They and the reading specialists should be paired with regular education colleagues within their buildings to offer informal support.

In considering time for instruction, principals should work together to establish common instructional block durations and required instructional activities for those blocks. School teams should then establish a schedule for intervention so that struggling readers are not missing initial instruction and are provided the supplemental instruction intended in an MTSS/RtII model.

In addition to instructional blocks, school teams must establish a scheduled time for staff to analyze data and collaborate for instruction. The results of research question three regarding how teachers use assessment to drive instruction indicated that teachers not only feel they do not have time to analyze data, but they also do not know how to do so. Therefore, teachers must be trained on a specific data analysis protocol and how to interpret multiple data points specific to the assessments administered in order to plan for instruction if the data analysis is to positively impact student performance (Filderman,

2021). Subsequent collaboration meetings should include reading specialists, intervention specialists, and learning support teachers in order to problem-solve how to address students' needs.

Another consideration for increasing collaboration and ensuring consistency across classrooms would be reconfiguring the four elementary buildings into two primary buildings (grades K-2) and two intermediate buildings (grades 3-5). This reconfiguration would allow professional development to be customized to the grade level bands' needs and focus administrative and other building supports (reading specialists, intervention specialists, and special education) on a discreet set of developmental skills.

Fiscal Implications

The fiscal implications for this research and associated recommendations are minimal. The structured literacy (Science of Reading) training is a statewide initiative supported by funds set aside for Training and Consultation (TaC) endeavors at the Lincoln Intermediate Unit, and, therefore, provided at no cost to the Dover Area School District. Professional development days built into the school calendar may be used to train professional staff and principals. As 20 highly qualified hours are required of reading aides and special education paraprofessionals, costs already budgeted for these hours may be used to offset costs for those who were not trained in the Science of Reading during the 22-23 school year. In order to prepare principals to run fidelity checks and support the implementation of scientifically based practices, TaC facilitators from the Lincoln Intermediate Unit may be brought into monthly principal meetings or a separate training during the summer months or school year, again at no cost paid to the IU. As principals work 261 days, there would be no additional salary or benefit costs.

Should the district choose to provide additional coaching training for its six reading specialists outside of the contracted 190 days, given the current hourly rate plus benefits, there may be a cost of approximately $5000 for four days of training which could, again, be done through the Lincoln Intermediate Unit, PaTTAN, or district administrators. This salaries and benefits cost could be applied to Title II funds. Because reading aides participated in the elementary learning support Science of Reading training arranged through the Office of Exceptional Children during the 22-23 school year, they would not require training.

As indicated through teacher responses to the number of appropriate materials for teaching foundational reading skills, there is no need to purchase additional resources. However, if the district continues to utilize Fundations®, there will be an estimated annual cost of $17,600 to replace consumable student materials. This is not an added cost relative to the district's annual budget to maintain its programs. The Dover Area School District will be piloting a new English Language Arts program during the 23-24 school year with an intent to adopt a new program, replacing Journeys, in 24-25. While not directly related to this research, the estimated seven-year cost of the new English Language Arts program is $558,840.

Should the district elect to reconfigure its elementary buildings as suggested as an option, there would be a one-time moving cost of approximately $30,000 due to the professional contract, which provides for one paid moving day for professional staff moving rooms and two paid moving days for professional staff moving buildings. There is also the possibility that additional hours may be required of custodial staff to assist with the move. Lastly, there may also be an impact on transportation costs, but there are

too many unknown variables to estimate such. Due to these costs, a decision to reconfigure should be made only after a careful study of its implications and based on numerous factors and the benefits of instructional consistency.

Limitations

Several limitations impacted the overall results of this study. First, the sample size with respect to teacher participants was small, with 17 kindergarten, first, and second-grade teachers participating in the survey (49% participation rate) and ten teachers participating in the observation and semi-structured interviews (29% participation rate). Participation was influenced by teacher transfers, resulting in six teachers new to the primary grades or new to the profession. The researcher received comments directly from some teachers that they did not feel comfortable participating. Additionally, two teachers went on maternity leave, and another was on intermittent and then long-term FMLA leave. These factors reduced the number of primary teachers with more than one year of experience in kindergarten through second grade, or those with consistent attendance, to 26. It is unknown how these staffing changes impacted student performance.

Another limitation of this study was the minimal participation of second-grade teachers. Only three of the 17 teachers who participated in the survey were second-grade teachers. Despite numerous outreach attempts, only one second-grade teacher agreed to participate in the direct observation and semi-structured interview. Therefore, teacher data specific to second grade must be interpreted cautiously.

The timing of the third Exact Path benchmark may have resulted in depressed results. While the administration window was open for the entire month of May, some first and second-grade teachers did not administer the assessments until the Friday before

the Memorial Day break, which also aligned with end-of-year schoolwide celebrations. This disruption in routine and academic focus may have distracted students and impacted scores.

Lastly, to preserve anonymity and protect minor participants, all identifiable data, including student names, identification numbers, teacher names, and buildings, were redacted from data sets before being given to the researcher. This anonymity prevented potential relationships from being established between observed and reported practices and student performance data. The district is encouraged to explore these relationships as part of the recommendations for future research.

Recommendations for Future Research

Considering the data collected in this research, several recommendations for future plans and topics require further examination. There was a notable discrepancy in kindergarten student performance on the ESGI and Acadience™ benchmarks. As the timing of the Acadience™ has been identified as a variable that may have largely affected scores, the district may want to determine to what extent kindergarten teachers require students to respond to prompts in letter naming, sound naming, segmenting and blending sounds, and reading sight words within a given time frame. ESGI data was also inconsistent in when teachers chose to stop collecting data on specific skills. The rationale for these decisions should be examined with the intent of establishing specific cut scores for all students.

Intervention, considered Tier 2 (or Tier 3, depending on the discrepancy of scores and response to Tier 2), is provided to students performing below pre-determined cut scores on Acadience™ benchmarks three times per year. This intervention is provided by

reading specialists, their aides, or an intervention specialist. Given the data collected and the apparent regression or stagnation of some students, the DASD may wish to explore how intervention can be provided to those students who score well above these cut scores to minimize regression and increase growth.

As second-grade participation was limited in this study, the district may wish to gather more data on instructional practices in second-grade relative to foundational reading skills. Should the district follow the application recommendations of this research study, it would be wise to replicate this study to determine the impact of the training, support, and consistent practices on student performance.

Because agreement with feedback and support for reading instruction varied among teacher participants, a potential extension of this study would be to examine the degree to which building principals feel confident in their ability to provide purposeful feedback and support. This could take the form of a pre-training and post-training survey.

Finally, as a point of self-reflection and personal research, and as supported by the National Reading Council (1998) and Goldberg and Goldenberg (2022), teachers should use their newly acquired, or perhaps better-informed, data analysis skills to compare end-of-year student performance data pre-training and post-training to determine the effectiveness of their professional growth on the achievement of their students. This may be a worthy project for teachers engaging in Differentiated Supervision Plans in lieu of formal observations or when establishing areas of focus for their annual Student Performance Measures.

Summary

This chapter has presented the conclusions of a year-long study of the core instructional practices related to foundational reading skills in Dover Area School District's primary classrooms. This research was prompted by an examination of longitudinal third-grade PSSA data indicating that, on average, less than 60% of the district's third graders have been able to reach proficiency in the last seven years, the perennial objective of establishing consistent, effective instructional practices, and the current superintendent's goal of all third-grade students reaching proficiency on the PSSAs.

Analysis of data collected through a survey, classroom observations, and interviews has established that the district continues to fall short in its consistent, effective instructional practices. Inconsistencies exist within and among the kindergarten, first, and second-grade classrooms, and range from instructional time to teacher confidence in teaching foundational reading skills. Additionally, data analysis protocols are widely misunderstood, with teachers reporting the use of minimal data points to drive instruction and limited time to review data.

Student performance data was collected and analyzed from three different assessments: the ESGI, Acadience™, and Exact Path. When disaggregated by skills, data indicated inconsistent performance among similar skills assessments except for Oral Reading Fluency. An overall examination of the data suggests that while some students are making gains in their acquisition of foundational reading skills, many are not, and many are not growing at the rate expected of kindergarten, first, and second grade when measured against criterion-referenced and norm-referenced benchmarks.

These conclusions have resulted in several recommendations to apply what has been learned through the research in order to improve practices. These recommendations focus predominantly on training for professional and support staff as well as building principals to institute consistent understandings of effective instructional practices and consistent expectations of those practices. The fiscal implications on the district budget are minimal in that the training for these practices is largely supported by the State-sponsored structured literacy initiative funneled through the Lincoln Intermediate Unit's Training and Consultation division and that the trainings can be provided during calendar days earmarked for professional development.

This study was not without its limitations. Sample size, lack of second-grade teacher participation, the timing of assessments, and the inability to establish direct relationships between instructional practices and student performance may have impacted the results of this study.

When considering future research relative to foundational reading skills, the district should examine the continued use of the ESGI for its alignment with other assessments and the consistency with which the kindergarten teachers use it. Due to the noticeable regression of students testing at and above expectations or benchmark early in the year, the district should investigate how to provide intervention for those students to maintain or increase skills. Principal perceptions and additional second-grade teacher/classroom data would provide the district information that could not be gathered through this study. Lastly, teachers should be encouraged to reflect upon their professional growth through focused training and its impact on student growth and achievement.

References

Act 55 of 2022, Pennsylvania Stat. § 24 (1949 & rev. 2022). https://www.legis.state.pa.us/cfdocs/legis/li/uconsCheck.cfm?yr=2022&sessInd=0&act=55

Adams, M., & Osborn, J. (1990). *Beginning reading instruction in the United States.* Office of Educational Research and Improvement (ED).

Ahmadi, M. (2021). The use of instructional time in early grade reading classrooms: A study in Herat Province of Afghanistan. *International Journal of Educational Development, 84.* https://doi.org/10.1016/j.ijedudev.2021.102435

Ainsworth, M., Ortlieb, E., Cheek, E., Pate, R., & Fetters, C. (2012). First-grade teachers' perception and implementation of a semi-scripted reading curriculum. *Language and Education, 26*(1), 77-90.

Al-Bataineh, A., & Sims-King, S. (2013). The effectiveness of phonemic awareness instruction to early reading success in kindergarten. *International Journal of Arts and Sciences, 6*(4), 59-76.

Arrow, A., Braid, C., & Chapman, J. (2019). Explicit linguistic knowledge is necessary, but not sufficient, for the provision of explicit early literacy instruction. *Annals of Dyslexia, 69,* 99-113.

Au, K., Carroll, J., & Scheu, J. (1997). *Balanced literacy instruction: A teacher's resource book.* Christopher-Gordon Publishers.

Baker, S., Beattie, T., Nelson, N., & Turtura, J. (2018). *How we learn to read: The critical role of phonological awareness.* U.S. Department of Education, Office of Elementary and Secondary Education, Office of Special Education Programs, National Center on Improving Literacy.

Blomert, L., & Froyen, D. (2010). Multi-sensory learning and learning to read. *International Journal of Psychophysiology, 77,* 195-204.

Bos, C., Mather, N., Dickson, S., Podhajski, B., & Chard, D. (2001). Perceptions and knowledge of preservice and inservice educators about early reading intervention. *Annals of Dyslexia, 51,* 97-120.

Boushey, G. & Moser, J. (2014). *The daily 5* (2nd ed). Stenhouse Publishers.

Chall, J. (1983). *Stages of reading development* (2nd ed). Harcourt Brace.

Connor, C., Morrison, F., & Underwood, P. (2007). A second chance in second grade: The independent and cumulative impact of first- and second grade reading instruction and students' letter-word reading skill growth. *Scientific Studies of Reading, 11*(3), 199-233.

Cunningham, A., Perry, K., Stanovich, K., & Stanovich, P. (2004). Disciplinary knowledge of K-3 teachers and their knowledge calibration in the domain of early literacy. *Annals of Dyslexia, 54*(1), 139-167.

Dehqan, M., & Samar, R. (2014). Reading comprehension in a sociocultural context: Effect on learners of two proficiency levels, *Procedia – Social and Behavioral Sciences, 98,* 404-410.

Dennis, D., & Hemmings, C. (2019). Making the simple more complex: The influence of job-embedded professional development in supporting teacher expertise in reading. *Literacy, 53*(3), 143-149.

Didion, L., Toste, J., & Filderman, M. (2020). Teacher professional development and student reading achievement: A meta-analytic review of the effects. *Journal of Research on Educational Effectiveness, 13*(1), 29-66.

Dover Area School District. (2020). *Dover Area School District district level plan 07/01/2020 – 06/30/2023. https://www.doversd.org/downloads/documents_and_forms/comprehensive_plan/2020-2023_dasd_comprehensive_plan.pdf*

Duke, N., & Block, M. (2012). Improving reading in the primary grades. *Future of Children, 22*(2), 55-73.

Ecalle, J., & Magnan, A. (2002). The development of epiphonological and metaphonological processing at the start of learning to read: A longitudinal study. *European Journal of Psychology of Education, 17*(1), 47-62.

Educational Research Institute of America. (2016). *Journeys reading program: An efficacy study.* https://s3.amazonaws.com/prod-hmhco-vmg-craftcms-public/research/HMH_Journeys_RM_1_5_Spring_2016_Final.pdf

Ehri, L. (1987). Learning to read and spell words. *Journal of Reading Behavior, 19*(1), 5-31. https://doi.org/10/1080/10862968709547485

Ehri, L. (1992). Reconceptualizing the development of sight word reading and its relationship to recoding. In P. Gough, L. Ehri, & R. Treiman (Eds.), *Reading acquisition* (pp.107-143). Erlbaum.

Ehri, L. (2020). The science of learning to read words: A case of systematic phonics instruction, *Reading Research Quarterly, 55*(1), S45-S60. https://doi.10.1002/rrq.334

Ehri, L., & Flugman, B. (2017). Mentoring teachers is systematic phonics instruction: Effectiveness of an intensive year-long program for kindergarten through 3rd grade teachers and their students. *Read Writ, 31,* 425-456.

Ehri, L., Nunes, S., Willows, D., Schuster, B., Yaghoub-Zadeh, Z., & Shanahan, T., (2001). Phonemic awareness instruction helps children learn to read: Evidence from

the National Reading Panel's meta-analysis. *Reading Research Quarterly, 36*(3), 250-287.

Ehri, L. & Wilce, L. (1985). Movement into reading: Is the first stage of printed word learning visual or phonetic? *Reading Research Quarterly, 20*(2), 163-179. https://doi.org/10.2307/747753

Every Student Succeeds Act, 20 U.S.C. §6301 (2015). https://www.congress.gov/114/Plaws/publ95/PLAW-114publ95.pdf

Filderman, M., Toste, J., & Cooc, N. (2021). Does training predict second-grade teachers' use of student data for decision-making in reading and mathematics? *Assessment for Effective Intervention, 46*(4), 247-258.

Florida Center for Reading Research. (2022). *Features of effective instruction overview.* Florida Department of Education.

Foorman, B., Chen, D., Carlson, C., Moats, L., Francis, D., & Fletcher, J. (2003). The necessity of the alphabetic principle to phonemic awareness instruction. *Reading and Writing: An Interdisciplinary Journal, 16,* 289-324.

Foorman, B., Francis, D., Fletcher, J., Schatschneider, C., & Mehta, P. (1998). The role of instruction in learning to read: Preventing reading failure in at-risk children. *Journal of Educational Psychology, 90*(1), 37-55.

Foorman, B., & Torgesen, J. (2001). Critical elements of classroom and small group instruction promote reading success in all children. *Learning Disabilities Research and Practice, 16*(4), 203-212.

Future Ready PA Index. (n.d.). *Dover Area SD.* https://futurereadypa.org/District/FastFacts?id=077059217152145023233206228207166046015224051045

Gamse, B., Tepper-Jacob, R., Horst, M., Boulay, B., & Unlu, F. (2008). *Reading First impact study: Final report.* Institute for Education Sciences, U.S. Department of Education.

Goldberg, M., & Goldenberg, C. (2022). Lessons learned? Reading wars, Reading First, and a way forward. *The Reading Teacher, 75*(5), 621-630.

Good, R., & Kaminski, R. (2011). *Acadience™ reading assessment manual.* Dynamic Measurement Group, Inc.

Goodman, K., & Goodman, Y. (1976). *Learning to read is natural* (ED155621). ERIC. https://files.eric.ed.gov/fulltext/ED155621.pdf

Goodman, K. (1992). Why whole language is today's agenda in education. *Language Arts, 69*(5), 354-363.

Goodman, K. (2001). Acquiring literacy is natural: Who skilled Cock Robin. *Theory into Practice, 16*(5), 309-314.

Goss, C., & Brown-Chidsey, R. (2012). Tier 2 interventions: Comparison of Reading Mastery and Fundations double dose. *Preventing School Failure, 56*(1), 65-74.

Gregory, E. (2016). Learning to read: A third perspective. *Prospects, 46,* 367-377.

Hattie, J. (2017). *250+ influences on student achievement.* Visible Learning Plus. www.visible-learning.org

Heggerty, M., & VanHekken, A. (2020a). *Phonic awareness: Primary version.* Literacy Resources, LLC.

Heggerty, M, & VanHekken, A. (2020b). *Phonic awareness:* Kindergarten *version.* Literacy Resources, LLC.

Hernandez, D. (2011). *Double jeopardy: How third grade reading skills and poverty influence high school graduation.* The Anne E. Casey Foundation. https://assets.aecf.org/m/resourcedoc/AECF-DoubleJeopardy-2012-Full.pdf

Hoffman, J., & Pearson, D. (2000). Reading teacher education in the next millennium: What your grandmother's teacher didn't know that your granddaughter's teacher should. *Reading Research Quarterly, 35*(1), 28-44.

Hoover, W., & Tunmer, W. (2018). The simple view of reading: Three assessments of its adequacy. *Remedial and Special Education, 39*(5), 304-312.

Hoover, W., & Gough, P. (1990). The simple view of reading. *Reading and Writing: An Interdisciplinary Journal, 2,* 127-160.

Houghton Mifflin-Harcourt. (n.d.) *Journeys Scope and Sequence Grades K-6. https://bit.ly/3MhwbK3*

Houghton Mifflin-Harcourt. (2022). *Journeys: Guide young readers to new heights.* https://www.hmhco.com/programs/journeys#about

Hudson, A., Moore, K., Han, B., Koh, P., & Binks-Cantrell, E.(2021). Elementary teachers' knowledge of foundational literacy skills: A critical piece of the puzzle in the science of reading. *Reading Research Quarterly, 56*(S1), S287-S315. https://doi:10.1002/rrq.408.

Indrisano, R., & Chall, J. (1995). Literacy development. *Journal of Education, 177*(1), 63-82.

Institute of Education Sciences. (2016). *Foundational skills to support reading for understanding in kindergarten through 3rd grade.* National Center for Educational Evaluation and Regional Assistance. https://ies.ed.gov/ncee/wwc/practiceguide/21

Institute of Education Sciences. (2022). *NAEP Report Card: 2022 NAEP Reading Assessment.* National Center for Education Statistics. https://www.nationsreportcard.gov

International Reading Association and National Associate for the Education of Young Children. (1998). Learning to read and write: Developmentally appropriate practices for young children. *The Reading Teacher, 52*(2), 193-216.

Juel, C., & Minden-Cupp, C. (2000). Learning to read words: Linguistic units and instructional strategies. *Reading Research Quarterly, 35*(4), 458-492.

Learning Point Associates. (2004). *A closer look at the five essential components of effective reading instruction: A review of scientifically based reading research for teachers.* Learning Point Associates.

Lyon, G. (1996). Learning disabilities. *The Future of Children, 6*(1), 54-76.

Marulis, L., & Neuman, S. (2010). The effects of vocabulary intervention on young children's word learning: A meta-analysis. *Review of Educational Research, 80*(3), 300-335.

Mathes, P., Denton, C., Fletcher, J., Anthony, J., Francis, D., & Schatschneider, C. (2005). An evaluation of two reading interventions derived from diverse models. *Reading Research Quarterly, 40,* 148-182. https://doi:10.1598/rrq.40.2.2

McCardle, P., Scarborough, H., & Catts, H. (2001). Predicting, explaining, and preventing children's reading difficulties. *Learning Disabilities Research and Practice, 16*(4), 230-239.

Moats, L. (2009). Knowledge foundations for teaching reading and spelling. *Read Writ, 22,* 379-399. https://doi:10.1007/s11145-009-9162-1

Moats, L., & Foorman, B. (2003). Measuring teachers' content knowledge of language and reading. *Annals of Dyslexia, 53,* 23-45.

Morris, D. (1993). The relationship between children's concept of word in text and phoneme awareness in learning to read: A longitudinal study. *Research in the Teaching of English, 27*(2), 133-154.

Moss, M., Fountain, A., Boulay, B., Horst, M., Rodger, C, & Brown-Lyons, M. (2008). *Reading First implementation evaluation: Final report.* Abt Associates.

National Research Council. (1998). *Preventing reading difficulties in young children.* The National Academies Press. https://doi.org/10.17226/6023

National Reading Panel & National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. U.S. Dept. of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Child Health and Human Development.

Oakland, T., Black, J., Stanford, G., Nussbaum, N., & Balise, R. (1998). An evaluation of the dyslexia training program: A multisensory method for promoting reading in students with reading disabilities. *Journal of Reading Disabilities, 31*(2), 140-147.

Olson, R. (2011). Genetic and environmental influences on phonological abilities and reading achievement. In S. Brady, D. Braze, & C. Fowler. (Eds.), *Explaining individual differences in reading: Theory and evidence* (pp. 197-216). Psychology Press.

Orton, S. (1929). The “sight reading” method of teaching reading, as a source of reading disability. *The Journal of Educational Psychology, 20,* 135-143. http://nottrivialbook.com/wp-content/uploads/2016/10/1929-Orton-article.pdf.

Paige, D., Smith, G., Rasinski, T., Rupley, W., Magpuri-Lavell, T., & Nichols, W. (2019). A path analytic model linking foundational skills to grade 3 state reading achievement. *The Journal of Educational Research, 112*(1), 110-120.

Paris, S. (2005). Reinterpreting the development of reading skills. *Reading Research Quarterly, 40*(2), 184-202.

Pearson, P. (2004). The reading wars. *Educational Policy, 18*(1), 216-252. https://doi: 10.1177/0895904803260041

Pennsylvania Department of Education. (2014). *Academic standards for English language arts: Grades pk-5.* https://static.pdesas.org/content/documents/PA%20Core%Standards%20ELA%20PreK-5%20March%202014.pdf

Pennsylvania Department of Education. (2023). *PSSA results, 2022* [Data set]. https://www.education.pa.gov/DataAndReporting/Assessments/Pages/PSSA-results.aspx

Pennsylvania Training and Technical Assistance Network. (2018). *Response to intervention.* https://www.pattan.net/Multi-Tiered-System-of-Support/MULTI-TIERED-SYSTEM-OF-SUPPORTS/Response-to-Intervention-RTI

Peters, M., Förster, N., Hebbecker, K., Forthmann, B., & Souvignier, E. (2021). Effects of data-based decision-making on low-performing readers in general education classrooms: Cumulative evidence from six intervention studies. *Journal of Learning Disabilities, 54*(5), 334-348.

Pfost, M., Hattie, J., Dörfler, T, & Artelt, C. (2014). Individual differences in reading development: A review of 25 years of empirical research n Matthew effects in reading. *Review of Educational Research, 84*(2), 203-244.

Piasta, S., Connor, C., Fishman, B., & Morrison, F. (2009). Teachers' knowledge of literacy concepts, classroom practices, and student reading growth. *Scientific Studies of Reading, 13*(3), 224-248.

Pressley, M., Roehrig, A., Bogner, K., Raphael, L. & Dolezal, S. (2002). Balanced literacy instruction. *Focus on Exceptional Children, 34*(5), 1-14.

Rehman, A. (2021). The impact of reading instructional time in the classroom: Early grade reading time policy initiative in Pakistan. *Journal of Education, 9*(3), 88-107.

Resendez, M., & Azin, M. (2013). *A study on the effects of Houghton Mifflin Harcourt's Journeys program: Year 2 final report.* PRES Associates, Inc. https://s3.amazonaws.com/prod-hmhco-vmgcraftcmspublic/research/HMHJourneys_RCT_Final_2013.pdf

Ritchey, K., & Goeke, J. (2006). Orton-Gillingham and Orton-Gillingham-based reading instruction: A review of the literature. *The Journal of Special Education, 40*(3), 171-183.

Robinson, C., & Wahl, M. (2004). *Fundations*. Florida Center for Reading Research. https://www.wilsonlanguage.com/wpcontent/uploads/2015/04/FCRR_Fundations_report.pdf

Scanlon, D., Gelzheiser, L., Vellutino, F., Schatschneider, C., & Sweeney, J. (2008). Reducing the incidence of early reading difficulties: Professional development for classroom teachers versus direct interventions for children. *Learning and Individual Differences, 18,* 346-359.

Scarborough, H. (2001). Connecting early language to later reading (dis)abilities: Evidence, theory, and practice. In S. Neuman & D. Dickenson. (Eds.), *Handbook of early literacy research* (1st ed., pp. 97-110). Guilford Press.

Schaars, M., Segers, E., & Verhoeven, L. (2017). Word decoding development during phonics instruction in children at risk for dyslexia. *Dyslexia, 23*, 141-160. https://doi: 10.1002/dys.1556

Schatschneider, C., Francis, D., Carlson, C., Fletcher, J., & Foorman, B. (2004). Kindergarten prediction of reading skills: A longitudinal comparative analysis. *Journal of Educational Psychology, 96*(2), 265-282.

Schatschneider, C., & Torgesen, J. (2004). Using our understanding of dyslexia to support early identification and intervention. *Journal of Child Neurology, 19*(10), 759-765.

Schwartz, S. (2019). *A comparative analysis of student achievement of first grade students using Fundations vs. Heggerty and Words Their Way* (Publication No. 27671879) [Doctoral dissertation, Lindenwood University]. ProQuest Dissertations and Theses Global.

Semingson, P., & Kerns, W. (2021). Where is the evidence? Looking back to Jeanne Chall and enduring debates about the science of reading. *Reading Research Quarterly, 56*(S1), S157-S169.

Slavin, R., Lake, C., Chambers, B., Cheung, A., & Davis, S. (2009). Effective reading programs for the elementary grades: A best-evidence synthesis. *Review of Educational Research, 79*(4), 1391-1466.

Snow, C., & Matthews, T. (2016). Reading and language in the early grades. *Future of Children, 26*(2), 57-74.

Spear-Swerling, L. (2018). Structured literacy and typical literacy practices: Understanding differences to create instructional opportunities. *Teaching Exceptional Children, 51*(3), 201-211.

Stein, M., Berends, M., Fuchs, D., McMaster, K., Sáenz, L., Yen, L., Fuchs, L., & Compton, D. (2008). Scaling up an early reading program: Relationships among teacher support, fidelity of implementation, and student performance across different sites and years. *Educational Evaluation and Policy Analysis, 30*(4), 368-388.

Stewart, M. (2004). Early literacy instruction in the climate of No Child Left Behind. *The Reading Teacher, 57*(8), 732-743.

Storch, S., & Whitehurst, G. (2002). Oral language and code-related pre-cursors to reading: Evidence from a longitudinal structural model. *Developmental Psychology, 38*(6), 934-947.

United States Department of Education. (n.d.). *The nation's report card.* National Center for Educational Statistics. https://www.nationsreportcard.gov/

United States Department of Education. (2010, July). *WWC intervention report: Fundations.* https://ies.ed.gov/ncee/wwc/Intervention/735

West, T. (n.d.) *Kinderliteracy® curriculum.* www.teacherspayteachers.com

West, T. (2017). *Kindergarten step by step: All things KinderLiteracy!* https://littlemindsatwork.org/kindergarten-step-by-step-all-things/

White, S., Sabatini, J., Park, B., Chen, J., Bernstein, J., & Li. M. (2021). *Highlights of the 2018 NAEP oral reading fluency study.* NCES. U.S. Department of Education.

APPENDICES

Appendix A

Teacher Survey Informed Consent

Dear Faculty Member,

As a teacher of Kindergarten, first grade, or second grade in the Dover Area School District, you are being asked to participate in a research study to evaluate core practices in the instruction of foundational reading skills in primary grades (K-2) in the Dover Area School District. Your participation in the study will help the researcher collect and analyze data to summarize current instructional practices with respect to foundational reading skills.

What will I be asked to do it I take part in this study?
If you agree to participate in this study, you will be asked to complete an electronic survey through Google Forms. Participants will be asked to answer selected-response and open-ended questions regarding current foundational reading skills instructional practices. Additional opportunities for participation through observations and interviews will be presented at a later time and with a separate and unique consent.

Where will this study take place?
The survey portion of this study will be available on Google Forms. Participants may take the survey at a time and place most convenient for them.

How long will this study last?
The intended duration of this study is nine months. The survey portion of this study will take approximately 10-15 minutes to complete.

What happens if I do not want to participate?
Your participation is voluntary; you may choose whether or not you want to participate in the study or not. There will be no penalty if you choose not to participate.

May I quit the study before it ends?
Your participation is voluntary. If you do not want to participate in this portion of the study, please do not complete the survey. Otherwise, by clicking continue, you are giving consent to participate in the study. If you change your mind after you begin the survey, close the survey before completion, and no survey responses will be recorded.

What are the risks?
There are minimal risks to this study. You will not answer questions of a sensitive nature, and you will not be asked to provide personally identifiable information. Settings in Google Forms will be such that the researcher will not collect email addresses from participants. The survey questions may make you feel uncomfortable as some individuals may not like volunteering information which may be perceived as negative. However, in order for the research to have the greatest impact, it is imperative that responses are truthful.

Your privacy is important, and the researcher will handle all information confidentially. The study's results will not identify you and will not isolate any one building's data for scrutiny. The researcher plans to present the study results as a published study and potentially in journals or periodicals.

How will I benefit from participating?
Should you decide to participate, you will assist the researcher in better understanding instructional practices with respect to foundational reading skills in the primary grades. Benefits may include an opportunity to share your perceptions and opinions, analysis of current practices, and the identification of recommendations for improvement.

Will my responses be kept confidential and private?
The collected survey responses will remain confidential, with only the researcher having access to the data. The results will be reported in a manner that will not identify you and will not isolate any one building's data for scrutiny. Data will be stored on a secure server which is password-protected or stored in a locked office or a combination of both.

Who do I contact if I have questions about this study?
If you have questions about this study, contact the researcher, Katherine Guyer, at GUY5405@pennwest.edu or 717-495-7494. If you would like to speak with someone other than the researcher, contact Dr. David Foley, Associate Professor at PennWest University, at foley@pennwest.edu.

I have read this form. Any questions I have regarding participation in this study have been answered. I agree to take part in this study, and I understand that this is voluntary on my part. I do not have to participate if I do not wish to do so. I may stop at any time for any reason. If I choose to no longer participation, I will not be asked for an explanation.

By clicking YES, you agree to participate in this survey.

Approved by the PennWest University Institutional Review Board. This approval is effective 10/04/22 and expires 10/3/23.

Appendix B

Teacher Survey

Survey: Classroom Teachers' Practices and Perceptions Regarding the Instruction of Foundational Reading Skills in the Primary Grades (K-2)

1) What grade level do you currently teach?
    a. Kindergarten
    b. First
    c. Second
2) How much time do you have in your daily schedule dedicated to the teaching of reading?
    a. 0-30 minutes
    b. 31-45 minutes
    c. 46-60 minutes
    d. 61-75 minutes
    e. 76-90 minutes
    f. 91-105 minutes
    g. 106-120 minutes
    h. More than 120 minutes
3) How often do you provide small group reading instruction to ALL students?
    a. Daily
    b. Once per cycle
    c. Twice per cycle
    d. Three times per cycle
    e. Four times per cycle

f. Five times per cycle

4) Which best describes the purpose of your small group instruction?

   a. Remediation/practice of taught skills

   b. Initial instruction of skills

   c. A combination of both

   d. Other (Please explain.)

5) Please provide and explanation if you chose “other” for the previous question.

6) Do you use station rotation within your classroom? If so, what do the students do when working independently? Please describe the activities and materials used.

7) How often per cycle do you provide instruction to ALL students in the following core components?

	Once	Twice	Three times	Four times	Five times	Six times	I do not teach this at my level.
Letter names (identification of written upper and lower case letters)							
Phonics (letter-sound relationships)							
Phonemic Awareness (oral and auditory understanding that words are made up of individual sounds)							

Vocabulary (meaning of words)							
Comprehension (deriving meaning from what is read)							
Oral Reading Fluency (reading accurately at an appropriate rate and with expression)							

8) What programs/materials do you use to teach letter names? Respond with "N/A" if you do not teach letter names.
9) What programs/materials do you use to teach phonics? Respond with "N/A" if you do not teach phonics.
10) What programs/materials do you use to teach phonemic awareness? Respond with "N/A" if you do not teach phonemic awareness.
11) What programs/materials do you use to teach vocabulary? Respond with "N/A" if you do not teach vocabulary.
12) What programs/materials do you use to teach comprehension? Respond with "N/A" if you do not teach comprehension.
13) What programs/materials do you use to teach oral reading fluency? Respond with "N/A" if you do not teach oral reading fluency.
14) Do you believe you have enough district-provided materials to teach reading? If not, please explain what additional materials you believe would be beneficial.

15) Please answer the following with respect to the level of confidence you have in the listed areas of reading instruction.

	I am very confident in my ability to provide instruction in this area.	I am confident in my ability to provide instruction in this area.	I am somewhat confident in my ability to provide instruction in this area.	I am not confident in my ability to provide instruction in this area.	I do not teach this at my level.
Letter names (identification of written upper and lower case letters)					
Phonics (letter-sound relationships)					
Phonemic Awareness (oral and auditory understanding that words are made up of individual sounds)					
Vocabulary (meaning of words)					
Comprehension (deriving meaning from what is read)					
Oral Reading Fluency (reading accurately at an appropriate rate and with expression)					

16) Please answer the following with respect to the need for professional learning opportunities for the listed areas of reading instruction.

	I do not need professional learning in this area.	I would welcome professional learning in this area as a refresher.	I would like professional learning offered in this area.	I need professional learning in this area.	I do not teach this at my level.
Letter names (identification of written upper and lower case letters)					
Phonics (letter-sound relationships)					
Phonemic Awareness (oral and auditory understanding that words are made up of individual sounds)					
Vocabulary (meaning of words)					
Comprehension (deriving meaning from what is read)					
Oral Reading Fluency (reading accurately at an appropriate rate and with expression)					

17) If you have engaged in any professional learning opportunities independent of the Dover Area School District with respect to reading instruction, please indicate the provider/source.

	LIU	PaTTAN	College or University Course	Professional Reading	Other source
Letter names (identification of written upper and lower case letters)					
Phonics (letter-sound relationships)					
Phonemic Awareness (oral and auditory understanding that words are made up of individual sounds)					
Vocabulary (meaning of words)					
Comprehension (deriving meaning from what is read)					
Oral Reading Fluency (reading accurately at an appropriate rate and with expression)					

18) What type of assessments do you use to measure student growth and achievement? Mark all that apply.

    a. Formative, non-graded assessments
    b. Observation
    c. Skills checklists
    d. Summative assessments (e.g., unit tests)
    e. Diagnostic assessments
    f. Benchmark assessments
    g. Other (Please explain.)

19) Please provide an explanation if you chose "other" for the previous question.

20) How often do you review each of the types of data for your students?

	daily	2-3 times per week	weekly	monthly	quarterly	after benchmarks are given	I do not use this type of assessment.
Formative, non-graded							
Observation							
Skills checklists							
Summative assessments							
Diagnostic assessments							
Benchmark assessments							
Other							

21) Are there circumstances under which you would review data for individual students on a more frequent basis than what you have described? If so, please explain.

22) Is there a protocol you follow when reviewing/analyzing student data? If so, please explain.

23) After analyzing student data, how do you use it? Mark all that apply.

	Most frequently	Occasionally	Rarely	Never
To create student groups for small group instruction				
To create individualized student practice assignments				
To plan for small group instruction				
To plan for whole-group instruction				
To provide data for additional potential services (Tier 2/3, special education)				
To provide performance updates to parents				
To reflect on my teaching practices				
To collaborate with peers on instruction				

24) Please indicate the level to which you agree/disagree.

	Strongly agree	Agree	Disagree	Strongly disagree
I have enough time during the day for reading instruction.				
I have enough materials provided to me for reading instruction.				

The materials I am provided are appropriate for the skills I teach.				
I am provided adequate time to review and analyze reading data.				
I receive support and feedback in my reading instruction.				

25) Please provide any additional feedback regarding reading instruction.

Appendix C

Classroom Observation and Interview Informed Consent

Dear Faculty Member,

As a teacher of Kindergarten, first grade, or second grade in the Dover Area School District, you are being asked to participate in a research study to evaluate core practices in the instruction of foundational reading skills in primary grades (K-2) in the Dover Area School District. Your participation in the study will help the researcher collect and analyze data to summarize current instructional practices with respect to foundational reading skills.

What will I be asked to do if I take part in this study?
If you agree to participate in this study, you will be asked to participate in a classroom observation and debriefing/follow-up interview. Participants will permit the researcher to observe reading instruction on a date agreeable to both parties. Following the observations, the participants will engage in a semi-structured interview regarding the observation as it relates to the teaching of foundational reading skills.

Where will this study take place?
The observation will take place in the participant's classroom. The interview will take place at a location mutually agreed-upon by the participant and researcher.

How long will this study last?
The intended duration of this study is nine months. The observation portion duration will be determined by the individual participant's schedule. The interview will take approximately 15-30 minutes.

What happens if I do not want to participate?
Your participation is voluntary; you may choose whether or not you want to participate in the study or not. There will be no penalty if you choose not to participate.

May I quit the study before it ends?
Your participation is voluntary. If you should change your mind after an observation is scheduled, you may notify the researcher of your decision. If you change your mind after the observation is completed, you may notify the researcher, and the observation notes will be destroyed. If you change your mind after the interview has taken place, both the observation and interview notes will be destroyed.

What are the risks?
There are minimal risks to this study. Observations are non-evaluative and will follow a prescribed observation form. Observation notes will be kept confidential without personally identifiable information. They will not be shared with supervisors. You will not answer questions of a sensitive nature, and you will not be asked to provide personally identifiable information, during the interview. The interview questions may

make you feel uncomfortable as some individuals may not like volunteering information which may be perceived as negative. However, in order for the research to have the greatest impact, it is imperative that responses are truthful. Should you wish to not respond to a question, simply state that for the record.
Your privacy Is Important, and the researcher will handle all information confidentially. The study's results will not identify you and will not isolate any one building's data for scrutiny. The researcher plans to present the study results as a published study and potentially in journals or periodicals.

How will I benefit from participating?
Should you decide to participate, you will assist the researcher in better understanding instructional practices with respect to foundational reading skills in the primary grades. Benefits may include an opportunity to share your perceptions and opinions, analysis of current practices, and the identification of recommendations for improvement.

Will my responses be kept confidential and private?
The observation and interview notes will remain confidential, with only the researcher having access to the data. Observation notes are non-evaluative and will not be shared with supervisors. The results will be reported in a manner that will not identify you and will not isolate any one building's data for scrutiny. Data will be stored on a secure server which is password-protected or stored in a locked office or a combination of both.

Who do I contact if I have questions about this study?
If you have questions about this study, contact the researcher, Katherine Guyer, at GUY5405@pennwest.edu or 717-495-7494. If you would like to speak with someone other than the researcher, contact Dr. David Foley, Associate Professor at PennWest University, at foley@pennwest.edu.

I have read this form. Any questions I have regarding participation in this study have been answered. I agree to take part in this study, and I understand that this is voluntary on my part. I do not have to participate if I do not wish to do so. I may stop at any time for any reason. If I choose to no longer participation, I will not be asked for an explanation.

By signing below, I agree to participate in this study. In doing so, I am indicating that I have read this form and had my questions answered. I understand that it is my choice to participate, and I may terminate my participation at any time.

Participant Signature _____ **Date** _____

Participant Name Printed _____

Approved by the PennWest University Institutional Review Board. This approval is effective 10/04/22 and expires 10/03/23.
Please return to Kathy Guyer at the Dover Administration Office by Friday, October 21.
Thank you!

Appendix D

Observation Checklists

Heggerty Lesson Observation Form*

Level _____ Lesson Week _____ Lesson Day _____

Component	Observed Y/N	Comments
Teacher has the appropriate Phonemic Awareness curriculum manual.		
Whole group lesson		
All skills in the lesson plan are used.		
Teacher follows the lesson as written.		
Teacher uses the correct hand motions for the following:		
Blending		
Isolating final or medial sounds		
Segmenting		
Adding		
Deleting		
Substituting		
Teacher provides directions for each skill.		
Teacher provides examples for each skill.		
Lesson is 15 minutes or less		Total time:
Teacher provides error correction as needed.		

adapted from Heggerty Fidelity Checklist for a Phonemic Awareness Lesson, Literacy Resources, LLC 2020

Fundations Lesson Observation Form

Level _____ Unit _____ Day _____

Component	Observed Y/N	Comments
Teacher has the appropriate Fundations manual.		
Whole group lesson		
Small group lesson		
Teacher follows correct procedures for the following when used:		
Alphabetical Order		
Dictation Sounds/Word		
Drill Sounds		
Echo/Finds Letters		
Echo Letter Formation		
Letter-Keyword-Sounds		
Sky-Write Letter Formation		
Story Time		
Student Notebook		
Trick Words		
Word of the Day		
Word Talk		
Teacher provides directions for each skill.		
Teacher provides examples for each skill.		
Teacher provides error correction as needed.		
Students have all necessary materials.		
Lesson is 30 minutes or less.		Total time:

Journeys Lesson Observation Form

Level _____ Unit _____ Lesson _____ Day _____

Components	Observed Y/N	Comments
Teacher has the appropriate Journeys manual.		
Whole group lesson		
Small group lesson		
Opening Routines		
Read Aloud		
Phonemic Awareness		
Speaking and Listening		
Vocabulary		
Comprehension		
Fluency		
Phonics		
Spelling		
Grammar		
Writing		
Teacher provides directions for each skill.		
Teacher provides examples for each skill.		
Teacher provides error correction as needed.		
Students have all necessary materials:		
Leveled Readers		
Write-in Reader		
Student Text		
Reader's Notebook		
Word/sound/vocabulary Cards		
Decodable Readers		

General Observation Form

Grade _____

Components	Comments
Time of lesson:	
Number of adults in room:	Describe roles of each
Number of students:	
SMART Board use	
Student iPad use	
Seating arrangement	
Supplemental materials used	
Teaching strategies observed:	
Direct Instruction/Explicit Teaching	
Errorless teaching	
Think-pair-share/interaction sequence	
Partner work	
Independent work	
Wait/think time	
Checking for understanding	
Modeling/think aloud	
Student movement/brain breaks	
Others	
Room displays relevant to reading	

Appendix E

Post-Observation Teacher Interview Form

1) Explain your personal process of planning for reading instruction. Specifically describe how you use data in the planning process.
2) Do you collaborate with anyone to plan for instruction?
    a. If so, with whom do you plan?
    b. How often do you collaborate?
3) How do you adjust your planned instruction for students who are struggling?
4) How often do you progress monitor all students?
    a. Does anyone assist you in progress monitoring? If yes, who?
    b. In what types of activities are students engaged when they are not being progress-monitored?
    c. How do you use progress monitoring data in your instructional planning (if different than above)?

Appendix F

District Letter of Approval

DOVER AREA SCHOOL DISTRICT

Empowering and Educating all learners to shape the 21st Century

Kelly K. Cartwright, Ed.D.
Superintendent of Schools

Rina R. Houck, Ed.D.
Assistant Superintendent

Matthew I. Ulmer
Chief Financial & Operations Officer

July 11, 2022

2749 Anita Drive
Dover, PA 17315

Dear Ms. Guyer:

I am pleased to write a letter in support of your doctoral capstone project entitled "Core Practices in the Instruction of Foundational Reading Skills in Primary Grades (K-2) in the Dover Area School District." I have reviewed your proposed project and believe the research has significant value with respect to our continued efforts to provide students with effective reading instruction leading to increased reading proficiency.

I have reviewed the project proposal and understand the following related to participation:

- Kindergarten, first grade, and second grade teacher voluntary completion of surveys and classroom observations with follow-up interviews
- Analysis of student data from triannual diagnostic and benchmark assessments
- Confidential data collection and secure storage via electronic files

Potential risks are minimal and include impact on teacher planning time while completing the surveys and participating in post-observation interviews. While information gathered will not be used to inform evaluations, teachers may not feel comfortable in answering some questions and/or react unfavorably to the data collected.

Please accept this letter as my formal consent and support of the district's participation in the proposed research project.

Sincerely,

Kelly K. Cartwright, Ed. D.
Superintendent of Schools

Appendix G

IRB Approval

PennWest UNIVERSITY

Institutional Review Board
250 University Avenue
California, PA 15419
instreviewboard@calu.edu
Melissa Sovak, Ph.D.

Dear Katherine,

Please consider this email as official notification that your proposal titled "Core Practices in the Instruction of Foundational Reading Skills in Primary Grades (K-2) in the Dover Area School District" (Proposal #PW22-011) has been approved by the Pennsylvania Western University Institutional Review Board as submitted.

The effective date of approval is 10/04/2022 and the expiration date is 10/03/2023. These dates must appear on the consent form.

Please note that Federal Policy requires that you notify the IRB promptly regarding any of the following:

(1) Any additions or changes in procedures you might wish for your study (additions or changes must be approved by the IRB before they are implemented)

(2) Any events that affect the safety or well-being of subjects

(3) Any modifications of your study or other responses that are necessitated by any events reported in (2).

(4) To continue your research beyond the approval expiration date of 10/03/2023, you must file additional information to be considered for continuing review. Please contact instreviewboard@calu.edu

Please notify the Board when data collection is complete.

Regards,
Melissa Sovak, PhD.
Chair, Institutional Review Board

Appendix H

Certificates of CITI Course Completion

CITI PROGRAM

Completion Date 06-Sep-2021
Expiration Date 05-Sep-2024
Record ID 44464665

This is to certify that:

Katherine Guyer

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

All Researchers Applying for IRB Approval
(Curriculum Group)
All Researchers Applying for IRB Approval
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

California University of Pennsylvania

CITI

Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w033b5e22-ce61-4d89-a63e-6218d6896203-44464665

CITI PROGRAM

Completion Date 11-Sep-2021
Expiration Date 10-Sep-2025
Record ID 44464661

This is to certify that:

Katherine Guyer

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

CITI Conflicts of Interest
(Curriculum Group)
Conflicts of Interest for Project Personnel
(Course Learner Group)
1 - Stage 1
(Stage)

Under requirements set by:

California University of Pennsylvania

CITI
Collaborative Institutional Training Initiative

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CITI PROGRAM

Completion Date 22-Mar-2022
Expiration Date 21-Mar-2025
Record ID 44464659

This is to certify that:

Katherine Guyer

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

RCR Basic Course
(Curriculum Group)
RCR Basic Course
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

California University of Pennsylvania

CITI
Collaborative Institutional Training Initiative

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Appendix I

Exact Path Reading Foundations Skills Descriptors

Less Common Vowel Teams - Decode words by applying knowledge of less common vowel teams. Read common high frequency words.

Phonics and Word Analysis 1 – Decode words by applying knowledge of beginning and ending digraphs, common long -e and long-a vowel teams, closed and open syllables. Read common high frequency words.

Phonics and Word Analysis 2 - Decode words by applying knowledge of initial consonant r-blends, l-blends, and s-blends, r-controlled vowels, and vCe towel teams, r-controlled syllables. Read common high frequency words.

Phonics and Word Analysis 3 - Decode words by applying knowledge of final consonant blends, common long-o and long-I vowel teams and inflectional endings -s, -es, -ed. Read common high frequency words.

Reading Text Fluently – Understand the features of complete sentences and red text fluently with appropriate rate and expression.

Silent Letters - Decode words by applying knowledge of silent letter consonant patterns. Read common high frequency words.

Sounds in Words – Isolate, blend, segment, add, deleted, and substitute sounds in words.

Word Analysis 1 – Decode multisyllabic words by applying knowledge of vCe and vowel team syllable patterns. Read common high frequency words.

Word Analysis 2 – Decode words by applying knowledge of prefixes and suffixes. Read common high frequency words.

Unusually Spelled Words - Decode words by applying knowledge of final consonant blends.