

Elementary teachers' perceptions of the impact of a dyslexia intervention specialist program on
teaching literacy

by

Wendi Fox

B.S., Kansas State University, 1998
M.S., Fort Hays State University, 2010

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

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Department of Curriculum and Instruction
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2025

Abstract

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Using Guskey's (2002) Model of Teacher Change as the theoretical framework, this study examines the lived experiences of educators who have completed the training. Two central questions guide the research:

1. How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?
2. In what ways, if any, did the dyslexia training influence their teaching practice?

Five Kansas-based teachers participated in in-depth interviews to address these questions, allowing for a detailed exploration of their perspectives. Interviews were recorded, transcribed, and systematically analyzed to identify emerging themes. To ensure credibility and validity, the study employed member checking and a confirmability audit throughout the research process.

The findings offer insights into how structured literacy training impacts instructional practices and teacher development. Chapter 4 presents the key themes that emerged from the data, while Chapter 5 discusses broader implications, recommendations for teacher preparation and professional development, and the study's overall conclusions.

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Approved by:

Major Professor
Dr. Suzanne L. Porath

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(“Mom, are you still working on that?”) kept me grounded. The best part? I'm officially done with homework! Now, it's my turn to cheer you on.

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So here we are, the finish line. It's been a journey of late nights, too much caffeine, and just enough stubbornness and determination. Onward!

Dedication

To the teachers who champion every child, the students who refuse to be defined by their struggles, and the families who never stop believing—this is for you. May we continue to unlock the brilliance in every child and rewrite the narrative of what is possible for their future.

Chapter 1 - Introduction

There is a critical window of opportunity in a child's literacy development (Foorman et al., 2016; Torgesen, 2004). Unfortunately, by the time children are identified as having reading difficulties, this window is often closing (Catts et al., 2015; Spencer et al., 2020). These children need early intervention to succeed in literacy in the future. Based on my experience as an elementary teacher, I have worked with various students facing unique literacy challenges. Literacy skills are essential for academic success and for navigating everyday life. They impact individuals and society as a whole (World Literacy Foundation, 2018).

The International Literacy Association (ILA) website glossary defines literacy as a complex set of abilities needed to understand and effectively engage with various forms of communication across multiple contexts. Literacy is not just reading and writing but includes the critical ability to work with information in diverse formats and mediums, incorporating traditional texts and digital technologies (International Literacy Association [ILA], n.d.). This definition highlights literacy as an essential skill that creates opportunities for individuals.

Recent findings from the National Assessment of Educational Progress (NAEP) paint a concerning picture of our nation's literacy state. According to the NAEP reading assessment, administered to 108,200 fourth-grade students across the United States, 66% of fourth-grade students are reading below the proficient level (National Center for Education Statistics [NCES], 2022). This alarming figure highlights a growing trend of declining literacy over the past two decades (Reardon et al., 2012). Reading performance in the United States has continued to decline, following a downward trend that began over a decade ago. Data from the NAEP show that reading scores for 13-year-olds have significantly dropped since 2012, with the most recent 2023 results reflecting widespread declines across all performance levels (NCES, 2023).

This long-term trend was further exacerbated by the COVID-19 pandemic, as a large-scale study of over five million students revealed notable reading losses, particularly among elementary-aged students (Kuhfeld et al., 2022). Internationally, this pattern is echoed by a global average decline of 33% in reading performance between 2016 and 2021 (Contini et al., 2023).

Research further shows that students who lack proficiency in reading by fourth grade face a higher risk of academic struggles and eventual dropout (Moats, 2020). Consequently, early identification of reading literacy issues is paramount (National Institute of Child Health and Human Development [NICHD], 2000).

Contrary to popular belief, reading is not a naturally acquired skill but a complex activity that demands diverse skills. It requires phonological awareness—the recognition of word sounds and their association with letters (Kendeou et al., 2016)—and a deep understanding of vocabulary and syntax to derive meaning from text. Furthermore, it includes cognitive processes such as memory and attention to form coherent thoughts from individual words (Sesma et al., 2009). Guthrie and Klauda (2014) also stated that the motivation to read and the value placed on reading are important in developing literacy skills. These elements are significant as they prove that reading is not only about recognizing words; it is a tool to use language to think, learn, and communicate with the world effectively. This is because distinguishing the best teaching strategies for students with reading difficulties is not an easy task. Determining the most effective instructional methods for students with reading difficulties is a nuanced challenge. Literacy expert Louisa Moats has emphasized that "the tragedy is that most reading failure is unnecessary," noting that research over the past fifty years has consistently demonstrated that explicit instruction in foundational skills can prevent such failure (Moats, 2020).

Among the students who grapple with reading proficiency, there is a subset affected by dyslexia, the most prevalent reading disability (Shaywitz et al., 2021). Dyslexia is a neurological condition that affects an individual's reading and processing of written words (Shaywitz, 1998). Advancements in brain imaging are providing scientists with insight into how children with reading difficulties process information compared to proficient readers (Simos et al., 2005; Shaywitz et al., 2004). Studies reveal that targeted, research-based reading instruction can lead to changes in brain function, helping to normalize it and improve reading skills (Shaywitz et al., 2004). According to Shaywitz (2003), dyslexia is characterized by difficulties in phonological processing, specifically in manipulating sounds in spoken language (p. 40). Consequently, this can cause affected individuals difficulty decoding words, reading fluently, and spelling accurately. Shaywitz (2003) stresses that dyslexia does not stem from low intelligence or sheer lack of effort but is a specific learning disorder applicable to individuals with all levels of intelligence. Shaywitz highlights how "many of these children have average or above-average intelligence" (p. 42). Dyslexia transcends gender, race, ethnicity, and socioeconomic backgrounds, affecting all segments of the population (Wagner et al., 2020). Astonishingly, one in every five individuals is estimated to be impacted by dyslexia (Yale Center for Dyslexia and Creativity, n.d.).

In the past decade, substantial strides have been made in raising awareness and allocating resources to impact the academic trajectories of individuals with dyslexia positively. For instance, 49 states have passed bills addressing dyslexia within the K-12 education framework (National Center on Improving Literacy, 2022). Dyslexia represents one of the most prevalent learning disabilities in the United States, affecting up to 20% of our student population (Shaywitz et al., 2021).

Both individual research studies and comprehensive meta-analyses have shed light on essential components of effective instruction for students with dyslexia. These findings encompass both the content of instruction and the delivery methods. Effective instruction should include phonological awareness, grapheme-phoneme relationships, encoding, decoding, fluency, and comprehension (Foorman et al., 2016). The International Dyslexia Association (IDA) also emphasizes the importance of teaching syllable types and orthographic rules (IDA, 2020). The research consistently emphasizes that instructional delivery methods for dyslexic students should be explicit and systematic.

Despite the wealth of evidence supporting best practices in dyslexia education, many educators continue to grapple with insufficient knowledge and resources to adequately support these students (Washburn et al., 2014, 2017; Piasta et al., 2009; Moats, 2020). Even with legislative progress, professional development efforts remain inconsistent across districts, leaving gaps in implementation (Al Otaiba & Fuchs, 2006). Furthermore, research suggests that teachers often feel unprepared to translate training into practice without ongoing coaching and mentorship (Washburn et al., 2017; Garet et al., 2001). Teachers well-versed in dyslexia can create a more effective and targeted learning environment for dyslexic students (Washburn et al., 2017; Cunningham et al., 2009). It is imperative to underscore that this challenge does not stem from a lack of willingness but rather from the scarcity of practical, affordable, comprehensive, and accessible professional development training (Moats, 2009; Wanzek & Vaughn, 2010).

Statement of the Research Problem

Dyslexia is the most prevalent reading-related learning disability, affecting approximately one in five individuals (Yale Center for Dyslexia & Creativity, n.d.; Peterson & Pennington, 2015). Characterized by difficulties with language processing, including reading, writing, and

spelling, dyslexia is a neurobiological learning disability (Lyon et al., 2003; Shaywitz et al., 2021). While it is important to note there is no cure for dyslexia, research indicates that in many cases, it can be effectively remediated through the expertise of highly qualified professionals equipped with evidence-based instructional strategies (Moats, 2020; Washburn et al., 2017; Shaywitz & Shaywitz, 2020). These findings highlight a growing consensus on the importance of early identification and specialized instruction.

Students with dyslexia benefit most from educational approaches that are structured, direct, and systematic. However, research indicates a gap in the training of even the most well-qualified and experienced teachers, particularly in the nuances of teaching reading and literacy to young learners (Moats, 2009; Washburn et al., 2011). There is an urgent call for advanced teacher education and continuous professional growth to reduce the number of children falling behind in reading (Brady & Moats, 1997). Additionally, while recognizing the importance of supporting students with dyslexia, studies show that educators often do not possess the critical knowledge necessary for instructing striving readers, including those with dyslexia (McMahan et al., 2019). Washburn et al. (2011) examined teachers' knowledge of dyslexia and determined that educators often possess a limited grasp of the issue. Consequently, this deficiency impedes teachers' ability to deliver students effective reading decoding and comprehension instruction. These findings point to a systemic issue: teacher preparation programs have historically lacked a focus on the science of reading and dyslexia-specific instruction, contributing to widespread gaps in educator knowledge and practice (National Council on Teacher Quality [NCTQ], 2020; Moats, 2009).

Although awareness of dyslexia has increased through legislative efforts, a gap persists in how teachers are trained to address it effectively. Research indicates that many educators, even those with years of experience, lack formal training in dyslexia-specific instruction (Washburn et

al., 2014, 2017). Historically, teacher preparation programs have not consistently included structured literacy or the science of reading as core component (NCTQ, 2020). As a result, many veteran teachers entered the classroom without adequate preparation for supporting students with dyslexia. However, recent improvements in some teacher education programs reflect a growing recognition of this need, as colleges of education begin to align with evidence-based practices and structured literacy approaches (The Reading League, 2024). While these changes are promising for new graduates, they do not retroactively support those already in the field, emphasizing the need for high-quality, ongoing professional development. Without targeted professional development training, even the most dedicated educators may continue to rely on outdated or ineffective instructional methods, leaving students with dyslexia at a disadvantage. Although concerns about insufficient dyslexia-specific training in teacher preparation programs are well-documented, this study focuses on veteran educators whose college coursework likely predated recent revisions to literacy instruction standards. While many institutions are beginning to integrate structured literacy into teacher education, these changes are still relatively recent and may not be widespread or fully embedded across all programs. This study, therefore, highlights the ongoing professional development needs of practicing teachers rather than serving as a critique of current preparation programs.

This study focuses specifically on veteran rural teachers, many of whom were trained prior to these recent shifts. It is essential to recognize that professional development, such as dyslexia specialist training examined in this study, can play a critical role in bridging the gap and supporting effective instructional practices for current educators. Without structured, research-based professional development, teachers may struggle to meet the literacy needs of students with dyslexia, further exacerbating the achievement gap. Even with legislative progress,

professional development efforts remain inconsistent across districts, leaving gaps in implementation. Furthermore, research suggests that teachers often feel unprepared to translate training into practice without ongoing coaching and mentorship (Washburn et al., 2017). This study aims to address this gap by examining how dyslexia specialist training impacts teachers' instructional practices and confidence in delivering structured literacy instruction.

Rural educators face unique challenges in literacy instruction, particularly when working with students with dyslexia. Many rural districts lack access to dyslexia specialists, structured literacy coaches, or comprehensive professional development programs. Compared to their urban counterparts, rural teachers often have fewer opportunities for ongoing training and fewer resources to support striving readers. Limited funding, geographic isolation, and staffing shortages further contribute to the disparities in professional learning (Cadero-Smith, 2020). This study examines how veteran rural elementary teachers experience dyslexia specialist training, providing insight into how professional development can be tailored to meet the needs of under-resourced schools. By focusing on rural educators, this research sheds light on how training accessibility, implementation challenges, and instruction adaptations vary based on school settings. Understanding these dynamics is critical for ensuring equitable literacy instruction, particularly in communities where early intervention resources may be scarce.

It is increasingly important for teachers to be well-informed about the indicators and characteristics of dyslexia (Thorwarth, 2014) and for educational systems to furnish them with the knowledge and tools required to adapt learning environments to meet the diverse requirements of all students, including those with learning differences (Jaka, 2015). Considering this, teachers must be equipped with explicit and effective instructional strategies to better serve students at risk of falling behind academically. Moreover, there is an acknowledged need for

additional, specialized training in dyslexia, preparing educators to recognize and assist students exhibiting dyslexic patterns more effectively (McMahan et al., 2019). This comprehensive approach to teacher preparation will ensure that all students receive the support they need to flourish in their educational journeys.

Statement of Purpose and Significance

This phenomenological study provides a comprehensive description of the perceptions held by veteran rural elementary teachers who actively participated in a dyslexia specialist training program. The program is designed to bolster literacy instruction for all learners, particularly those with dyslexic tendencies. This research examines whether, and if so, how, this training influenced the participants' instructional practices. By delving into teachers' lived experiences, reflections, and insights, the study seeks to assess the participants' perceptions of the program's potential to instigate substantive changes in educational practices.

Although research on dyslexia has largely focused on student interventions, this study examines the experiences of veteran rural elementary teachers who have participated in a dyslexia specialist training program. By capturing teachers' perceptions, this research provides valuable insights into how professional development influences instructional practices and the challenges educators face in implementing evidence-based strategies. Understanding their perspectives is crucial for designing teacher training programs that translate theoretical knowledge into effective classroom practices.

Additionally, this study explores the impact of dyslexia intervention specialist professional development training on teacher confidence, instructional decision-making, and student engagement, filling a gap in existing research that primarily emphasizes student-centered outcomes rather than teacher implementation challenges.

Several studies have examined evidence-based interventions for students with dyslexia (Griffiths & Stuart, 2013; Stuart & Yates, 2018; Wadlington, 2000). Nevertheless, very limited research has explored the perspectives and lived experiences of educators who have undergone a dyslexia specialist training program aligned with the Academic Language Therapy Association (ALTA) and the International Multisensory Structured Language Education Council (IMSLEC). This program offers an all-encompassing framework for enhancing the teaching skills of educators to help students with dyslexia. It is based on the science of reading and is intentionally designed to align with the high-quality indicators established by ALTA and IMSLEC. These organizations emphasize evidence-based instructional practices and rigorous educator preparation standards (Moats, 2020; Washburn et al., 2017). Studies show that programs aligned with Certified Academic Language Therapist (CALT) standards significantly improve teacher knowledge and student literacy outcomes, particularly for students with language-based learning differences like dyslexia (Spear-Swerling, 2019; Cheesman et al., 2009). The program in this study supports educators in pursuing CALT credentials, ensuring a deep understanding of structured literacy. It is recognized nationally and provides educators with the skills needed to address diverse learning needs by fostering a unified approach to setting standardized professional development benchmarks and establishing clear guidelines for evidence-based teaching methodologies (Brady & Moats, 1997; IDA, 2018). This study uses a phenomenological research design to examine the impact of the CALT-aligned dyslexia training program on educational practices and to address existing research gaps in teacher perceptions of dyslexia intervention training.

Despite decades of research supporting structured literacy instruction for students with dyslexia, many schools continue to implement inconsistent or outdated reading approaches that

do not align with best practices. Existing studies have mainly focused on the effectiveness of dyslexia interventions from a student-centered perspective, but little research has examined how teachers experience, apply, and integrate dyslexia training into their classrooms. As a result, the gap between research and classroom practices persists, leaving many educators without essential guidance on how to translate research-based strategies into effective instruction.

Understanding how teachers perceive, apply, and integrate dyslexia training into their instructional practices is crucial for bridging the gap between research and real-world implementation. By exploring teachers' experiences, this study offers a unique perspective on how professional development influences instructional decision-making and the challenges teachers face when applying structured literacy methods in their classrooms.

The findings from this study offer actionable insights for educational leaders, policymakers, and professional development providers. By understanding the lived experiences of veteran rural teachers, this research helps shape more effective dyslexia training program that better support educators in implementing structured literacy instruction. Unlike previous studies that focus on the theoretical aspects of dyslexia intervention, this research provides direct feedback from educators who have undergone specialized training, offering practical recommendations for improving professional development programs. The results contribute to refining training frameworks, ensuring that professional learning is accessible and effective in real-world teaching environments.

The significance of this study lies in its potential to inform educational stakeholders, including educators, administrators, and policymakers, about the tangible benefits and challenges associated with professional development training programs such as Dyslexia Intervention Specialist Training.

This study is grounded in Guskey's Model of Teacher Change, which emphasizes the connection between professional development, instructional change, and student outcomes. According to Guskey (2002), teachers are more likely to modify their instructional practices when they see tangible improvements in student learning. By applying this model to dyslexia specialist training, this research provides a framework for understanding how training influences teachers' instructional practices and professional growth. Additionally, by exploring how educators implement what they learn, this study offers insights into the effectiveness of this professional development in shifting teacher beliefs and long-term classroom strategies.

This research further aligns with Guskey's model, highlighting that meaningful professional development not only influences instructional practices but also directly impacts student outcomes. By capturing the voices and lived experiences of participating teachers, this study provides valuable insights for program improvement, helping to tailor professional development initiatives to better meet the needs of educators. These insights could facilitate changes in instructional practices that, once resulting in positive student learning outcomes, encourage further change in teacher attitudes and beliefs. Consequently, this improves the quality of literacy instruction provided to students. Additionally, this research contributes to the broader discourse on teacher professional development and its influence on classroom practices, ultimately aiming to improve educational outcomes for all students.

Research Questions

Consistent with the purpose of this study, the research questions are as follows:

1. How did the veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?
2. In what ways, if any, did the dyslexia training influence their teaching practice?

Methodology

This phenomenological study explores the insights of veteran rural elementary educators who have participated in a dyslexia specialist training program. Individual interviews explore teachers' lived experiences and perspectives through questions anchored in Guskey's Model of Teacher Change. The analysis of the interviews focuses on identifying emerging themes. This approach enhances the researcher's understanding of the phenomenon of participation in a dyslexia specialist training program.

Subjectivity and Positionality Statement

My journey with dyslexia began eighteen years ago when my three-year-old son underwent evaluation and was placed on an Individualized Education Program (IEP) due to speech delays and articulation issues. As parents of two children, we were acutely aware that his speech development was abnormal. However, little did we know that this was just the starting point of our journey.

By the conclusion of his kindergarten year, it was evident that he was not progressing as expected in school. Academic concerns prompted us to request an evaluation from the school. Our son, too, sensed that something was wrong. He did not want to be pulled out of the classroom and away from his friends. Homework became a constant battle. Our son went from fun-loving and energetic to discouraged and overwhelmed.

My husband and I finally reached a breaking point and took matters into our own hands. We sought multiple professional evaluations, and the results confirmed what we had not expected – our son had both language and reading delays. This happened nearly 20 years ago when dyslexia was not widely recognized. At the time, it was still largely misunderstood as a visual issue or

simply backward reading. This marked the beginning of private tutoring sessions, which would prove transformative. By the close of his second-grade year, he was reading at grade level.

Today, our son has successfully graduated from the University of Missouri. He is now pursuing graduate studies at UConn while balancing work and travel between campus and New York City.

We are incredibly proud of his accomplishments and grateful for the perseverance and determination he demonstrated in overcoming his academic and language challenges. However, a lingering question persists: Why did our school district never broach the topic of dyslexia? We count ourselves fortunate to have had the means to afford private tutoring, but we are acutely aware that not every child with dyslexia enjoys such privilege.

My experiences have given me great insight as a researcher in this study. To reduce potential biases, documented interviews were used to report the perceptions and experiences of subjects in this study.

Every child should have the opportunity to receive research-based instruction. The capacity to read should never hinge on a child's socioeconomic status. I am confident that other educators share this desire as well: to become knowledgeable and equipped to provide the best possible instruction for all their students, enabling them to become independent and confident readers. We must ensure that all students receive the highest-quality, evidence-based instruction through research and advocacy.

A deeper understanding of how dyslexia can impact the development of literacy skills can prove invaluable to aspiring educators and seasoned teachers alike. Equipping teachers with the necessary background knowledge and resources is not merely about teaching students with dyslexia; it is about enhancing the effectiveness of instruction for all students.

Definition of Terms

Many of the following terms are relevant in reading and literacy. The following definitions provide an understanding of the terminology used in this study.

1. *Comprehension*: The ability to understand and gain meaning from what has been read (International Reading Association [IRA], 2010).
2. *Direct instruction*: All concepts are taught with continuous student-teacher interaction; a model for instruction that emphasizes well-developed and carefully planned lessons around small increments and defined teaching tasks (NICHD, 2000).
3. *Dyslexia*: The federal definition of dyslexia in the First Step Act of 2018 states, “an unexpected difficulty in reading for an individual who has the intelligence to be a much better reader, most commonly caused by a difficulty in phonological processing (the appreciation of the individual sounds of spoken language), which affects the ability of an individual to speak, read, and spell” (First Step Act of 2018, Pub. L. No. 115-391, § 3635(3), 132 Stat. 5194 (2018)).
4. *Literacy*: “the ability to identify, understand, interpret, create, compute, and communicate using visual, audible, and digital materials across disciplines and in any disciplines” (ILA, n.d.).
5. *Multisensory instruction*: The brain has four learning pathways: visual, auditory, kinesthetic, and tactile. These pathways are accessed at the same time to improve memory and learning (NICHD, 2000).
6. *Phonemic awareness*: The ability to notice, think about, and use individual sounds in spoken words (Armbruster et al., 2001).

7. *Phonics*: The relationship between the letters of written language and the sounds of spoken language (IRA, 2010).
8. *Phonological awareness*: The understanding of the internal linguistic structure of words (IDA, 2018).
9. *Rural*: A geographic area classified by the National Center for Education Statistics as a community with population of 7,000 or fewer residents. Schools in these areas are further designated as remote, distant, or bring based on their proximity to urban centers (NCES, 2023).
10. *Veteran teacher*: An educator with five or more years of classroom teaching experience, as defined by the National Center for Education Statistics in relation to teacher turnover and stability data (NCES, 2022).
11. *Vocabulary*: The words students must know to communicate effectively (IRA, 2010).

Organization of the Study

Chapter 1 provides an overview of the research, including the statement of the problem, purpose of the study, guiding research questions, theoretical underpinnings, key terms, and organization of the study.

Chapter 2 presents a comprehensive literature review, drawing on historical and contemporary scholarly works related to dyslexia, the science of reading, legislative context, the evolution of dyslexia understanding, professional development, teacher learning and change, teacher experiences with dyslexia, and diverse reading instructional methods.

Chapter 3 describes the methodology of the research, a rationale for qualitative phenomenological research, a description of the research design, criteria for participants, data collection, means of data analysis, and ethical considerations.

Following the methodology, Chapter 4 presents the findings of this research study following the collection and analysis of the data and presents key themes arising from the data.

Finally, Chapter 5 will engage in a discussion that brings full circle the research questions and their relation to the theoretical framework. It will also discuss the broader implications of these findings for educational practice and learning, culminating the research narrative.

Summary

There is a critical window of opportunity in a child's literacy development (Torgesen, 2004; Snow, Burn, & Griffin, 1998). Unfortunately, by the time children are identified as having reading difficulties, this window is often closing (Lonigan & Shanahan, 2009; Gaab, 2017). Literacy is more than just an academic skill; it is a foundation for success in life, encompassing cognitive, social, and economic outcomes (OECD, 2013; Hernandez, 2011). It extends beyond reading and writing to include a broad range of abilities necessary for functioning in society. The 2022 NAEP assessment paints a concerning picture: only 33% of fourth graders read at or above the proficient level, highlighting the urgent need for early detection and intervention (NCES, 2022).

This study examines the lived experiences of veteran rural elementary teachers who have participated in a dyslexia specialist training program. While awareness of dyslexia has grown and legislation has progressed, many teachers still lack the training and resources needed to effectively support striving readers (Moats, 2020; Washburn et al., 2017). This gap underscores the importance of equipping educators with specialized skills to ensure all students, especially those with dyslexia, receive the instruction they need to succeed.

Chapter 2 - Literature Review

Introduction

Literacy challenges in the United States have reached a critical point, as national assessments reveal troubling trends in student reading achievement. The most recent report from the National Assessment of Educational Progress (NAEP) revealed that only 33 percent of fourth-grade students read at or above the NAEP Proficient level (National Center for Education Statistics [NCES], n.d.). There is a window of time in a child's life when specific learning must occur to achieve their ultimate potential. Often, this window begins to close by the time children are identified with reading difficulties, typically around the age of ten or eleven (Zakariya, 2015). Immediate intervention for these children is vital to securing their success in literacy. Research shows that students who lack literacy proficiency by fourth grade are at a higher risk of struggling in school and dropping out (Moats, 2020).

Research based on the science of reading demonstrates that reading development progresses through neurologically-based stages which require explicit systematic instruction in phonological awareness and phonics as well as vocabulary, fluency, and comprehension (National Reading Panel (NRP), 2000; Moats, 2020; Seidenburg, 2017). The knowledge about reading development has not led to consistent implementation in schools. The difference between research and classroom practice becomes more noticeable when studying dyslexia identification and intervention methods in educational settings (Kilpatrick, 2015).

Dyslexia, the most common reading disability, affects up to 20 percent of the population (Shaywitz, 2003; IDA, 2019), yet teachers consistently report insufficient training to detect and instruct students with reading difficulties effectively (Washburn et al., 2011). The scientific consensus now recognizes that specialized professional development focused on structured

literacy instruction has become crucial for educators to help students who struggle with reading (Brady & Moats, 1997; Sayeski et al., 2018).

The theoretical foundation for this study is grounded in Guskey's (2002) Model of Teacher change which asserts that teacher beliefs and attitudes are most effectively influenced through changes in student outcomes and instructional practices. This model provides a useful framework to assess the effects of dyslexia intervention specialist training on rural educators' knowledge, classroom application, and long-term shifts in instructional mindset.

It is important to note that literacy is more than just reading and writing. According to the International Literacy Association (ILA) (n.d.), literacy is "the ability to identify, understand, interpret, create, compute, and communicate using visual, audible, and digital materials across disciplines and in any context" (para. 15). Literacy is more than reading and comprehending; it includes reading, writing, language, speaking, and listening. This essential life skill allows people many different opportunities and is essential to effective communication in American society.

Literacy plays a crucial role in shaping a child's future. It is the foundation for their academic success, personal growth, and overall well-being. With solid literacy skills, children can confidently navigate various subjects, comprehend complex ideas, and effectively communicate their thoughts and emotions. Additionally, literacy empowers children to explore new knowledge, pursue their passions, and participate actively in society. It opens doors to countless opportunities, enabling children to achieve their goals and aspirations.

When examining the literacy-related challenges and the reasons behind children's difficulties in reading, it is essential to acknowledge the significant impact of dyslexia. Dyslexia affects many individuals, with an estimated one in five children experiencing this learning

difference. Dyslexia is a neurobiological disability that can affect a person's reading processes; especially regarding accurate and fluent word recognition, poor spelling, and decoding abilities (KSDE, 2024; IDA, n.d.). Understanding and addressing dyslexia is crucial in ensuring that every child receives the support and resources they need to succeed in reading and overcome the obstacles they may face. Educators are responsible for identifying and providing these students with research-based best practices. Teacher training using evidence-based teaching strategies is a critical factor that can profoundly impact both teacher instruction and student performance. This study aims to investigate the perceptions and lived experiences of teachers participating in a dyslexia intervention specialist professional training program. The CALT-aligned dyslexia intervention specialist program is specifically crafted to enhance literacy instruction for students with dyslexic tendencies by offering thorough professional development training to teachers. Ultimately, the goal is to enhance the educational experiences and outcomes of students with dyslexia.

This literature review is organized into thematic sections to provide a comprehensive foundation for the study. It begins with the theoretical framework, grounding the research in Guskey's Model of Teacher Change. The review then establishes a working definition of literacy, followed by an exploration of the historical "reading wars" and current research in the science of reading.

With this foundation, the review shifts to an in-depth focus on dyslexia, including its definition, historical background, and major theories. Additional sections address the dyslexia debate, common characteristics, and prevailing misconceptions. The policy context is presented through a review of dyslexia legislation, followed by an examination of teacher knowledge and

training. The chapter concludes with a discussion of effective interventions, the role of professional development, and dyslexia specialist training programs.

These topics are addressed in the following order: (a) the theoretical framework, (b) the definition of literacy, (c) the reading wars, (d) the science of reading, (e) defining dyslexia, (f) the historical background of dyslexia, (g) theories on dyslexia, (h) the dyslexia debate, (i) common characteristics of dyslexia, (j) common misconceptions, (k) legislation on dyslexia, (l) teacher knowledge and training, (m) effective strategies and interventions, and (n) professional development training.

Theoretical Framework

Guskey's Model of the Process of Teacher Change

This study is grounded in Guskey's (2002) model of teacher change, which emphasizes that meaningful professional development (PD) leads to changes in teacher practices, which in turn influence student outcomes and ultimately reshape teacher beliefs. According to Guskey, change in educators' beliefs and attitudes often occurs after they observe positive impacts of new strategies on student learning—not merely through attending training sessions. This model challenges the assumption that belief change must precede practice change, instead proposing a practice-first approach to professional learning.

Guskey's model outlines three major outcomes of PD: (1) changes in classroom practices, (2) changes in student learning outcomes, and (3) changes in teacher beliefs and attitudes. His linear model (see Figure 2.1) suggests that for PD to be effective, it must be ongoing, job-embedded, and provide opportunities for reflection and collaboration (Guskey, 2002). These principles are especially relevant for dyslexia intervention training, where teachers must master complex, evidence-based literacy strategies and apply them with fidelity in real classrooms. In

rural settings, where professional learning opportunities are often limited, Guskey's framework provides a useful lens for evaluating how training impacts both instruction and teacher mindset over time.

This model serves as the conceptual foundation for exploring how participation in dyslexia intervention specialist training may lead to sustained changes in teacher knowledge, classroom practices, and beliefs, ultimately improving outcomes for students with dyslexia.

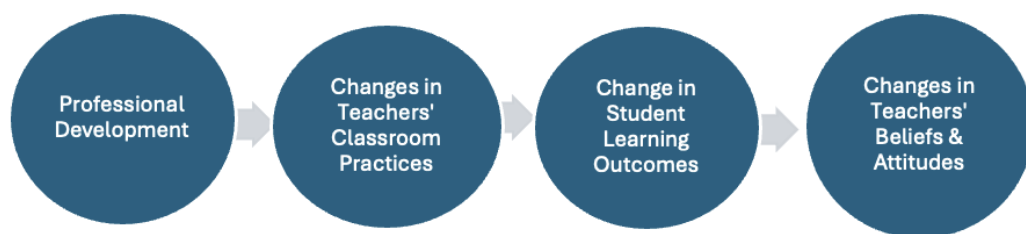


Figure 2.1. *Guskey's Model of the Process of Teacher Change.*

Adapted from "Staff Development and Teacher Change," by T. R. Guskey, 1985, *Educational Leadership*, 50(6), p. 58.

Defining Literacy

Defining literacy encompasses various perspectives and interpretations. The definition of literacy within the educational context lacks consistency, leading to confusion among educators and resulting in diverse instructional approaches. The National Center for Education Statistics (NCES) defines literacy as "the ability to use printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential" (NCES, n.d., "Literacy Definition" section), highlighting its multifaceted nature. Literacy is increasingly viewed as a multifaceted construct encompassing decoding, comprehension, and the ability to engage with texts across digital and social contexts (Snow & Moje, 2010). Additionally, the

United Nations Educational, Scientific and Cultural Organization (UNESCO, 2024) emphasizes literacy as a dynamic process involving understanding, creating, and communicating in today's digital world, expanding beyond traditional reading and writing (UNESCO, 2024, "*How does UNESCO define literacy*" section).

However, for the purposes of this study, the definition provided by the ILA holds particular significance. The ILA defines literacy as "the ability to identify, understand, interpret, create, compute, and communicate using visual, audible, and digital materials across disciplines and in any context" (ILA, n.d., para. 15). This definition emphasizes literacy as a comprehensive set of skills encompassing various forms of communication and media. This definition aligns with the evolving understanding of literacy as more than just reading and writing. Moreover, it underscores the importance of literacy across diverse disciplines and contexts.

The significance of the ILA's definition is further supported by scholarly literature. The ILA, as a reputable organization dedicated to literacy education, has contributed significantly to the discourse on literacy definitions and frameworks. Scholarly research has utilized the ILA's definition to explore the multifaceted nature of literacy and its implications for education and society. According to the National Council of Teachers of English (NCTE, 2020), despite its complexity, literacy serves as a global metric for assessing the health and competence of communities, with high literacy rates correlating with various positive outcomes, including better economic opportunities, nutrition, and environmental sustainability.

In summary, the definition provided by the ILA was selected for this study due to its comprehensive nature and alignment with contemporary understandings of literacy. Supported by scholarly research and recognized within the field of literacy education, this definition offers a robust framework for examining literacy in diverse contexts.

Reading Wars

The approach to teaching reading in the United States has changed significantly over the centuries. The origins of structured reading instruction trace back to the 1600s and 1700s. During this period, teaching methods included memorization of the alphabet, understanding the relationship between letters and sounds, and practicing spelling (Kilpatrick, 2015; Moats, 2020). By the mid-19th century, Horace Mann spearheaded a movement towards focusing on the meaning behind words rather than just phonics. This shift led to ongoing debates, famously known as the "reading wars," which centered on whether phonics or meaning-based strategies were more effective in teaching reading (Goldberg & Goldenberg, 2022).

Throughout the 20th century, the debate over the best method to teach reading, often referred to as the "reading wars," persisted. During the 1930s, the Scott Foresman company introduced the "Dick and Jane" books, which promoted learning through the memorization of words, largely sidelining phonics-based methods (Moats 2020). The tide shifted in 1955 when Rudolph Flesch published *Why Johnny Can't Read*, advocating a return to phonics, backed by meta-analyses of educational research (Semingson & Kerns, 2021). This was followed by Jean Chall's *Learning to Read: The Great Debate*, a scholarly examination that supported phonics as an essential component of a well-rounded reading program (Semingson & Kerns, 2021). In the 1970s, the whole language approach gained traction, influenced by psycholinguists like Kenneth Goodman, who argued for a focus on the meaning-based aspects of reading (Semingson & Kerns, 2021).

During the 1900s, the U.S. federal government took significant steps to enhance student achievement by enacting various legislative measures aimed at state educational bodies (Stevens, 2003). One notable initiative, Reading First, was launched under the No Child Left Behind Act

in 2001 (Stevens, 2003). This move, aimed at bolstering federal accountability, led states and local school districts to modify their reading instruction strategies to meet new standards.

The NRP established explicit guidelines for the type of research studied. Notably, the panel outlined criteria for the research it considered, excluding observational and anecdotal studies and those not adhering to experimental design standards (Seidenberg, 2013). The NRP researched scientific literature that adhered to strict criteria such as experimental and quasi-experimental research design (National Reading Panel & National Institute of Child Health, & Human Development (NICHD), 2000). In 2000, the NRP released its formative study that indicated the five key components needed to teach children to read: phonemic awareness, phonics, vocabulary, fluency, and comprehension (National Reading Panel, NICHD, 2000).

The Science of Reading

The science of reading refers to a rich body of research and knowledge accumulated over decades, shedding light on the most efficient approaches to reading instruction. The foundation of this research lies in extensive experimental studies, brain imaging scans, and numerous research hours, which collectively empower stakeholders to make informed decisions about reading instruction (Petscher et al., 2020; Seidenberg et al., 2020). This body of work includes contributions from neuroscientists, cognitive psychologists, and linguists, who study the processes occurring in the human brain as students learn to read (Dehaene & Cohen, 2011). The science of reading is defined as "the accumulated knowledge about reading, reading development, and the best methods to teach children how to read obtained by the use of the scientific method" (Petscher et al., 2020, p. S268). Instruction based on the science of reading involves the systematic and explicit teaching of the five components of reading identified by the

National Reading Panel: phonological awareness, phonics, vocabulary, comprehension, and fluency.

Phonological and Phonemic Awareness

Phonological awareness, a crucial component of reading, comprises various skills including word awareness, rhyme awareness, and phoneme awareness, among others (NRP, 2000). Specifically, phonemic awareness, the ability to manipulate phonemes, significantly impacts reading proficiency (Kilpatrick, 2016). It's a strong predictor of future reading success (Ehri et al., 2001).

Instruction in phonological and phonemic awareness focuses on sounds within spoken language and is auditory-based (Heggerty et al., 2020). Although typically introduced in kindergarten through second grade, there's no age limit for skill development (Kilpatrick, 2016). Phonological awareness involves recognizing sounds in spoken language, such as identifying words and breaking them into syllables (Moats & Tolman, 2004). The primary goal is understanding language structure, and progressing from words to syllables and phonemes.

At its core, phonological awareness starts with word recognition, then progresses to syllables, and later, to recognize the onset and rime within syllables (Moats & Tolman, 2004). Teachers aid this progression through syllable-related activities (Heggerty et al., 2020).

Furthermore, students learn to recognize and produce rhyming words, enhancing their phonological awareness (Moats & Tolman, 2004). Phonemic awareness, a subset of phonological awareness, involves manipulating individual sounds within words, including blending and segmenting (Kilpatrick, 2016). It's crucial for advanced reading skills (Kilpatrick, 2016).

Phonics

Phonics refers to the paired association between letters and sounds; a method of teaching reading and spelling that emphasizes sound to symbol relationships (Birsh & Carreker 2018). The English language operates on the basis of the alphabetic principle, which involves understanding that phonemes, or sounds, are represented by graphemes, which are letters or combinations of letters (Moats, 2019). Graphemes serve as the fundamental code for printed words (Moats, 2019). Phonics instruction entails guiding students in understanding the connection between sounds and the letters or combinations of letters that represent those sounds (Moats & Tolman, 2004). According to the findings of the National Reading Panel (NRP), structured phonics teaching leads to better results in comparison to unstructured or nonexistent phonics teaching methods for young learners. Structured phonics instruction involves teaching predetermined associations between letters and sounds that are commonly encountered in texts containing controlled vocabulary (NRP, 2000). Furthermore, the panel noted that phonics instruction at the beginning of reading significantly impacts reading comprehension (NRP, 2000). To summarize, phonics instruction offers benefits to early readers in terms of decoding, spelling, and word recognition, thereby enhancing their reading comprehension (NRP, 2000).

Fluency

The National Reading Panel (NRP) also emphasized the importance of fluency in reading. Fluency involves reading with precision, speed, and expressive tone. Skilled readers who possess fluency are generally better able to comprehend text (NRP, 2000). Fluency plays a critical role in proficient reading as it enables readers to concentrate on comprehension rather than decoding (NRP, 2000). A fluent reader can read words accurately and swiftly, effortlessly recognizing familiar words (Hudson et al., 2021). Speed, an essential element of fluency, refers to the capacity to read words automatically and without difficulty (Hudson et al., 2021).

Moreover, prosody encompasses aspects such as intonation, pitch, stress, and timing, which contribute to expressive reading (Hudson et al., 2021; Kilpatrick, 2015). Mastery of accuracy, speed, and prosody collectively characterizes fluent reading.

Vocabulary

Vocabulary encompasses the understanding of word meanings, which becomes more intricate due to words existing in both spoken and written forms. Furthermore, our comprehension of words can be classified into two primary types: receptive, relating to what we understand or recognize, and productive, concerning the vocabulary we use when communicating orally or in writing (Kamil & Hiebert, 2005). Vocabulary proficiency extends beyond language comprehension to encompass word recognition (Mitchell & Brady, 2013). In the English language, many words can have multiple pronunciations (heteronyms), such as "tear" and "lead." A comprehensive grasp of vocabulary aids in determining the correct pronunciation and ensures comprehension of text (Ehri, 2014). Studies indicate that vocabulary knowledge significantly influences students' reading comprehension (Quinn et al., 2015).

Comprehension

According to Birsh and Carreker (2018), "Comprehension is making sense of what is read and depends on good word recognition, fluency, vocabulary, world knowledge, and verbal reasoning" (p. 11). Since the 1980s, research on comprehension instruction has supported using specific cognitive strategies to help readers understand and remember what they read (NICHD, 2000). Metacognition is thinking about thinking. Good readers think about what they are reading. The research suggests that students will improve their ability to comprehend text through modeling and metacognitive instruction (Klingner et al., 2011).

Defining Dyslexia

Dyslexia is the most prevalent learning disability (Shaywitz, 2003). Yale Center for Dyslexia and Creativity estimates that one in every five people is affected by dyslexia (Yale Center for Dyslexia and Creativity, n.d.). Dyslexia is a neurobiological learning disability. It is characterized by language, reading, writing, and spelling difficulties.

Most definitions of dyslexia include that reading difficulty is “unexpected” in relation to other cognitive abilities. This correlates with reports that many students with dyslexia have average to above-average verbal IQ scores (YaleNews, 2010). Although definitions vary, most include phonological deficits that contribute to difficulties with sound-symbol relationships. These weaknesses lead to challenges with decoding and fluency. Significant advances have built a better understanding of dyslexia in the last ten years. Through MRI studies conducted on children before the onset of reading, scientists have discovered neurobiological disparities in at-risk pre-readers, notably in regions like the left temporoparietal and occipitotemporal areas (Vandermosten et al., 2016). This suggests an inherent nature rather than the product of diverse reading experiences. These findings strengthen the hypothesis of dyslexia’s biological correlation with specific brain regions. Dyslexia is defined by The International Dyslexia Association (IDA) in the IDA Dyslexia Handbook: What Every Family Should Know (IDA, 2019) as follows:

Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language and is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include

problems in reading comprehension and reducing reading experience that can impede the growth of vocabulary and background knowledge (p.2).

Historical Background of Dyslexia

Researchers have been studying learning disabilities and dyslexia since the 17th century. In 1877, Dr. Adolf Kussmaul, a German neurologist and professor of medicine at Strassburg, first identified dyslexic characteristics, terming it "word blindness" (Kirby, 2020). In 1896, the first documented case of dyslexia was identified and diagnosed by British ophthalmologist W. Pringle Morgan (Shaywitz, 2003). Morgan's patient, a bright individual named Percy, despite receiving several years of quality instruction, demonstrated exceptional intelligence but faced significant challenges in learning to read. Percy's teacher remarked he would excel as the brightest student in the school if all subjects involving reading were conducted orally (Shaywitz & Shaywitz, 2020). Notably, Percy's vision was unimpaired, his hearing was as expected, and he easily solved complex mathematical problems (Shaywitz & Shaywitz, 2020).

Dr. Rudolf Berlin, another German ophthalmologist, later coined the term "dyslexia" from the Greek roots "Dys" meaning difficulty and "Lexis" meaning words (Cox, 1985; Kirby, 2020). He applied this term to some of his adult patients in whom strokes had destroyed their ability to read and spell, yet left their speech and oral comprehension intact, now referred to as "acquired" dyslexia (Stein, 2023). These patients did not have any difficulty with their vision, and Dr. Berlin speculated that these patients had some physical differences in the brain.

A few years later, Hinshelwood and Pringle Morgan adopted this concept to hypothesize the existence of a developmental form of dyslexia (Stein, 2023). This would account for why certain children do not acquire the typical neural pathways associated with reading, even though they achieve normal development in speech and listening comprehension (Stein, 2023).

During this time, Dr. Samuel Orton, a neurologist, put forward the belief that dyslexia was rooted in a neurological deficit (Henry, 1998). According to Orton's perspective, dyslexia manifested in two primary characteristics: the absence of one dominant side of the brain and reading difficulties arising from strephosymbolia or twisted symbols (Henry, 1998).

Strephosymbolia is a term coined by Dr. Orton to describe the phenomenon of seeing letters or symbols as twisted or reversed.

In 1925, Dr. Orton and educators Anna Gillingham and Bessie Stillman collaborated to create a reading program known as the Orton-Gillingham method (Creak, 1937; Cox, 1985). This method adopted a multisensory approach, aiming to address the specific reading challenges faced by students with dyslexia. The four modalities of this learning approach are visual, auditory, kinesthetic, and tactile. Over the years, the Orton-Gillingham method has proven highly effective, providing valuable support to dyslexic students and enhancing their reading skills through various sensory-based techniques (Birsh & Carreker, 2018).

Dr. Orton was also one of the first to recognize the importance of phonics in reading instruction. He believed combining visual, auditory, and kinesthetic techniques could help students with literacy deficits. His multisensory approach engages students in their lessons, resulting in more on-task behavior, and has become well-regarded in the field of dyslexia.

Theories on Dyslexia

Over the course of history and with advancements in technology, particularly in brain imaging, scientists have made significant strides in understanding the inner workings of the brain and identifying the specific brain regions impacted in dyslexic children (Shaywitz, 2003). Scientific research has played a crucial role in shaping our comprehension of dyslexia, offering valuable insights into the underlying mechanisms and complexities of this learning difference.

Through brain imaging studies, cognitive research, and genetic studies, researchers have made significant strides in unraveling the intricate nature of dyslexia and providing empirical evidence for various theories (Birsh & Carreker, 2018). The subsequent section delves into various theories concerning dyslexia.

The Visual Theory

According to the visual theory of dyslexia, individuals with dyslexia may have difficulties perceiving and processing visual information accurately, which can impact their ability to recognize and distinguish letters and words (Stein, 2023). This theory suggests that visual processing deficits could result in problems with letter and word recognition, making it challenging for individuals with dyslexia to decode written language (Stein, 2023). Additionally, abnormalities in the visual processing areas of the brain, such as the occipital and parietal lobes, have been observed in neuroimaging studies of individuals with dyslexia, further supporting the visual theory (Goswami, 2011).

While the visual theory of dyslexia offers valuable insights into the neurobiological underpinnings of the disorder, it is important to note that dyslexia is a complex condition influenced by multiple factors, including genetic, cognitive, and environmental variables (Goswami, 2015). The visual theory of dyslexia does not negate the potential presence of phonological difficulties. Instead, it underscores the significance of visual factors in reading challenges, particularly in specific individuals with dyslexia (Eden et al., 1994). While acknowledging that phonological impairments may coexist, the visual theory highlights how visual processing plays a crucial role in some instances of dyslexia, contributing to reading problems (Goswami, 2011). More behavioral or functional MRI data is needed to validate this theory (Vandermosten et al., 2016).

The Cerebellar Theory

The Cerebellar Theory of dyslexia proposes that dyslexia is linked to abnormalities or dysfunction in the cerebellum, a region of the brain primarily associated with motor control and coordination (Nicolson et al., 2001). This dysfunction leads to difficulties in language processing and, consequently, reading challenges. It is hypothesized that abnormalities in the cerebellum may disrupt the timing and coordination of neural processes involved in reading, which could contribute to difficulties in phonological awareness, rapid automatized naming (RAN), and other critical reading skills (Sikoya et al., 2019).

Researchers at Georgetown University Medical Center used fMRI to compare cerebellar activity between typical children and children with dyslexia while reading single words. They conducted two types of analyses: one focused on the whole cerebellum and the other on specific regions of interest (Ashburn et al., 2020). They examined brain activity during word reading compared to fixating on a point and also investigated the connectivity of the cerebellum with other brain regions during rest and word processing. The researchers expected typical readers to show cerebellar activation during reading and specific connections between the cerebellum and certain brain areas (Ashburn et al., 2020). If the cerebellar theory is valid, they will anticipate differences in brain activity and connectivity during word processing in children with dyslexia compared to typical readers.

In the study, they conducted a region-of-interest analysis of the cerebellum and its sub-regions, but they did not find any specific activity related to reading in either group nor were there any differences between the groups (Ashburn et al., 2020). Additionally, they did not observe any functional connectivity specific to single word processing in either typical children

or children with dyslexia, and there were no differences between the two groups in this aspect as well (Ashburn et al., 2020). Therefore, these results do not support the cerebellar theory.

The Magnocellular Theory

The magnocellular theory of dyslexia proposes that deficits in the magnocellular pathway, a visual pathway responsible for processing motion, may contribute to difficulties in reading and language processing experienced by individuals with dyslexia (Stein, 2019). According to this theory, the magnocellular pathway, which is primarily involved in detecting rapid changes in visual stimuli and processing low-frequency visual information, is impaired in individuals with dyslexia (Stein, 2001). This impairment can manifest as difficulties in perceiving and discriminating between rapidly changing visual stimuli, such as letters and words during reading tasks (Stein, 2001).

Research supporting the magnocellular theory has shown differences in magnocellular function between individuals with dyslexia and typical readers. For example, studies using visual evoked potentials (VEPs) have demonstrated differences in the magnocellular response to visual stimuli in individuals with dyslexia compared to controls (Witton et al., 1998). Furthermore, neuroimaging studies have revealed abnormalities in the magnocellular pathway in individuals with dyslexia, including differences in the structure and function of brain regions involved in magnocellular processing (Goswami, 2011). While the magnocellular theory of dyslexia continues to be debated and investigated, it provides valuable insights into the neurobiological basis of dyslexia and informs the development of interventions targeting visual processing deficits in individuals with dyslexia.

The Phonological Theory

The phonological theory is one of the prominent explanations for dyslexia. According to this theory, individuals with dyslexia struggle with phonological processing (Shaywitz, 2003). Phonological processing refers to the cognitive abilities involved in recognizing, manipulating, and representing speech sounds, also known as phonemes. Phonological processing is a fundamental skill for reading and spelling, and difficulties in these areas are often associated with dyslexia. The three components of phonological processing include phonological memory, phonological naming, and phonological awareness (Birsh & Carreker, 2018). Phonological awareness involves the ability to recognize and manipulate the individual sounds (phonemes) in spoken language (Birsh & Carreker, 2018). Dyslexic individuals may struggle to identify and manipulate these sounds, such as recognizing rhyming words or breaking words into their constituent sounds. Phonological memory involves the rapid processing and immediate recall of sound-based information, temporarily stored in short-term memory (Anthony & Francis, 2005). Phonological naming is efficiently retrieving words stored in long-term memory (Whitehurst & Lonigan, 2002).

The phonological component is known to be associated with the left side of the brain, particularly the left temporal lobe, which plays a critical role in language processing, speech perception, and reading abilities (Vandermosten et al., 2016). This region is commonly called the "phonological processing center" or the "language center" of the brain. In individuals with typical language development, the left hemisphere, specifically the left temporal lobe, is specialized for processing phonological information (Shaywitz & Shaywitz, 2020). Dyslexic individuals may struggle to identify and manipulate these sounds, such as recognizing rhyming words or breaking words into their constituent sounds.

The left temporal lobe, which includes the Wernicke's area, is responsible for understanding and interpreting spoken language (Binder, 2015). When someone listens to speech, this region actively processes the phonological information present in the sounds they hear, allowing them to comprehend the meaning of words and sentences (Price, 2012). It also plays a significant role in developing phonological awareness, which is crucial for reading and spelling (Shaywitz & Shaywitz, 2020).

In individuals with dyslexia, there may be differences in the activation or connectivity of the left temporal lobe during phonological processing tasks (Shaywitz et al., 2004). Research using brain imaging techniques, such as functional magnetic resonance imaging (fMRI), has shown that individuals with dyslexia may exhibit altered activation patterns in this region while performing phonological tasks (Shaywitz et al., 2004). These differences in brain activation may contribute to the phonological difficulties experienced by individuals with dyslexia.

Effective interventions for dyslexia often focus on strengthening the phonological processing abilities of individuals (Birsh & Carreker, 2018). For example, phonics-based instruction, which emphasizes the relationship between letters and sounds, can help dyslexic learners improve their reading and spelling skills by targeting the phonological component associated with the left side of the brain (Shaywitz & Shaywitz, 2020).

Phonological memory is temporarily holding and manipulating phonological information in working memory (Birsh & Carreker, 2018). Difficulties in phonological memory can hinder the retention and recall of sound-symbol associations, making it challenging for individuals with dyslexia to decode and encode words accurately (Stanovich & Siegel, 1994). Phonological decoding involves translating written symbols (letters) into their corresponding sounds and blending them to read words (Moats, 1994). Individuals with dyslexia may encounter difficulties

in this area, leading to inaccurate or slow reading and spelling challenges (Birsh & Carreker, 2018).

Critics of the phonological theory acknowledge the presence of a phonological deficit and its role in reading difficulties. However, they propose that dyslexia is a broader condition connected to sensory, motor, and learning processes (Ramus et al., 2003; Nicolson & Fawcett, 2008; Stein 2019). According to these critics, the phonological deficit is just one aspect or outcome of this more widespread disorder. In essence, they believe that dyslexia involves a complex interplay of factors beyond phonological difficulties, which may include issues related to sensory perception, motor skills, and overall learning processes (Ramus et al., 2003; Nicolson & Fawcett, 2008; Stein 2023).

The Neurobiological Theory

The neurobiological theory proposes that dyslexia is rooted in atypical brain development and functioning (Hudson et al., 2007). It suggests that dyslexia arises from neurological differences in brain regions responsible for language processing, particularly areas involved in phonological processing, orthographic processing, and rapid automatized naming (RAN) (Shaywitz & Shaywitz, 2020). Neuroimaging studies have revealed differences in brain activation patterns and structural connectivity in individuals with dyslexia, supporting the idea of neurobiological underpinnings (Shaywitz & Shaywitz, 2020).

The neurobiological theory is supported by a growing body of brain-based evidence, which provides a deeper understanding of the neural mechanisms involved in dyslexia (Birsh & Carreker, 2018). Neuroimaging studies have shown differences in brain activation and connectivity in areas critical for reading, offering insights into the neurological basis of dyslexia (Birsh & Carreker, 2018). Shaywitz and Shaywitz noticed that dyslexic readers lacked neural

activity in more than one area in the back of the brain. The main differences occur in the Wernicke's area, which contributes to language comprehension, along with parts of the visual cortex, and a section of the association cortex, which is a part of the brain that is used to integrate the sight of printed letters with their corresponding sounds (Shaywitz & Shaywitz, 2020). Researchers also showed that people with dyslexia have a different makeup of matter in the brain. Hudson et al., 2007 stated:

People with dyslexia have less gray matter in the left parietotemporal area than nondyslexic individuals. Having less gray matter in this region of the brain could lead to problems processing the sound structure of language (Phonological awareness). Many people with dyslexia also have less white matter in this same area than average readers, which is important because more white matter is correlated with increased reading skill. Having less white matter could lessen the ability of efficiency of the regions of the brain To communicate with one another (p. 509)

Unified Framework: Integrating Neurobiological and Phonological Theories

The neurobiological theory and the phonological theory of dyslexia offer complementary perspectives that together provide a comprehensive understanding of this learning difference. Both theories underscore the critical role of phonological processing deficits in dyslexia, with neurobiological studies revealing differences in brain regions associated with phonological processing in individuals with dyslexia (Birsh & Carreker, 2018). This emphasis on phonological processing aligns with the neurobiological theory, which highlights the brain-based differences underlying dyslexia (Vandermosten et al., 2016). By integrating these theories, researchers and educators gain a deeper understanding of dyslexia's multifaceted nature, informing evidence-based interventions and support strategies tailored to address both brain-based differences and

phonological processing deficits (Tanaka et al., 2011). Recognizing the interconnectedness of these theories allows for a more holistic approach to supporting individuals with dyslexia in their reading development. Therefore, for my study, operating under both the neurobiological and phonological theories provide a robust framework for investigating dyslexia and identifying interventions that address its underlying mechanisms effectively.

The Dyslexia Debate

The Dyslexia debate encompasses a range of perspectives on the nature, diagnosis, and treatment of dyslexia, a learning difference characterized by difficulties with reading and language processing. In 2005, a television program titled "The Dyslexia Myth" added fuel to this discussion. The program argued that dyslexia is a myth and should be discarded from history, as asserted by Graham Stringer. Central to this debate are disagreements over the validity and utility of the dyslexia label. Critics contend that the term "dyslexia" is overly broad and lacks precision, suggesting that it may encompass a wide spectrum of reading difficulties that defy easy classification (Elliott & Grigorenko, 2014). This viewpoint advocates for a shift towards using more descriptive terms, such as "specific reading disorder," to better capture the heterogeneity of reading difficulties (Elliott & Grigorenko, 2014). Amidst these debates, there are also discussions about the role of educational and societal factors in shaping perceptions of dyslexia, as well as concerns about overdiagnosis and the potential for stigma associated with the label (Fletcher et al., 2007).

The debate regarding who should provide services and diagnose dyslexia within schools has been a contentious issue, often centering on the roles of educators, psychologists, and specialized professionals. Advocates for educators taking the lead argue that teachers possess valuable insights into students' learning needs and can implement evidence-based instructional

strategies to support striving readers (Moats, 2020). Additionally, some argue that early intervention within the classroom setting can effectively address reading difficulties before they escalate (Torgesen, 2000). Conversely, proponents of formal diagnosis by psychologists or specialized professionals emphasize the importance of accurate assessment to determine the specific underlying factors contributing to reading difficulties and to guide appropriate interventions (Elliott & Grigorenko, 2014). They argue that comprehensive evaluations can provide a more nuanced understanding of a student's needs, leading to tailored interventions and support services (Elliott & Grigorenko, 2014). This ongoing debate underscores the complex interplay between the roles of educators and specialized professionals in addressing the needs of students with dyslexia. As schools increasingly turn to classroom teachers to take a more active role in early identification and intervention, understanding how educators experience and apply dyslexia training becomes especially relevant, particularly in rural settings.

This study contributes to the ongoing dyslexia debate by examining how well-prepared teachers feel after completing a dyslexia intervention specialist training program, and how they apply what they have learned in the classroom. It centers teacher perspectives to better understand the impact of training on practice, particularly within the challenges of rural education. By focusing on the lived experiences of teachers, this study offers valuable insights into how training can empower educators to fulfill their expanding responsibilities in identifying and supporting students with dyslexia, thereby informing both policy and practice.

Common Characteristics of Dyslexia

The term "dyslexia" is a combination of two elements: "dys," which means "not" or "difficult," and "lexia," which refers to "words," "reading," or "language" (Hudson et al., 2007). Dyslexia is a specific learning disability that affects reading, spelling, writing, and sometimes,

language comprehension. While individuals with dyslexia can vary in the severity and specific challenges they face, some common characteristics include:

1. Difficulty with phonological awareness: Individuals with dyslexia often struggle with identifying and manipulating the sounds in spoken language, making it challenging to connect sounds to letters and decode words (Kilpatrick, 2020).
2. Reading difficulties: Dyslexia can lead to slow, inaccurate, or laborious reading, with difficulties in recognizing words quickly and automatically (Shaywitz, 2003).
3. Spelling challenges: People with dyslexia may have difficulty spelling words correctly due to their struggles connecting sounds to their corresponding letters (Birsh & Carreker 2018).
4. Poor decoding skills: Dyslexic individuals may have difficulty using phonics rules to decode unfamiliar words, relying more on guessing or contextual clues (Hudson et al., 2007).
5. Slow reading fluency: Dyslexia can impact the rate of reading, resulting in slow and choppy reading compared to their peers (Shaywitz & Shaywitz, 2020).
6. Poor working memory: Some individuals with dyslexia may struggle with holding and manipulating information in their working memory, which can hinder learning and following multi-step instructions (Birsh & Carreker, 2018).
7. Difficulty with reading comprehension: Understanding and remembering what is read can be challenging for individuals with dyslexia, despite good listening comprehension skills (Shaywitz, 2003).
8. Family history: Research has shown that there is often a genetic link. Parents who have dyslexia are more likely to have children with dyslexia (IDA, n.d.).

It is essential to note that dyslexia can present differently in individuals, and not all individuals with dyslexia will have all of these characteristics. Early identification and targeted interventions can significantly support individuals with dyslexia in developing their reading and language skills (Shaywitz, 2003).

Common Misconceptions

The confusion surrounding dyslexia often arises from conflicting terminology used to describe, assess, and comprehend it (Wadlington & Wadlington, 2005). These misunderstandings can lead to students remaining unidentified with dyslexia. Some common misconceptions include gender differences, visual perceptions, reading reluctance, spelling challenges, and academic achievement. However, there is scientific research available to help better understand dyslexia (Dyslexia Help, 2015). It is critical to debunk the following misconceptions and increase awareness about dyslexia's true nature as a language-based learning difference. Early identification and appropriate support can help individuals with dyslexia thrive in various aspects of life (Hall & Moats, 1999).

1. **Dyslexia is a visual problem:** Many people mistakenly believe that dyslexia is primarily a visual issue, where individuals with dyslexia see letters and words backward. However, dyslexia is a language-based learning difference that affects how the brain processes written language (Porch and Gilroy, 2003).
2. **Dyslexia is a sign of low intelligence:** Some individuals mistakenly associate dyslexia with low intelligence. However, dyslexia does not correlate with intelligence levels. Many people with dyslexia are intellectually capable and have strengths in other areas (IDA, n.d.).

3. Dyslexia can be outgrown or cured: Another misconception is that children with dyslexia will eventually outgrow it or that it can be cured with specific treatments. Dyslexia is a lifelong condition, but with appropriate support and intervention, individuals with dyslexia can develop effective reading and language skills (Shaywitz, 2003).
9. Dyslexia only affects reading: While reading difficulties are a hallmark of dyslexia, it can also impact spelling, writing, and other language-related tasks. Dyslexia is a complex learning difference that involves multiple language processing areas in the brain (Birsh & Carreker, 2018).
4. Dyslexia is caused by laziness or lack of effort: Some individuals mistakenly believe that dyslexia is a result of laziness or a lack of effort on the part of the individual. This is untrue, as dyslexia is a neurobiological condition that affects how the brain processes language (Shaywitz, 2003).
5. All individuals with dyslexia have the same difficulties: Dyslexia can manifest differently in different individuals. While phonological processing deficits are common, other cognitive strengths and weaknesses can vary among individuals with dyslexia (Stein, 2019).
6. Dyslexia is rare: According to the Yale Center for Dyslexia & Creativity (n.d.), dyslexia is the most common learning disability and represents 80-90 percent of those students with learning disabilities (*Dyslexia FAQ*, n.d.).
7. Dyslexia is more common in boys: Dyslexia affects an equal number of boys and girls. However, boys are more frequently referred for dyslexia assessment, often due to behavioral issues that may arise due to their reading and language processing struggles (Shaywitz & Shaywitz, 2020).

Legislation on Dyslexia

Literacy has emerged on the national political stage over the last 25 years. In 2001, President George W. Bush enacted the No Child Left Behind Act (NCLB) (*No Child Left Behind Act*, n.d.). This legislation aimed to ensure education equity and close achievement gaps between different demographic groups. The act was designed to improve public education and increase accountability for schools and states.

Dyslexia is one of the most common learning disabilities in America. It affects up to 20% of our students (Shaywitz et al., 2021). In the last decade, tremendous progress has been made in garnering the attention and resources needed to positively influence the academic path of those impacted by dyslexia (Ward-Lonergan & Duthie, 2018). For example, 49 states have passed one or more bills that address dyslexia in K-12 education (National Center on Improving Literacy, 2022). Federal and state authorities have implemented legislation aimed at enhancing dyslexia awareness and providing support through screening, interventions, specialized teacher training, accommodations, and safeguarding the rights of individuals with dyslexia (Ward-Lonergan & Duthie, 2018).

At the national level, legislation related to dyslexia, including pertinent court rulings, is grounded in the Individuals with Disabilities Education Act (IDEA) and Section 504 of the Rehabilitation Act, established in 1973 (Zirkel, 2020). Both laws are designed to ensure that individuals with disabilities receive equal opportunities comparable to those without disabilities.

The Individuals with Disabilities Education Act (IDEA) identifies thirteen conditions that qualify students for special education services, including specific learning disabilities (SLD), under which dyslexia is currently categorized. Recently, Senator Cassidy proposed legislation that aims to redefine dyslexia as a distinct category within IDEA, rather than a subset of SLD

(S.3121 - 21st Century Dyslexia Act, 2023). This change would establish a separate definition for dyslexia in federal education policy.

The Rehabilitation Act of 1979 was enacted to ensure specific rights for individuals with disabilities and to prevent discrimination against them. Specifically, regarding education, Section 504 of the Act provided and expanded civil rights protections to those with disabilities, including students with dyslexia. This section mandates that educational institutions make reasonable accommodations to enable students with disabilities to achieve academic success (Office for Civil Rights, 2008)

Although both the IDEA and Section 504 aim to support individuals with disabilities, they differ in their identification processes and eligibility criteria. The IDEA mandates that students qualify under one of thirteen specific categories to receive special education services. In contrast, Section 504 has broader eligibility requirements, obligating school districts to ensure a free and appropriate education to students with any physical or mental impairments that significantly limit one or more major life activities (Office for Civil Rights, 2008).

Zirkel (2020) presents a detailed diagram (Figure 2.2) that maps out the framework for educational interventions. This continuum positions Section 504 and the IDEA as the most formalized and legally binding options under federal law. On the other end, it depicts less formal strategies, such as general educational interventions carried out by the student's classroom teacher and various multi-tiered approaches to assist students facing challenges.

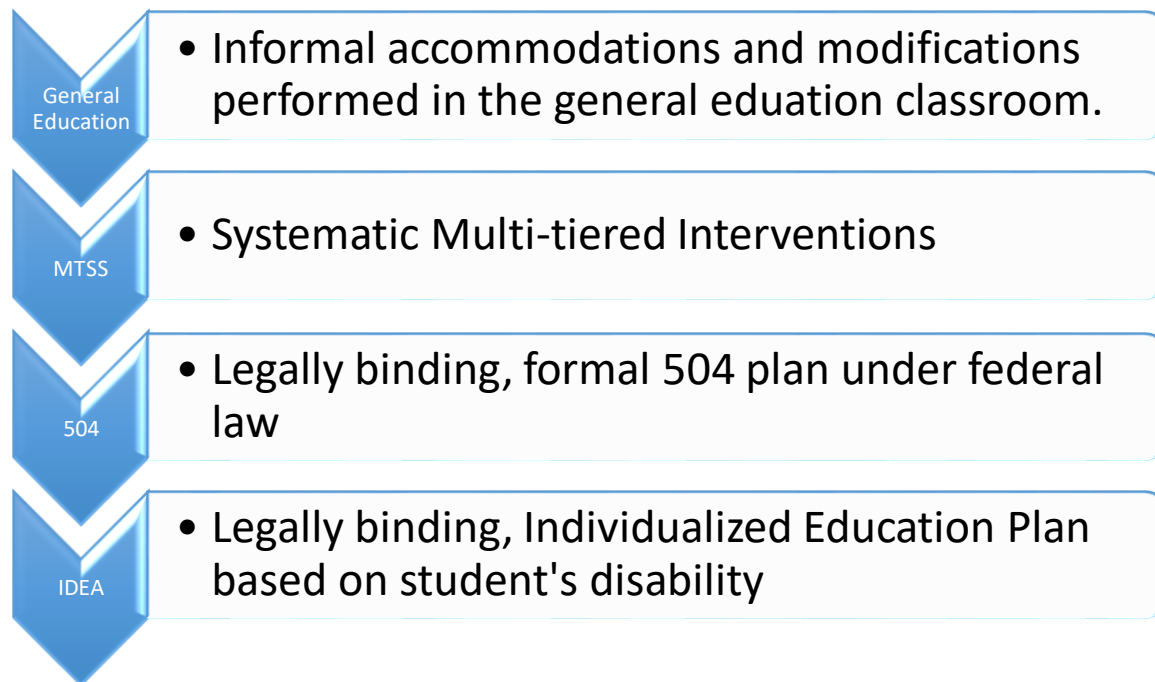


Figure 2.2 *Continuum of Educational Intervention Options*

Note. Adapted from *Zirkel Schematic Framework of Intervention Options*, by P.A. Zirkel (2020).

It's important to note that federal laws such as IDEA and Section 504 of the Rehabilitation Act do not directly address dyslexia. In IDEA dyslexia can fall under the category of "Specific Learning Disability." According to the American Psychiatric Association (2024):

To be diagnosed with a specific learning disorder (SLD), a person must meet four criteria.

1. Have difficulties in at least one of the following areas for at least six months despite targeted help:
 - Difficulty reading (e.g., inaccurate, slow and only with much effort).
 - Difficulty understanding the meaning of what is read.
 - Difficulty with spelling.
 - Difficulty with written expression (e.g., problems with grammar, punctuation or organization).

- Difficulty understanding number concepts, number facts or calculation.
 - Difficulty with mathematical reasoning (e.g., applying math concepts or solving math problems).
2. Have academic skills that are substantially below what is expected for the child's age and cause problems in school, work or everyday activities.
 3. The difficulties start during school-age even if some people don't experience significant problems until adulthood (when academic, work, and day-to-day demands are greater).
 4. Learning difficulties are not due to other conditions, such as intellectual disability, vision or hearing problems, a neurological condition (e.g., pediatric stroke), adverse conditions such as economic or environmental disadvantage, lack of instruction, or difficulties speaking/understanding the language (American Psychiatric Association, 2024, "Diagnosis" section).

If a child does not meet the eligibility criteria under the IDEA, Section 504 still recognizes reading as a significant life activity (Zirkel, 2020). As of 2024, legislation pertaining to this issue has been enacted at the state level in 49 states, with Hawaii being the only state without such legislation.

Kansas' Dyslexia Initiatives

Formed in 2018 via Substitute for House Bill 2602, the Legislative Task Force on Dyslexia was assigned the responsibility of guiding and providing recommendations to the Governor, the State Legislature, and the State Board of Education on implementing evidence-based practices for dyslexia. The task force's mandate included researching and endorsing evidence-based reading practices, outlining high-quality professional development activities for

both pre-service and in-service training to address reading challenges, reviewing current state and federal legislation and regulations, and identifying reliable screening and evaluation tools to detect reading difficulties, including dyslexia.

According to the Legislative Task Force on Dyslexia (2018), several key recommendations were made to improve dyslexia education and awareness:

- “Kansas State Department of Education (KSDE), should adopt the International Dyslexia Association’s Knowledge and Practice Standards
- KSDE should require candidates for K-6 teaching, English Language Arts, reading specialists, and special education teaching licenses to pass an exam addressing their knowledge of the science of reading
- The Legislature should provide funding for training for university professors to receive training in the science of reading
- Kansas State Board of Education (KSBE) should require professional learning experiences for in-service teachers
- KSBE should develop a dyslexia handbook.
- KSBE should identify a dyslexia coordinator within KSBE.
- KSBE should require screening for dyslexia.
- KSBE should require districts to implement a rigorous tiered system of supports subject to external review.
- KSBE should require accredited school districts to use structured literacy as the evidence-based approach to teaching literacy instruction.”

(Legislative Task Force on Dyslexia, 2018, pp. 2-3)

The 2018 Legislative Task Force on Dyslexia's recommendations led to significant changes and new requirements in teaching methods as outlined in the Kansas Dyslexia Initiatives. These requirements, as documented in the Task Force's report to the Legislature, are implemented by the Kansas State Department of Education (KSDE). In response to the Task Force's findings, the Kansas State Board of Education adopted the Kansas Dyslexia Handbook (2021/2023). This handbook aims to offer detailed guidance on dyslexia, enhance understanding of the condition, and promote effective educational practices to support students with dyslexia and other reading challenges (Kansas Dyslexia Handbook, 2021/2023).

The Kansas Dyslexia Handbook (2021/2023) is structured into five primary sections: Dyslexia Defined, Screening, Evidence-Based Reading Instruction, Structured Literacy Framework, and Reading Intervention Recommendations. It starts with a comprehensive definition of dyslexia, its typical characteristics, and the recommended procedures for screening. The handbook later details evidence-based practices for reading instruction. It also discusses the structured literacy framework, which is described as explicit, systematic, cumulative, multisensory, and data-driven. The components of this framework align with the National Reading Panel's findings and the principles of the science of reading, encompassing phonological awareness, sound-symbol association, syllable instruction, orthography, morphology, vocabulary, fluency, and comprehension. Additionally, the handbook includes a checklist to help educators assess curricular resources effectively.

In addition to the above recommendations, the Kansas State Department of Education also has dyslexia screening protocols and professional learning requirements.

According to the Kansas State Department of Education (n.d.), "Six hours of required Dyslexia training Modules are required for any new hire to a district that has not received

this training in previous district and hold the license or endorsements below in addition professional learning is required annually in Structured Literacy and/or Dyslexia Training for the following:

- All teachers endorsed elementary education.
- All teachers endorsed early childhood unified.
- All teachers endorsed high-incidence special education in teaching in grades K - 12.
- All teachers endorsed English Language Arts grades 5 - 12.
- All teachers endorsed as reading specialists.
- All professionals endorsed as school psychologists.
- Highly recommended that paraeducators receive the training." ("Structured Literacy and/or Dyslexia Training" section).

Furthermore, colleges of education in Kansas are encouraged to develop a course of study with a curriculum focusing on dyslexia and individuals facing reading difficulties. This curriculum should center around the principles of the science of reading and adhere to the standards set by IDA (2018).

Teacher Knowledge and Training on Dyslexia

Despite the considerable research and legislative efforts regarding dyslexia, many educators still lack the requisite training, entering classrooms ill-prepared to identify its signs or effectively instruct dyslexic students (Brady & Moats, 1997). Research consistently highlights this deficit in teacher knowledge and training on dyslexia, with educators often expressing a limited understanding of dyslexia and uncertainty on how to support these students (Shaywitz et al., 2008; Rose, 2009). Confusion among teachers regarding dyslexia and its instructional

approaches persists, hampering their ability to discuss it accurately (Aladwani & Al Shaye, 2012; Worthy et al., 2016).

Historically, teacher preparation programs have long received criticism for inadequately preparing educators in the areas of dyslexia and the science of reading (Aladwani & Al Shaye, 2012; Worthy et al., 2016). However, recent years have brought about multiple legislative and policy-based reforms aimed at addressing this knowledge gap. A national trend toward improved teacher readiness is reflected in *Dyslexia: A State Guide* (2022), which reports that 49 states have enacted dyslexia-related laws. These laws commonly require pre-service and in-service training, as well as ongoing professional development, rooted in structured literacy and evidence-based reading instruction. This reflects a growing awareness and a movement toward incorporating structured literacy into educator preparation programs.

Despite these mandates, the implementation of such policies has yielded inconsistent results. For example, while states like Mississippi and Arkansas have developed robust accountability systems for teacher preparation programs, others rely on voluntary training modules that lack oversight (NCTQ, 2024; *Dyslexia: A State Guide*, 2022). Furthermore, research suggests that many preparation programs struggle to maintain consistent alignment between coursework and current reading science, even in states with mandates (NCTQ, 2024). Although concerns about inadequate dyslexia-specific training in teacher preparation programs are well-documented, this study focuses on veteran educators whose college coursework likely predated recent reforms. Many teacher preparation programs are now integrating structured literacy and the science of reading into their curricula, which may better prepare future teachers to meet the needs of striving readers.

Kansas has responded with significant systemic reforms, including required structured literacy training for new educators and promotion of International Dyslexia Association–approved curriculum models in higher education. The *Kansas Dyslexia Handbook* (2021/2023) outlines these changes, establishing statewide dyslexia screening protocols and detailing essential components of evidence-based instruction.

At this point in time, ongoing professional development remains critical, particularly for in-service teachers who did not benefit from recent reforms during their pre-service training. This is especially true in rural settings, where educators may face additional challenges, such as limited access to high-quality training, geographic isolation, and staffing shortages (Cadero-Smith, 2020). Addressing these challenges is essential to ensuring that all students, regardless of location, receive equitable and evidence-based reading instruction.

Misconceptions about dyslexia persist. Some teachers still believe that dyslexia is a visual issue or assume students will naturally outgrow it (Vellutino et al., 2004; Snowling et al., 2012). Calls for more targeted teacher training in dyslexia, encompassing awareness and evidence-based interventions, echo through the literature (Toste et al., 2017; Eide & Eide, 2019). Without proper training, many teachers may unknowingly contribute to heightened frustration, diminished self-esteem, and academic struggles for dyslexic students (Girard et al., 2019; Deacon et al., 2019).

Despite the widespread need for professional development, rural educators often face additional barriers. Research highlights that teachers in rural communities frequently have limited access to high-quality dyslexia training, coaching support, and updated instructional resources due to funding constraints, geographic isolation, and staffing shortages (Cadero-Smith,

2020). Addressing these rural-specific challenges is essential to ensure that all educators, regardless of location, are equipped to support diverse learners.

Effective Strategies and Interventions for Students with Dyslexia

According to the National Reading Panel (NICHD, 2000), certain instructional approaches are better than others. The NRP concluded that the best approach to reading instruction combines explicit instruction in phonemic awareness and systematic phonics instruction (NICHD, 2000). In addition to phonemic awareness and phonics instruction, the NRP also identified fluency, vocabulary development, and reading comprehension as essential components of reading (NICHD, 2000).

While dyslexia persists throughout an individual's life and lacks a cure, appropriate early interventions can significantly enhance reading abilities. According to Birsh and Carreker (2018), scholars have emphasized the interplay of neurobiological and environmental factors in individuals with reading difficulties. This has been evidenced through techniques such as functional magnetic resonance imaging (fMRI) (Vandermosten et al., 2016). When children with reading disabilities were given intensive, systematic code-based reading interventions, they demonstrated increased activation in the left occipitotemporal brain region and made significant gains in reading fluency and comprehension 1 year after the intervention ended (Birsh & Carreker, 2018).

After receiving intensive and structured reading interventions focusing on language codes, children with reading difficulties showed heightened brain activity in the left occipitotemporal region. Additionally, they exhibited notable improvements in both reading fluency and comprehension even a year after the intervention concluded (Birsh & Carreker, 2018).

According to Shaywitz and her team (2004), this finding suggests that the brain's reading systems possess neuroplasticity, indicating that a reading intervention grounded in scientific principles can lead to substantial and lasting alterations in brain structure. This facilitates the enhancement of rapid neural systems crucial for proficient reading (Shaywitz et al., 2004). Shaywitz and her team discovered that intensive phonological-based intervention made “significant and durable changes in brain organization so that brain activation patterns resemble those of typical readers” (Shaywitz et al., 2004, p. 931). Snowling and Hulme (2011) also report evidence showing phonologically based interventions are effective in teaching children with dyslexia.

Neuroimaging studies affirm that dyslexia has a neurobiological basis, with individuals exhibiting reduced brain activity in specific regions during reading and rhyming tasks compared to neurotypical counterparts (Kearns et al., 2018). Encouragingly, effective instruction can lead to neuroplastic changes, altering brain activation patterns (Shaywitz et al., 2004). Hence, it's imperative for educators to grasp how to implement evidence-based practices tailored for dyslexic students.

The International Dyslexia Association, drawing from extensive research, outlines effective instruction for dyslexic students, emphasizing approaches that are explicit, systematic, cumulative, structured, and multisensory. Such instruction should be language-centric, providing cognitive explanations to deconstruct language structure progressively (Sayeski et al., 2018). Structured Literacy, encompassing all reading components, emerges as the most effective approach for dyslexic students and others facing reading challenges (Moats, 2017). This approach targets language processing weaknesses inherent in dyslexia, including phonological skills, decoding, and spelling (Spear-Swerling, 2019). It systematically addresses language

instruction at all levels, including phonology, letter-sound relationships, syllable structure, morphology, syntax, and semantics (IDA, 2017). Structured Literacy has been shown to be effective in teaching all students how to read and write (Moats, 2019; Young, 2018).

Professional Development Training

Numerous studies have underscored the lack of teachers' training and expertise to recognize dyslexia indicators or traits (Aladwani & Shaye, 2012). Addressing this gap, Aladwani and Shaye (2012) advocate for integrating dyslexia-focused professional development and mandatory coursework in colleges and universities to increase teacher comprehension of dyslexia.

Current pre-service workshops for general education teachers fall short of equipping them to effectively educate dyslexic children (Smith & Tyler, 2011). College training programs tend to prioritize theoretical knowledge acquisition over practical teaching strategies for dyslexic students (Sharma et al., 2012). Moreover, general education teachers report receiving inadequate instruction on suitable teaching methodologies for addressing dyslexia-related learning challenges (Chiner & Cardona, 2013). To bridge this gap, educators require professional development that incorporates contemporary practices and approaches for students with reading difficulties, including dyslexia (Bateman & Bateman, 2014).

Teachers' limited understanding of dyslexia may lead to negative attitudes toward dyslexic students, fostering feelings of discomfort, uncertainty, or vulnerability in their interactions (Yildiz et al., 2012; Washburn et al., 2011). Moats (2010) established a robust correlation between teachers' dyslexia knowledge and practices and student reading achievement. Many educators admit to feeling ill-prepared to instruct dyslexic children in their classrooms,

expressing a desire for additional training to rectify ineffective teaching methods (Moats, 2010; McCray & McHatton, 2011).

Offering teachers opportunities for professional development in dyslexia instruction could effectively address the current deficiency in dyslexia training (Guskey & Yoon, 2009). Research indicates that students demonstrate academic improvements when educators receive specialized and ongoing professional development (Guskey & Yoon, 2009). Additionally, Gallardo and colleagues (2015) discovered that professional development activities positively impacted teachers' attitudes and practices in supporting dyslexic students.

Advocates such as Guskey and Yoon (2009) emphasize the importance of professional development opportunities in fostering positive teacher attitudes and classroom practices. Furthermore, there exists evidence linking the intensity of professional development to student achievement. A comprehensive review of over 1,300 studies revealed that teachers who underwent substantial professional development, averaging 40 hours, could enhance their students' achievement by approximately 21 percentile points (Yoon et al., 2007). Studies with more than 14 hours of professional development demonstrated a positive effect on student achievement, whereas those with the least amount of professional development (5-14 hours total) showed no statistically significant impact (Yoon et al., 2007).

Despite increasing legislative mandates and policy shifts emphasizing evidence-based reading instruction, many teachers continue to report feeling underprepared to implement structured literacy effectively. This concern is underscored by findings from the National Council on Teacher Quality (NCTQ, 2024), which revealed that only 25% of teacher preparation programs adequately address all five components of scientifically based reading instruction. The report highlights that elementary teachers must be equipped to explicitly and systematically teach

these components; however, most preparation programs lack sufficient instruction in these areas, leaving educators without the practical skills needed to translate theory into effective classroom practice.

Integrating Guskey's Model for Professional Development

In addressing the need for professional development training to equip teachers with the necessary skills to effectively teach students with dyslexia, Guskey's model for teacher change offers valuable insights. According to Guskey (2002), effective professional development should be ongoing, job-embedded, and focused on the specific needs of teachers. Additionally, Guskey emphasizes the significance of providing teachers with opportunities for collaborative learning and feedback, facilitating a supportive environment conducive to skill development and implementation (Guskey, 2002). Incorporating these elements into professional development initiatives can enhance teachers' abilities to recognize dyslexia indicators, implement evidence-based instructional strategies, and create inclusive learning environments. Furthermore, Guskey's model underscores the importance of evaluating the effectiveness of professional development efforts through rigorous assessment methods, ensuring continuous improvement and sustained impact on teacher practice and student outcomes (Guskey, 2002). Thus, integrating Guskey's model into professional development frameworks can play a pivotal role in addressing the critical need for teacher training in dyslexia instruction.

Dyslexia Specialist Training

The dyslexia specialist training that was explored for this study aligns with the standards established by the Academic Language Therapy Association (ALTA) and the International Multisensory Structured Language Education Council (IMSLEC). This CALT-aligned dyslexia intervention specialist program offers an all-encompassing framework for enhancing the teaching

skills of educators to help students with dyslexia. The program is based on the science of reading and is intentionally designed to align with the high-quality indicators established by ALTA and MSLEC. It further helps to move educators toward their Certified Academic Language Therapist (CALT) credentials. The program is recognized nationally and possesses essential competencies to effectively cater to a diverse range of learning needs by fostering a unified approach to setting standardized professional development benchmarks. The program is also recognized and approved by IDA (2018).

Participants are immersed in the principles of structured literacy, focusing on systematic and explicit teaching methods to address the underlying language difficulties associated with dyslexia. This comprehensive curriculum covers key areas such as phonology, morphology, syntax, and semantics, providing trainees with a deep understanding of language structure and its application in literacy instruction.

The training uses the Alphabetic Phonics curriculum. Aylett Royall Cox (1915–2006) and her team at the Scottish Rite Hospital in Dallas were instrumental in the development of the Alphabetic Phonics curriculum during the 1980s (Cox, 2000). Derived from the Orton-Gillingham-Childs multisensory teaching approach, initially formulated by S. T. Orton in 1937 and further refined by A. Gillingham in 1956 and 1963, the Alphabetic Phonics curriculum represents an extension of these foundational methods (Orton, 1937; Gillingham, 1956, 1963). Designed as an ungraded, multisensory curriculum, Alphabetic Phonics is specifically tailored to teach the structural aspects of the English language, making it particularly suitable for children with dyslexia (Cox, 2000). It can be implemented in individual, small group, or whole group settings for elementary or secondary school students, addressing various literacy components

including reading, handwriting, spelling, verbal and written expression, as well as comprehension (Cox, 2000).

Alphabetic phonics provides systematic reading instruction while simultaneously engaging the visual, auditory, and kinesthetic modalities. Each daily session is structured to alternate modalities by including 11 different activities: phonemic awareness, alphabet, letter decks, sound decks, multisensory introduction of new learning, reading, cursive handwriting, spelling, verbal expression, review, and listening.

The teacher monitors the students' progress and modifies the pacing of the curriculum to meet the needs of the students. The lesson cycle, as shown in Table 2.1, includes structured daily activities, procedures, discovery learning, and daily exposure to small bits of new learning.

Table 2.1 *Lesson Cycle for Alphabetic Phonics*

Activity	Description
Phonemic Awareness	The study of the awareness of the units of speech and the development of how the elements may be manipulated in oral language.
Alphabet	The study of the alphabet. Activities support automatic recognition, sequencing, directionality, alphabetizing, and dictionary skills.
Reading Decks	Daily review of graphemes and phonemes.
Spelling Decks	Daily review of previously introduced speech sounds with corresponding orthographic representation.
Multisensory Learning or Concept Introduction	The introduction of new learning or concepts for reading, writing, and spelling incorporating visual, auditory, and kinesthetic modalities.
Reading Practice	The reading and coding of words and sentences using previously taught letters and concepts. Syllable types are also emphasized.
Handwriting Practice	Review of previous letters with emphasizes placed on size, shape, form, and directionality.
Spelling Practice	Practice learned procedures from S.O.S (Save our Spelling) routine. Students echo the word, unblend the word, spell the word, write the word, then code and read the word.
Verbal/Written Expression	Activities that practice verbal and written communication.

Review	Daily review of new learning and previously taught concepts.
Listening	Activities that incorporate comprehension and model comprehension strategies.

Upon successful completion of the training program, participants can acquire Certified Academic Language Practitioner (CALP) Certification and may continue and acquire Certified Academic Language Therapists (CALT) Certification. The following outlines the requirements CALP and CALT requirements.

Certified Academic Language Practitioner Requirements (CALP)

- Minimum of 45 instructional hours
- Minimum of 60 clinical teaching practicum hours
- Minimum of 5 demonstrations
- Acceptable performance on the ALTA Competency Exam (Certified Academic Language Practitioner (CALP) Requirements, Updated 9/2022)

Certified Academic Language Therapist Requirements (CALT)

- A Bachelor's degree from an accredited institution;
- A Master's degree from an accredited institution;
- Comprehensive therapist training in a Multisensory Structured Language Education Program. This training is defined as a course under the supervision of a Qualified Instructor that includes a minimum of 200 instructional hours, a minimum of 700 clinical/teaching hours, a minimum of 10 demonstration lesson, clinical/teaching documentation, and proof of the therapist's progress and competency.

- Passing performance on a comprehensive examination administered by the Academic Language Therapy Association (ALTA); and a minimum of 2 years and a maximum of 5 years from the beginning of CALT Training
- Completion of 10 CEU's (1 CEU = 1 hour at an approved ALTA event) per year (Certified Academic Language Therapist (CALT) Requirements, Updated 9/2022).

Conclusion

Dyslexia is the most prevalent learning disability (Shaywitz, 2003). Creativity (n.d. Center for Dyslexia and Creativity (n.d.) estimates that one in every five people is affected by dyslexia. Dyslexia is a neurobiological learning disability. It is characterized by language, reading, writing, and spelling difficulties. However, with research-based support and intervention, people with dyslexia can learn to read and write and achieve success.

To effectively support students with dyslexia, educators must go beyond prevailing myths and misconceptions. Instead, they should adopt an approach centered on comprehending each student's unique struggles and requirements. The attitudes, knowledge, and training of educators significantly influence the academic progress of dyslexic students. Therefore, exploring how educators' perceptions impact identification and subsequent academic outcomes warrants further investigation.

While existing studies emphasize general teacher training needs for dyslexia, few address the lived experiences of rural educators navigating these challenges. This study contributes to the literature by bringing attention to the experiences of rural teachers and examining how the unique context of rural schools influences the implementation of dyslexia intervention specialist training.

The attitudes, training, and knowledge of educators are pivotal in facilitating effective instruction for dyslexic students. Furnishing educators with comprehensive training not only enriches their pedagogical perspective but also enhances their efficacy in the classroom. Such initiatives result in tangible improvements in how dyslexic students are supported academically. Moreover, the ripple effects of this training extend beyond dyslexic students, fostering a more inclusive and supportive learning environment for all students.

Dyslexia is the most prevalent learning disability (Shaywitz, 2003), with an estimated one in five individuals affected (Yale Center for Dyslexia and Creativity, n.d.). Although it presents significant challenges in reading, writing, and language processing, research-based interventions can lead to meaningful progress for students with dyslexia. Educators play a pivotal role in this process; their knowledge, attitudes, and training directly shape how dyslexia is identified and addressed in classrooms. Yet, while existing research highlights the general need for better teacher preparation, few studies explore the lived experiences of educators—particularly those in rural settings—who must navigate these challenges with limited resources. This study seeks to fill that gap by examining how rural teachers implement what they have learned through dyslexia intervention specialist training. By centering teacher perspectives, this research provides insight into the practical application of structured literacy and informs both policy and professional development efforts aimed at improving outcomes for students with dyslexia. Ultimately, equipping educators with high-quality training benefits not only students with dyslexia but enhances inclusive instructional practices for all learners.

Chapter 3 - Methodology

This phenomenological qualitative research aimed to examine teachers' perceptions regarding their participation in a dyslexia specialist training program. This professional development program aimed to equip teachers with the necessary knowledge, tools, and strategies to effectively teach reading to students with dyslexic tendencies.

This study was prompted by the increasing number of students identified as reading below grade level. According to the National Assessment of Educational Progress (NAEP), 66% of fourth-grade students read below the proficient level (National Center for Education Statistics [NCES], 2022). Among these students, it is estimated that one in five exhibits dyslexic characteristics (National Center on Improving Literacy, 2017).

The findings of this study contributed to the growing body of research on reading best practices and helped education stakeholders develop standards to improve reading proficiency. This study intended to support teachers, administrators, and policymakers in integrating effective literacy practices into classroom instruction by providing valuable insights.

The major sections of Chapter 3 included the research design and rationale, the role of the researcher, methodology, and trustworthiness. The methodology section detailed the participant selection process, instrumentation, data collection, and analysis. The trustworthiness section explained measures to ensure credibility, confirmability, dependability, and transferability. Each section outlined how the study applied these components, concluding with a summary of key points.

Research Questions

This qualitative phenomenological study focused on teachers who had participated in a dyslexia specialist training program. This study aimed to explore teachers' perceptions of the

program. The dyslexia specialist training examined in this study aligned with the standards established by the Academic Language Therapy Association (ALTA) and the International Multisensory Structured Language Education Council (IMSLEC). This program offered a comprehensive framework for enhancing the teaching skills of educators to help students with dyslexia. The program was based on the science of reading and aligned with the high-quality indicators established by ALTA and IMSLEC. It further helped move educators toward their Certified Academic Language Therapist (CALT) credentials. The program was recognized nationally and possessed essential competencies to effectively cater to diverse learning needs by fostering a unified approach to setting standardized professional development benchmarks. It was also recognized and approved by the International Dyslexia Association (IDA).

A theoretical framework for this research was grounded in the principles of Guskey's model of teacher change. Guskey (2002) posited that enduring changes in teaching approaches occur only following a fundamental shift in teachers' beliefs and attitudes.

The following research questions guided this study:

1. How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?
2. In what way, if any, did the dyslexia training influence their teaching practice?

Rationale for Qualitative Research

In his work on qualitative research, Patton (2015) emphasized the important role that the researcher plays in being actively engaged in and accurately capturing the experiences of individuals within their natural surroundings. Qualitative research aims to discover how different people experience and interpret reality (Vagle, 2018). To truly understand experiences firsthand and derive meaning, qualitative researchers must connect with all involved individuals (Ravitch

& Carl, 2016). Additionally, Bhattacharya (2017) noted that qualitative research is centered around exploring human experiences and how people derive significance from them. Merriam and Tisdell (2016) further explained that qualitative researchers focus on understanding how individuals or groups interpret their reality and lived experiences.

This study examined the participants' perceptions of a dyslexia specialist training program. Qualitative research allows for an in-depth exploration of participants' perspectives and viewpoints. In qualitative research, the researcher serves as the primary instrument for data collection and analysis. Therefore, a significant amount of time was spent with participants. The researcher's relationship with the Phillips Fundamental Learning Center facilitated this engagement, enabling a thorough exploration of the participants' experiences.

Phenomenology is a qualitative research approach that aims to capture, as closely as possible, how individuals experience a particular phenomenon (Creswell & Poth, 2018; Giorgi & Giorgi, 2003). In this study, phenomenology served as the methodological framework because of its focus on the lived experiences and perspectives of elementary school teachers who had participated in a dyslexia specialist training program. To explore these lived experiences, this study drew upon the phenomenological perspective of Edmund Husserl, which emphasizes the subjective interpretation of experiences (Husserl & Moran, 2012). Husserl's framework allowed for a deep examination of the participants' personal perceptions and inner realities. Data were collected to thoroughly describe how individuals experienced this phenomenon.

This study's phenomenological nature was characterized by emphasizing personal encounters and subjective meanings (Peoples, 2020). Qualitative data were used to explore the depth of teachers' experiences. This phenomenological study aimed to preserve the participants' authentic voices and narratives (Van Manen, 1984). The research focused on interpreting their

lived experiences in relation to the impact of the dyslexia specialist training program. The study prioritized capturing teachers' experiences as they perceived and interpreted them rather than as objective facts (Vagle, 2018). This was achieved through in-depth interviews that explored the teachers' feelings, thoughts, and attitudes toward the training program. Under the phenomenological framework, this study employed qualitative data analysis to identify patterns and themes in teachers' reflections on a shared phenomenon, their experiences with professional development training for dyslexia.

A case study design was considered but ultimately deemed unsuitable for this study, as it would not have provided the same level of insight into the teachers' perspectives and lived experiences with the dyslexia specialist training program. Similarly, quantitative and mixed methods approaches were considered inappropriate given the study's subject matter and research questions. Since lived experiences are rich and complex, qualitative information was essential for capturing the nuances that quantitative methods may overlook (Creswell & Poth, 2018). Because the research questions focused on participants' perceptions and lived experiences, a qualitative, phenomenological approach was determined to be the most suitable methodology.

Research Procedures

This research examined the perceptions of veteran rural elementary educators regarding their participation in a dyslexia specialist training program, a professional development training designed specifically for educators working with dyslexic students and other striving readers. The study centered on participants' viewpoints, capturing their personal accounts and lived experiences. A phenomenological research design was the most appropriate because educators' experiences with professional development are naturally subjective (Merriam & Tisdell, 2016; Patton, 2015). This method aligned with the study's objective of capturing teachers' firsthand

experiences and evaluating how they perceived the program's influence on their instructional practices and teaching methods.

According to Guskey (2002), teacher transformation occurs in stages, and professional development leads to sustained instructional change only when shifts in beliefs and attitudes accompany the application of new skills. This framework guided the research examining how educators' practices evolved following professional development. The interview questions were structured to align with the research questions and framed within Guskey's Model of Teacher Change, which served as the theoretical foundation for this study. The phenomenological approach, as outlined by Creswell and Poth (2018), was reflected in the design of the interview questions, which aimed to elicit rich, descriptive narratives conveying the teachers' personal journeys through the training program. These narratives were analyzed to identify themes that captured the core of the professional development experience as lived by the participants.

Selection of Participants

Participants in this study were selected using purposeful sampling, a method commonly used in qualitative research to ensure that those involved have meaningful and relevant experiences to share (Bloomberg, 2022). More specifically, this study used homogeneous purposeful sampling, as recommended by Creswell and Poth (2018), to identify participants who shared key characteristics. All participants were veteran elementary teachers working in rural settings who had completed the same dyslexia specialist training program. For the purposes of this study, the term 'veteran teacher' was defined using teacher turnover and stability data from the NCES, which considers teachers with five or more years of classroom experience as veteran educators (NCES, 2022). To define 'rural,' the study relied on NCES locale codes, which classify schools based on geography and population size. Specifically, this study defined rural areas as

communities with populations of 7,000 or fewer residents. All participants worked in schools categorized as rural, specifically those labeled remote, distant, or fringe (NCES, 2023). Selecting teachers who had similar backgrounds and completed the same training allowed for a more focused look at how that professional development influenced their classroom practices.

Candidates selected to enter the study were those who taught reading to first through fourth-grade students, had a minimum of two years of classroom teaching experience, and had fully completed the dyslexia specialist training program. Recruitment was carried out via the Phillips Fundamental Learning Center, which provided a list of eligible candidates. Prospective participants were initially reached through email and provided with the study information; research aims, research questions, and sample interview topics. A total of five educators were selected; a purposeful sample size guaranteed data saturation (when no new knowledge emerged from the audit data, Trotter, 2012).

Three separate interviews were conducted with each participant to gain a comprehensive understanding of their experiences. The initial interview was conducted before they started the two-week, 80-hour instructional part of the training. The second occurred right after the training ended. The last interview occurred at the end of the first semester after participants had implemented their new knowledge in the classroom. During this time, every participant worked with a mentor (who conducted at least three classroom observations before the end of the semester).

Informed consent was obtained from all participants, with full disclosure about the study design, recruitment process, and measures taken to maintain confidentiality. All data were stored in an encrypted format, and no personally identifiable information was included in the data.

Data Collection

Prior to this study, approval was granted by Kansas State University Institutional Review Board (IRB) (Appendix A) and the Phillips Fundamental Learning Center (PFLC) (Appendix B). Prior to the recruitment of participants, written approval was obtained from PFLC. Both Kansas State University IRB and PFLC formally approved the collection of all data used in this study.

Interviews

This qualitative phenomenological study explored the perceptions of veteran rural elementary educators who participated in a dyslexia specialist training program. Data collection involved three semi-structured interviews with each participant, providing a full account of their experiences across different stages of the training process. The interviews were conducted virtually via Zoom and were voice-recorded for accuracy. Each session lasted approximately 45 minutes and was scheduled based on participant availability.

The first interview was before the two-week, 80-hour instructional training and provided a record of initial perspectives. Participants considered their prior personal experiences with professional development on dyslexia, their background of working with students who show dyslexic traits, and their knowledge of dyslexia and the science of reading. They shared their motivations for joining the training and what they hoped to gain.

The second interview took place immediately after the instructional portion of the program. This phase of the research focused on documenting participants' reflections on the instructional portion of the training. At this stage, educators had completed intensive coursework designed to provide them with tools and strategies for working with students with dyslexia.

The third and final interview occurred at the end of the first semester after participants had applied their newly acquired knowledge in the classroom. During this time, each educator

worked alongside a mentor who conducted at least three observations before the semester ended. The last interview explored how their literacy instruction had changed, how helpful the support they received was, and any challenges they encountered when implementing structured literacy practices.

Interviews followed a semi-structured format, allowing for open discussion. The protocol for the interviews (Appendices E, F, and G) included open-ended questions designed to stimulate thinking and in-depth individual answers. The interview questions were aligned with the study research questions and were framed using 's Model of Teacher Change (2002).

Interview questions were peer and mentor reviewed prior to the study to improve the credibility of the study. Questions were designed to avoid leading participants while also encouraging them to share their lived experiences (Creswell & Poth, 2018).

Five participants were recruited through purposeful sampling, which allowed the researchers to gather rich, detailed data from people who share certain characteristics. All participants were veteran teachers from rural district and had gone through the same training program to become dyslexia specialists. Data saturation was achieved with 5 participants over 3 rounds of interviews; no new themes were discovered, reinforcing the validity of the results (Trotter, 2012).

By conducting multiple interviews over time, this research aimed to provide a more comprehensive view of participants' evolving perspectives and instructional practices (Creswell, 2009). Before each interview, participants were reminded of their rights and the purpose of the study, ensuring ethical considerations were upheld throughout the research process.

Member Checking

After transcription, each participant had the opportunity to review and validate their transcribed interview responses, a process known as member checking. Member checking allowed participants to confirm or correct specific aspects of the interpretation of their provided data (Creswell & Miller, 2000). This process strengthened the credibility of the findings and ensured the accuracy of participants' descriptions of their experiences with the phenomenon.

Reflective Journal and Field Notes

During or immediately after each interview, field notes were used to capture and record contextual details. These notes included reflections, questions, and observations related to the research process (Creswell & Poth, 2018). A reflective journal documented the researcher's actions, thoughts, and feelings while analyzing the data. As discussed by Lincoln and Guba (1982), reflexive journals enhance the reliability of research by helping to mitigate bias. These insights provided a deeper understanding of participant meaning.

Timeline of Data Collection

The study began in the summer of 2024. Table 3.1 provides a timeline of data collection.

Table 3.1: *Timeline of Data Collection*

Action	Description	Date
IRB approval from Kansas State University	IRB approval from Kansas State University (Appendix A)	June 2024
Approval from PFLC	Written approval from PFLC (Appendix B).	May 2024
Informed Consent	A letter (Appendix C) was emailed to each potential research participant to gauge their interest in participating in the study. Attached to this letter was the Kansas State University informed consent document (Appendix D), which participants orally consented to at the beginning of each interview.	June 2024

Interview #1	Semi-structured interviews were conducted with participants via Zoom. To ensure consistency across interviews, formal semi-structured interview questions (Appendix E) were used. All responses were transcribed, and participants were given the opportunity to review and verify their transcriptions through member checking.	Before first training session: July 22, 2024
Interview #2	Semi-structured interviews were conducted with participants via Zoom. To ensure consistency across interviews, formal semi-structured interview questions (Appendix F) were used. All responses were transcribed, and participants were given the opportunity to review and verify their transcriptions through member checking.	After last training session: August 2, 2024
Interview #3	Semi-structured interviews were conducted with participants via Zoom. To ensure consistency across interviews, formal semi-structured interview questions (Appendix G) were used. All responses were transcribed, and participants were given the opportunity to review and verify their transcriptions through member checking.	At the conclusion of the fall semester- December 2024
Preliminary Data Analysis	The information and data collected were reviewed to determine whether additional information was needed.	At the conclusion of each transcription
Follow-up Interview	A follow-up interview was conducted with research participants if needed.	If needed, after each transcription
Debrief	At the conclusion of the study, a debriefing letter (Appendix H) was emailed to participants, thanking them for their participation and providing the results of the findings.	February 2025

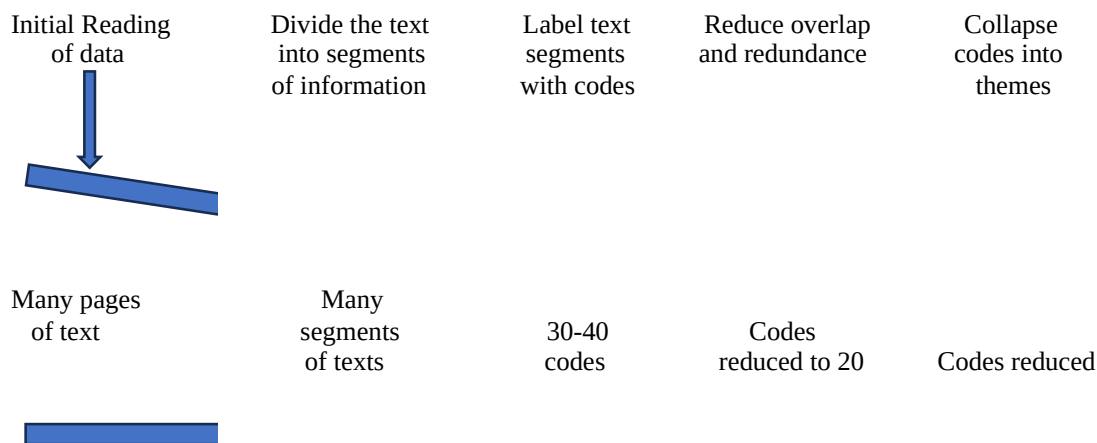
Data Analysis

Transcription and analysis were conducted immediately after each round of interview to determine whether additional information was needed through follow-up interviews. This approach ensured that themes and patterns accurately reflected participants' experiences. Consistent with phenomenological methods, the process began with the researcher bracketing, to remove prior assumptions and preconceptions about dyslexia and the training to authentically capture the participants' lived experiences (Husserl, 1931; Moustakas, 1994). This allowed the

researcher to remain grounded in the participants' words and perceptions, focusing on the meaning they assigned to their professional growth and instructional shifts. In line with Husserl's notion of reduction, this study sought to uncover the essential nature of how dyslexia intervention specialist training was perceived by veteran rural teachers. Instead of bringing in outside interpretations, the researcher aimed to uncover the deeper meaning within participants' reflections by repeatedly engaging with the data. Deductive and inductive coding methods were applied to align findings with the research questions while maintaining a naturalistic inquiry approach (Lincoln & Guba, 1985).

The coding process followed a structured approach recommended by Creswell (2009), ensuring a systematic and thorough analysis of qualitative data. Figure 3.1 illustrates the visual model of the coding process that guided this study.

Figure 3.1: *Based on A Visual Model of the Coding Process (Creswell, 2009)*



To analyze the data in a systematic and meaningful way, this study utilized both deductive and inductive coding methods to identify key themes that captured participants' experiences. The process began with a set of broad, theory-informed codes grounded in Guskey's Model of Teacher Change (2002) and the research questions. However, to ensure that

participants' unique perspectives were accurately represented, an inductive approach was prioritized, allowing themes to emerge naturally from the data.

While initial codes provided a basic organizational framework, the richness of participants' reflections required a flexible and responsive coding process. As transcripts were reviewed, it became evident that the participants' insights extended beyond the original framework, prompting a deeper analysis using open and in vivo coding techniques as recommended by Saldana (2021). This method honored the participants' voices by using their own words and preserving the authenticity of their lived experiences.

As the analysis progressed, recurring patterns began to take shape, revealing teacher reflections on mentorships, emotional strain, instructional challenges, and shift in professional mindset. These emerging themes reflected the complexities of applying dyslexia specialist training in real classroom settings. Through a process of constant comparison and refinement, overlapping codes were merged based on underlying meaning, ultimately capturing the core of participants' shared experiences.

This process was both iterative and reflective, aligning with phenomenological methodology by staying closely connected to the participants' lived experiences and treating their descriptions as the primary source of knowledge. To further refine the data, codes were physically sorted using notecards, an approach inspired by grounded theory techniques (Glaser & Strauss, 1967). This hands-on method allowed for flexibility in recognizing relationships among themes. Through this process, the codes were ultimately consolidated into three overarching themes that best captured teachers' lived experiences:

1. Challenges to Applying Dyslexia Specialist Training – Barriers related to district constraints, time limitations, and a lack of resources.

2. Emotional and Professional Growth of Educators – How teachers' confidence, mindset, and instructional beliefs evolved.
3. The Impact of Dyslexia Specialist Training – Observable changes in instructional methods, student engagement, and literacy outcomes.

These final themes extend beyond surface-level topics, they reflect the deeper meanings that capture the essence of teachers' experiences with dyslexia intervention specialist training. They were developed through a phenomenological lens, the focus remained on rich, detailed descriptions, with an emphasis on honoring the participants' own understanding over outside interpretation. Table 3.2 provides a revised thematic framework showing how subcategories were mapped within these major themes.

Table 3.2 *Thematic Framework with Descriptions and Participant Examples*

Major Theme	Subcategory	Short Description	Research Question Alignment	Participant Example
Challenges to Applying Dyslexia Specialist Training	District curriculum limitations	Educators faced restrictions implementing training methods due to district-mandated materials.	RQ1: How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?	"I knew what I needed to do, but the curriculum we're told to use doesn't allow me to."
Challenges to Applying Dyslexia Specialist Training	Time and resource constraints	Teachers cited limited planning time and lack of materials.	RQ1: How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?	"We don't have time to implement everything we want."
Challenges to Applying Dyslexia Specialist Training	Disconnect between decision-makers and educators	Participants felt decision-makers did not fully understand the realities of	RQ1: How did veteran rural elementary teachers experience a dyslexia specialist training that included	"The people making decisions haven't been in

		structured literacy implementation.	knowledge and application with mentoring?	a classroom in years.”
Challenges to Applying Dyslexia Specialist Training	District-mandated curricula limited time to apply research-based methods from training	District mandates limited time to practice research-based methods.	RQ2: In what way, if any, did the dyslexia training influence their teaching practice?	“I knew what I needed to do, but the curriculum we’re told to use doesn’t allow me to.”
Emotional and Professional Growth of Educators	Emotional toll of ineffective instruction	Participants described feeling defeated before training gave them new tools.	RQ1: How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?	“It was hard watching kids struggle and not having the tools and resources I needed to help them.”
Emotional and Professional Growth of Educators	Frustration over gaps in teacher preparation	Participants felt unprepared to support striving readers due to limited preservice training.	RQ1: How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?	“Why didn’t I learn this in college?”
Emotional and Professional Growth of Educators	Overcoming self-doubt	Participants expressed regaining confidence through the training.	RQ1: How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?	“It validated what I had always suspected, I just needed the right tools.”
Emotional and Professional Growth of Educators	Role of mentorship and support	Ongoing support and collaborative learning were seen as vital.	RQ1: How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and	“Having a mentor observe my lessons and provide feedback was so important.”

			application with mentoring?	
Emotional and Professional Growth of Educators	Increased confidence and self-efficacy	Participants expressed regaining confidence through the training.	RQ2: In what way, if any, did the dyslexia training influence their teaching practice?	"I finally have the knowledge and the research to back up what I'm doing."
The Impact of Dyslexia Specialist Training	Changes in instructional strategies	Participants adopted multisensory and structured literacy approaches.	RQ2: In what way, if any, did the dyslexia training influence their teaching practice?	"I used to tell students to look at the picture... now I teach them to break down and decode words."
The Impact of Dyslexia Specialist Training	Increased student engagement	Participants noted improvements in how students responded and performed.	RQ2: In what way, if any, did the dyslexia training influence their teaching practice?	"One day he looked up at me and said, 'I can read this by myself now!'"
The Impact of Dyslexia Specialist Training	Long-term commitment to structure literacy	Participants expressed dedication to continue using structured literacy methods.	RQ2: In what way, if any, did the dyslexia training influence their teaching practice?	"This training didn't just change the way I taught; it changed the way my students experienced reading."

Table 3.2 presents the major themes and subcategories that emerged from the data analysis, aligned with each of the research questions. These themes were developed through an iterative, inductive coding process rooted in phenomenological methodology. The framework illustrates how participants experienced dyslexia intervention specialist training, highlighting both the challenges they faced and the transformation they experienced. The subcategories provide insight into specific barriers such as district-mandated curricula, emotional responses to ineffective instruction, and the transformative impact of the training. Participant reflections were

central to identifying these patterns, which ultimately offer a deeper understanding of how this professional development training influenced the participants’ instructional practice in rural settings.

To further validate the thematic findings, the data were examined through Guskey’s Model of Teacher Change (2002). According to this model, meaningful instructional change unfolds in three key phases:

1. Belief Shift – Teachers first recognized gaps in their prior literacy training and acknowledged the need for structured literacy approaches.
2. Instructional Change – Participants modified their teaching methods, implementing explicit, systematic strategies grounded in research-based literacy instruction.
3. Student Impact – Teachers observed tangible improvements in student decoding, fluency, and overall literacy engagement, reinforcing their commitment to structured literacy.

These phases mirrored participants’ experiences, further substantiating the study’s findings.

Table 3.3 illustrates the research question, data collection method, and method of analysis.

Table 3.3: *Research Questions and Corresponding Data Collection and Analysis Method*

Question	Data Collection	Method Analysis
How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?	Interview Field Notes Reflective Journaling Member Checking	Thematic coding and comparing responses gathered during interviews. Map themes through the lens of theoretical framework, Guskey’s Model of Teacher Change.
In what way, if any, did the dyslexia training influence their teaching practice?	Interview Field Notes Reflective Journaling	Thematic coding and comparing responses gathered during interviews.

Member Checking	Map themes through the lens of theoretical framework, Guskey's Model of Teacher Change.
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Trustworthiness

The following safeguards were implemented to ensure trustworthiness (Lincoln & Guba, 1985):

- **Credibility:** This study employed crystallization (Ellingson, 2009) to ensure a multi-dimensional understanding of participants' experiences. Multiple rounds of interviews captured the evolving perspectives of educators, allowing for deeper insight into how their beliefs and instructional practices transformed over time. Verbatim transcription, iterative coding, and member checking ensured participants had the opportunity to verify the accuracy of their responses and refine the researcher's interpretations (Bloomberg & Volpe, 2019). The use of rich, thick descriptions and extended participant engagement further enhanced credibility.
- **Confirmability:** Reflexive journaling was used throughout the study, aligning with crystallization's emphasis on researcher reflexivity (Ellingson, 2009). The journal documented coding decisions, evolving interpretations, and researcher reflections to acknowledge positionality and minimize bias. Member checking also reinforced confirmability by ensuring findings accurately represented participants' experiences.
- **Dependability:** A well-documented audit trail of coding revisions was maintained, following structured thematic analysis procedures (Creswell & Poth, 2018).
- **Transferability:** Rich descriptions of participant backgrounds, the study's context, and the dyslexia specialist training experience were provided, allowing for comparisons with similar educational settings.

Throughout the study, a reflective journal was kept, documenting the researcher's thought process, initial impressions, and coding challenges. Engaging in this practice reinforced epoche, ensuring that findings were rooted in participants' voices rather than researcher biases (Moustakas, 1994).

Researcher's Role

The researcher's positionality, located in both personal and professional domains, informed the study. It helped the researcher understand the day-to-day challenges, the emotional side of the experience, and the change that can be brought about by effective intervention. Furthermore, as a reading specialist, the researcher has gained a deep understanding of the professional world of literacy education and the current best practices for dyslexic students. The researcher understands the importance of positionality in shaping the approach to the topic of this research and, at the same time, is committed to transparency, rigor, and objectivity, while acknowledging that these experiences informed the research perspective.

Summary

This research utilized a phenomenological qualitative approach to examine veteran rural elementary school educators' experiences and perspectives regarding their participation in a dyslexia specialist training program. The dyslexia specialist training program used for this study was designed to provide educators with practical and effective strategies and instructional techniques to better support students who demonstrate characteristics of dyslexia in literacy development.

This study was motivated by concerns about literacy expressed in the most recent National Assessment of Educational Progress (NAEP) results (NCES, 2024). These findings demonstrate gaps and challenges in literacy education. This particularly applies to those students

who struggle with decoding, phonemic awareness, and retrieving information crucial for reading comprehension. It is, therefore, crucial to know how professional learning experiences can inform teachers so they can acquire the understanding and strategies to support improved student performance. This study focused on the perspectives and lived experiences of participants enrolled in a dyslexia specialist training program. Participants were asked to reflect on their experiences with the program. The reflection included knowledge and instructional skills acquired, attitudes, and teaching practices. The aim was to determine how the participants believed the program helped shape and improve their teaching strategies.

The theoretical framework of this study was based on Guskey's (2002) model of teacher change, which states that real and sustainable change in teaching strategies occurs when teachers first go through a process of changing their beliefs and attitudes. This chapter outlines the research design and identifies the selection process for participants, the research setting, methods for data collection, and analytical procedures used to interpret the findings.

Two main research questions guided this study:

1. How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?
2. In what way, if any, did the dyslexia training influence their teaching practice?

Data were collected using semi-structured interviews and field notes. Teachers with a minimum of two years of teaching experience from rural communities and districts who participated in the dyslexia specialist training and completed the program were included through a purposive sampling strategy. The study was done in conjunction with the participants from the Phillips Fundamental Training Center.

In-depth interviews were conducted to allow participants to express themselves in detail. The participants talked about their professional experience throughout the training process. Multiple data sources were used. These included field notes, reflective journaling, and member checks to add credibility to the study. Participants were also given a copy of the themes that emerged in the study to validate the interpretations and ensure that the participants' views were properly recorded. This chapter concludes with a discussion of the researcher's role and a reflection on how personal experiences informed the study. This chapter builds on the phenomenological commitment to ensuring the voice of participants in the research process.

Chapter 4 - Results

This qualitative phenomenological study examined the lived experiences of veteran rural educators teaching first through fourth grade and their engagement with dyslexia intervention specialist training. The study aimed to understand how participants who completed the training integrated their learning into classroom practices and the impact on their instructional approaches. This research was guided by the following questions:

1. How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?
2. In what ways, if any, did the dyslexia training influence participants' teaching practice?

In this chapter, an analysis of the data is provided and organized into two sections. The first section presents a narrative description of each participant to create context for their role within the educational system. The names of the participants have been replaced with pseudonyms to protect confidentiality. In the second section, data were analyzed through the lens of Guskey's (2002) Model of Teacher Change, and emerging themes were explored.

This study was conducted over a single semester, concluding at the end of the first semester after the participants began implementing the knowledge and tools gained from their training. Due to the brief duration, the findings reflect the initial stages of teacher change as outlined by Guskey (2002). While promising patterns and anecdotal evidence emerged, it is reasonable to expect that the full progression through Guskey's stages would likely develop with additional time and continued classroom practice.

Participants

April

From a young age, April knew she wanted to be a teacher. As a child, she would set up her stuffed animals and teach them using the workbooks she brought home over the summer. Though she briefly considered a career in child psychology, she ultimately realized that she wanted to be directly involved with students in the classroom.

April earned her bachelor's degree in elementary education in 2009. After graduating, she and her husband moved to a different state, where they lived for a little over a year and welcomed their first daughter. When they returned to their home state, she rejoined the local school district, working in various roles.

Over the years, April gained experience in multiple capacities within education. She worked as a paraprofessional, an instructional aide with the band, and continued as a para until 2015. At that point, she made the difficult decision to leave the district to open an in-home daycare while attending school. The financial strain of childcare for her two young children made it more practical for her to run her own daycare.

In 2019, when her youngest child started kindergarten, April returned to the district. The following year, in 2020, she was offered an opportunity to take on a teaching position in their rural community. She accepted the role and began teaching second grade.

April's dedication to her students and her field led her to pursue further education. In December 2022, she graduated with her master's in education. Since 2007, she has worked in various educational roles, including paraprofessional work, instructional aide, after-school programs, and early childhood care. Since 2020, she has been a fully certified teacher, bringing over a decade of experience to her current role in fourth grade.

April recalls her early experiences with learning to read in elementary school as relatively effortless. She attributes her success to a literacy-rich environment that incorporated phonics instruction, which supported her development as a reader. However, as she reflected on her pre-service education, she recognized a critical gap in her training. While she had been introduced to various theories on how students learn to read, she was never explicitly taught how to provide direct literacy instruction. "I learned about different reading theories in my teacher preparation courses," April explained, "but no one ever showed me how to actually teach a child to read step by step."

Her teacher preparation courses primarily emphasized Balanced Literacy, an approach that, at the time, she accepted without question. "We were told to include phonics," she recalled, "but when a child struggled with a word, we were encouraged to emphasize context and visual cues rather than actually teaching them how to decode." Looking back, she realizes that this approach failed to provide students with the foundational skills necessary to become confident, proficient readers.

It was not until she graduated from college and began her first teaching position that she became fully aware of the gaps in her training. Confronted with students who struggled to read, many displaying characteristics of dyslexia, she realized she lacked the knowledge and tools necessary to help them. "I remember standing in front of my students and thinking, 'I didn't know what to do. I didn't know how to help them,'" she admitted. This realization was both overwhelming and frustrating, as she had assumed her education had prepared her for all aspects of literacy instruction. The discrepancy between her training and the reality of her classroom experiences left her questioning the effectiveness of her pre-service education and seeking additional professional development to bridge the gap.

Her experience highlights a common gap in teacher preparation programs, where theoretical knowledge was emphasized, but practical and explicit instruction in literacy teaching, especially for striving readers and students with dyslexia, was often missing.

Cassie

Cassie had just completed her fourteenth year in education, gaining extensive experience teaching preschool through second grade. She had spent one year teaching eighth-grade history but quickly returned to early childhood education, where she had felt most comfortable. Interestingly, Cassie's journey into teaching had been initially driven by her desire to go to China, as she had seen it as an accessible way to obtain a visa and experience life abroad.

Her plan had worked, and she had spent eight years living in Shanghai, China, where she had taught and raised her children, both of whom had been born there. During her time in Shanghai, she had taught English and early childhood education, primarily working with preschool, kindergarten, and second-grade students.

Now back in the United States, Cassie is preparing for a new teaching role for the upcoming school year. She is set to teach a first-grade class at a small rural school. The school follows a highly individualized learning model, allowing students to progress at their own pace in each subject. Cassie is eager to begin this next chapter, working with approximately fifteen students in her classroom.

The school itself is relatively small, structured similarly to a rural multi-grade learning environment where students from different grade levels learn together. Previously, the institution had only had three teachers covering all grades, but with its recent expansion, Cassie became the fourth educator. She was assigned to teach first grade, while the other teachers oversaw grades two through eight.

Cassie did not distinctly recall how her teacher preparation program had addressed reading instruction. She remembered creating engaging and interactive themed units but could not specifically recall the literacy approach that had been emphasized. While she had understood that phonics should be included in instruction, she had never been explicitly taught how to teach it.

"I remembered adding phonics to my lesson plans, but I didn't really have a rhyme or reason for the skills I had selected," she admitted. Cassie recalled that her focus had been on engaging students with literature, fostering a love for reading, and encouraging meaning-making strategies. However, she realized that her training had lacked explicit instruction in foundational reading skills. "I remembered thinking, okay, I knew phonics was important, but how did I actually teach it?" she reflected. "We were encouraged to use word walls, shared reading, and guided reading, but there had been no structured approach to teaching students how to decode words."

It had not been until Cassie began teaching that she realized how unprepared she had been to help striving readers and students with dyslexia. She found herself searching for strategies on her own, trying to fill in the gaps left by her pre-service training. "I had students who just couldn't sound out words, and I didn't know what to do," she admitted.

Her experience reflected a widespread concern among many educators regarding teacher preparation programs. While these programs emphasized theoretical knowledge, they often lacked practical, explicit instruction in literacy teaching, particularly when it came to supporting striving readers and students with dyslexia. Like her, other participants had expressed frustration over feeling unprepared to provide systematic phonics instruction and effective interventions for students who needed the most support.

With her diverse teaching background spanning multiple grade levels, international education, and small-school environments, Cassie looks forward to another meaningful year in the classroom. She hopes to apply her knowledge, shape young learners, and continue advocating for research-based instructional practices.

Jennifer

Jennifer is preparing to enter her twelfth year as a teacher. Her journey in education began with eight and a half years of substitute teaching, covering preschool through twelfth grade, and even included teaching a college dual-credit course.

Her first full-time teaching position was as a sixth-grade special education teacher at the middle school level. After a year in that role, she transitioned into teaching kindergarten, where she remained for three years. Following a move to Missouri, she spent five years teaching high school life skills special education before relocating back to Kansas a couple of years ago. Since returning, she has been teaching first grade. In addition to her current role, Jennifer has taught in other rural communities across the state.

Currently, Jennifer lives in rural Kansas. She is committed to staying in the profession and is especially excited about her recent dyslexia specialist training, which has reignited her enthusiasm for teaching. She plans to continue working in her current district, where she enjoys being part of the community.

Jennifer reflected on her college preparation and recognized that it had not adequately prepared her to teach students how to read effectively. She explained, "I had always kind of had that gut feeling that what I was doing before wasn't working, and now I know why. I wasn't really teaching phonics the way that I should have been." It wasn't until she gained experience in

the classroom and sought additional professional development that she fully understood the gaps in her own knowledge and how they had impacted her students' ability to learn to read.

With a broad range of teaching experiences across grade levels and a passion for special education, Jennifer looks forward to continuing her work in first grade while integrating new instructional strategies to support her students.

Kara

Kara's path to teaching was shaped by her own struggles with dyslexia. Growing up, she found learning to read particularly challenging, which gave her a deep understanding of the difficulties many students face. This personal experience sparked her passion for working with students who have dyslexia, driving her commitment to helping them develop the skills and confidence they need to succeed.

Before entering the classroom, Kara spent 18 years running a daycare, caring for young children while raising her own. As her children grew older, she transitioned into teaching and coaching - fields that felt like a natural fit given her lifelong experience working with kids.

Kara has been an educator for 19 years, teaching a variety of grade levels. She spent seven years teaching a combined second and third-grade class, followed by nine years teaching fifth grade. Most recently, she moved into first grade, where she enjoys laying the foundational skills for early learners.

Kara reflected on the challenges she faced during her teacher preparation program and recognized that the gaps in her training were not necessarily the fault of her instructors. She explained, "My teachers and professors were genuinely teaching us in the way they believed was best." She further noted, "To their credit, they acknowledged that during student teaching, we would be required to follow district-approved reading curriculums, and the same would apply

once we entered the workforce." Now that she has her own classroom, she has identified several areas of concern, particularly with well-known reading curriculums. She shared, "These companies are stating that their materials are structured literacy when, in reality, they are not." Her observations highlight the disconnect between evidence-based reading instruction and the materials marketed to educators, further emphasizing the need for more explicit and comprehensive training in structured literacy.

Her journey as both a student and a teacher has reinforced her belief in the importance of early literacy support and specialized instruction for students with dyslexia. Through her work, she hopes to make reading more accessible and less intimidating for children who struggle, just as she once did.

With nearly two decades in the classroom, Kara remains passionate about her role in shaping young minds, advocating for students with dyslexia, and ensuring that every child receives the support they need to thrive.

Emma

Emma has been teaching for 22 years, dedicating most of her career to working with students in various educational settings. She spent most of her time teaching freshman and sophomore English, with some experience teaching junior-level classes as well. For 13 years, she taught at a Catholic school before transitioning to a small rural school nine years ago. She most recently moved into her current role as a third-grade classroom teacher.

Emma's journey in education has taken on a deeply personal meaning since her own child, who is in fourth grade, was diagnosed with dyslexia and struggles with reading. This experience has been long and painstaking for her, as many educators either overlooked his struggles or simply did not have the knowledge or resources to provide effective intervention.

She recalled, "His teachers wanted to help him. They really did. But they just didn't know how." Despite their best intentions, they lacked the training necessary to support a student with dyslexia. "I kept hearing things like, 'He'll catch up,' or 'Some kids just take longer to read,'" she explained, "but deep down, I knew something wasn't right." Being an educator herself, Emma felt an overwhelming sense of guilt, believing she was letting her son down. "I'm a teacher, and yet I couldn't even help my own child learn to read," she admitted. Despite her years of experience in education, she had never been trained on how to support a striving reader or a child with dyslexia. "I was never taught how to teach reading or what to do when a child wasn't picking it up naturally," she explained.

She also expressed frustration over the lack of resources available to teachers, noting that many of the materials they were provided were ineffective for students with reading difficulties. "Our reading curriculum wasn't working," she stated. "If it was working then we wouldn't have so many of our students struggling to read." Emma's experience highlights a deeper issue in literacy education, where both teachers and students are left without the proper tools to succeed.

Frustrated with the lack of support, Emma took matters into her own hands, seeking private therapy for her son and using her own funding to ensure he received the intervention he needed. "I had no choice but to find someone who actually knew how to help him," she said. This experience has fueled her passion for literacy education and supporting students with dyslexia, as she understands firsthand the challenges that striving readers face. "No parent should have to fight this hard to get their child the help they need," she stated. "And no teacher should be left without the training to properly support these students." Her personal journey has strengthened her resolve to advocate for evidence-based literacy instruction, ensuring that both teachers and students have access to the tools they need for success.

Emma was inspired to become a teacher in part by her mother, who had been an educator before transitioning to stay-at-home parenting. From an early age, Emma knew she wanted to make a difference in the lives of students, encouraging them to believe in themselves and their abilities. Now, with both professional experience and personal motivation, she is committed to helping students develop strong literacy skills and ensuring that striving readers receive the support they need to succeed.

Her personal and professional journey continues to shape her teaching philosophy, and she hopes to be an advocate for students with dyslexia while working to improve literacy instruction in her classroom and beyond.

Data Analysis

All five participants in this study are educators who had taught reading before, during, and after completing a two-week dyslexia specialist training program. To protect participants' confidentiality, all names and identifying details were replaced with pseudonyms, ensuring ethical integrity. Their varied perspectives were analyzed through the lens of Guskey's Model of Teacher Change (2002). As discussed in Chapter 3, this theory explains that true instructional change does not occur immediately following professional development but rather happens through a process in which teachers implement new strategies, observe student progress, and subsequently adjust their beliefs based on those results.

Through participant interviews, three key themes emerged: challenges to applying dyslexia specialist training, emotional and professional growth, and the impact of dyslexia specialist training. These themes provided insight into the participants' experiences and perceptions of how dyslexia training influenced their instructional practices. Each theme was

explored in depth and analyzed to identify key factors that facilitated or hindered sustainable change in literacy instruction.

Theme: Challenges to Applying Dyslexia Specialist Training

Implementing their newly acquired knowledge and resources came with a variety of challenges for these educators. These challenges included district-mandated curricula that didn't align with the science of reading, limited time and resources to put new strategies into practice, and a disconnect between decision-makers and those in the classroom. Each of these barriers played a significant role in shaping their experiences, making it sometimes difficult to translate their learning into meaningful, everyday instruction. The following sections explore these challenges in more depth, highlighting how they influenced the participants' ability to apply their training effectively.

District Curriculum Limitations

A significant challenge that participants encountered was the expectation to continue using district-mandated curricula from large publishing companies that claimed to be structured literacy and aligned with the science of reading. However, after completing the dyslexia specialist training, some of the teachers began noticing critical gaps in these programs. April expressed frustration, saying:

Now that I've had this training, I can see all the things that are wrong in the curriculum my district spent thousands of dollars on. They say it's research-based, but it was not truly structured literacy. There are huge gaps, and my students, especially those struggling the most, were the ones paying the price.

Kara and Emma both reflected on the curriculum mandated by their districts and the challenges it presented. Looking back on her teaching experience, Kara recalled the approach she

had been expected to follow. “I had students look at the words, reread them, and just hoped that if they kept rereading, they’d eventually recognize them,” she said. But over time, she realized this method wasn’t teaching students how to read. “There was no real instruction on how to help students sound out words or understand letter-sound relationships,” she admitted.

Emma echoed similar concerns, recognizing that the curriculum did not provide the structured literacy approach that striving readers, particularly those with dyslexia, needed. “I was following what I had been given, but it wasn’t working,” she admitted. “It was frustrating because I wanted to help my students, but I didn’t have what I needed.” Their experiences highlight a common issue in literacy instruction: many district-approved curriculums continue to rely on outdated or ineffective strategies, leaving teachers without the necessary resources to provide evidence-based reading instruction.

Jennifer explained, “I was told to integrate the knowledge gained from my dyslexia specialist training into the existing district curriculum.” While this approach seemed logical in theory, she found it to be a highly time-consuming process in practice. She described spending countless hours analyzing the current curriculum, identifying gaps, and supplementing it with the necessary components to support her dyslexic students.

Time and Resource Constraints

Another challenge some of the participants faced was the reluctance of their school districts to provide the necessary time and resources to fully implement the strategies they learned in the dyslexia specialist training program. Many of the participants expressed frustration over being expected to integrate the program’s research-based methods without the structural support to do so effectively. April shared her disappointment, explaining, “I was told I still had to follow the expensive curriculum my district purchased, even though I now know it’s not aligned

with the science of reading." She also voiced frustration over the lack of dedicated instructional time for evidence-based interventions. "I'm expected to fit an hour-long dyslexia program into just 20 minutes a day. There's no way to do it properly," she said. Now that she has developed a deeper understanding of effective literacy instruction, she found it even more difficult to follow a curriculum that she believed did not best serve her students. "It's frustrating because I finally have the knowledge and training to teach reading the right way, but I'm being told to stick to a program that doesn't align with what research says works," she explained.

Other participants echoed similar concerns, noting that despite their commitment to applying what they had learned, their districts remained hesitant to make meaningful adjustments. Without administrative support, these teachers felt they were left to find their own ways to implement best practices, often at the expense of adequate instructional time. This lack of flexibility and alignment with research-based instruction left many of the participants feeling constrained in their ability to make meaningful changes in their classrooms.

Emma described her deep frustration with trying to apply the evidence-based strategies from her training while being required to follow district-mandated curricula. She explained:

We've been given the tools to teach reading effectively, but we're not given the time to use them. Most of our reading block is taken up by a program that our district spent lots of money on and they expect us to use. It's really hard because now that I know better, I want to do better.

She struggled with the disconnect between what she had learned and what she was required to implement, feeling restricted in her ability to make the necessary instructional shifts. She reinforced these concerns, adding, "I finally understand how to help my students, but I'm stuck

using a curriculum that isn't effective. It's frustrating to know what works and not be allowed to do it."

Unlike the other participants, Cassie experienced strong support from her administrator, who fully embraced the principles of her dyslexia specialist training and trusted her instructional decisions. "My administrator told me that she trusted me and knew we needed change because our current assessment data shows that our existing approach is not effective," she recalled. This level of administrative support gave her the confidence to implement evidence-based reading instruction for her students.

Disconnect Between Decision-Makers and Educators

Participants expressed frustration over the lack of understanding among decision-makers responsible for shaping literacy policies and programs. They described how many initiatives were introduced without fully considering the science of reading or the practical challenges teachers faced when implementing them.

Cassie voiced her concerns about the lack of consistent communication from knowledgeable leaders, emphasizing that misinformation was creating confusion among educators. "Teachers were being told so many different things about what reading instruction should look like," she explained. "There was no consistency, and a lot of it wasn't even based on research."

She acknowledged that her district's decision to implement LETRS training was a step in the right direction, helping to build foundational knowledge and dispel misconceptions about literacy instruction:

LETRS was great for understanding the science behind how kids learn to read, but we were still missing the resources and the application piece. We learned all of this

information, but then we went back to our classrooms and didn't have the materials or structured programs to actually implement it.

April expressed frustration with the decision-making process in education, stating, "It's frustrating to have decisions made by professionals that haven't been in the classroom and don't really know what is going on." Her concerns were shared by other participants who felt there was a significant disconnect between policymakers and classroom educators.

Kara shared that this disconnect left her feeling unheard and untrusted:

It's like we were just expected to go along with whatever new program or policy they rolled out, but no one asked us what actually worked. We poured our time and energy into learning these new methods, and then a few years later, they scrapped it and moved on to something else. It was exhausting.

The participants' concerns highlighted the uncertainty surrounding educational reforms, as teachers often found themselves investing in initiatives that might not last. Without consistent, research-based guidance and meaningful input from educators, many feared that the cycle of ineffective and short-lived programs would continue.

Theme: Emotional and Professional Growth of Educators

The emotional and professional growth of educators emerged as a powerful theme throughout the study, highlighting both the struggles and transformations that participants experienced in their journey to become more effective literacy educators. Many teachers expressed deep frustration and self-doubt upon realizing that their previous instructional methods had not provided all students with the foundational skills necessary for reading success. However, rather than remaining discouraged, the participants described using the realization as motivation to refine their teaching practices. Through the dyslexia specialist training, participants

reported gaining confidence, shifting their instructional mindset, and feeling empowered to make meaningful changes. The following section presents the emotional toll of ineffective instruction, the transformation in teacher confidence and mindset, and the role of mentorship and support in fostering lasting professional growth.

Emotional Toll of Ineffective Instruction

The challenge of teaching reading effectively often brought overwhelming stress to the participants, adding to the already demanding role of educators. Before undergoing dyslexia specialist training, many participants expressed frustration and uncertainty about their ability to support striving readers. A recurring theme in the initial interviews was a deep sense of guilt and helplessness as these teachers reflected on their instructional practices.

Emma shared her own struggles, admitting, "I've been teaching for years, I should know how to teach a child to read." She described the weight of responsibility she felt when faced with students who needed more support than she knew how to provide. "It's heartbreaking to look at a student who is struggling and not have the right tools to help them," she explained, emphasizing the emotional burden of feeling unprepared.

Jennifer voiced similar concerns, noting, "We're expected to teach kids to read, but no one ever really showed us how." Kara shared, "It felt like I had been piecing together reading instruction, just hoping that something worked." The frustration and uncertainty expressed by these educators highlighted the emotional toll of feeling unprepared, as they struggled with the weight of their students' success resting on their shoulders without adequate training, resources, or support.

Cassie shared, "I spent five years becoming really good at a program that didn't work," she reflected. "Five years of doing what I thought was right, only to realize I wasn't actually

helping my students the way I should have been. I wish I could have those five years back." The realization weighed heavily on her, bringing feelings of guilt for the students she had taught during that time. "I thought about those kids all the time," she confessed. "I wish I could have gone back and retaught them, knowing what I know now."

Cassie's experience highlighted the frustration many of these educators felt when they discovered that the methods they had been trained to use were not based on effective, evidence-based reading instruction. Cassie shared that the regret she carried fueled her commitment to ensuring that future students received the instruction they truly needed.

For many participants, the emotional weight of realizing they had not been adequately prepared to teach reading became a powerful motivator for change. Rather than remaining discouraged, they used their frustration as fuel to seek out better instructional methods. Their dyslexia specialist training provided the missing tools they had long needed, equipped them with research-based strategies, fundamentally transforming their approach to literacy instruction.

Teacher Confidence and Mindset Shift

Participants expressed a sense of empowerment after gaining the ability to identify dyslexia early and provide targeted support. Emma reflected on this shift, stating, "For years, I was teaching reading without fully understanding how students actually learned to decode words. I have the knowledge and strategies now to support all of my students, not just those with dyslexia."

This deeper understanding led participants to rethink their approach to literacy instruction, moving away from ineffective strategies and instead implementing evidence-based methods with confidence.

April shared that from the moment she began the dyslexia specialist program, she felt empowered with the knowledge and resources necessary to help her students with dyslexia learn to read. She expressed confidence in the program, explaining that her trust came from understanding the science behind it. "I finally have the knowledge and the research to back up what I'm doing," she explained.

Her passion for change grew even stronger as she witnessed her students making progress. Seeing their excitement and confidence build as they learned to read reaffirmed her confidence in the approach. "I'm actively seeing them get better and better at decoding," she shared. "They are no longer guessing, they are actually reading and feeling confident about it." The smiles on their faces as they recognized their own progress made the impact of structured literacy even more evident to her, reinforcing her commitment to effective reading instruction.

Support and Mentoring

Participants in the dyslexia specialist training program consistently highlighted the invaluable support they received from both mentors and staff throughout their journey. While the initial two-week training provided foundational knowledge, the program did not end there. Each participant was assigned a mentor who continued to offer guidance, conducting a series of five classroom observations to ensure the implementation of effective literacy instruction. This ongoing support played a crucial role in helping teachers refine their skills and build confidence in their ability to teach striving readers.

April emphasized the accessibility of the instructors, explaining, "They were always available to answer questions and provide guidance, not just during the two-week training, but even after it was over. We weren't left to figure things out on our own." She appreciated

knowing that support was just a phone call or email away whenever she needed reassurance or clarification.

Emma also spoke about the importance of mentorship, highlighting how it extended well beyond the initial training. "Having a mentor observe my lessons and provide feedback was so important," she shared. "It wasn't just about learning strategies, it was about applying them and knowing I had someone to guide me through the process." She described how being able to ask questions, receive constructive feedback, and discuss different teaching techniques with a mentor helped her grow as an educator.

Participants emphasized the lasting impact of ongoing mentorship and structured follow-ups on their teaching practices. Cassie reflected on this support, stating, "It wasn't just about learning new strategies and being sent back into the classroom to figure it out on our own. We had guidance every step of the way." April echoed this sentiment, explaining, "Having structured follow-ups and someone to check in with made all the difference. It gave me the confidence to actually implement what I was learning, rather than just filing it away." The combination of structured training and sustained mentorship provided participants with a sense of reassurance, ensuring they felt prepared and supported as they worked to transform their approach to reading instruction.

Jennifer pointed out that the support she received during the dyslexia specialist training program extended beyond just the mentors and instructors. One of the most valuable aspects of the experience, she shared, was the strong sense of community that developed among her fellow participants. "It wasn't just about learning the material, we built a network of teachers who were all in this together," she explained.

She described how she and her classmates formed a group chat where they regularly shared ideas, asked questions, and supported one another as they implemented the strategies from the training. "If I was struggling with a lesson or unsure about how to approach something, I could send a message, and within minutes, I had teachers from across the country offering advice and sharing what worked for them," she said.

The collaboration among educators created not only a professional learning network but also lasting friendships. "It was more than just training, it was a connection with other teachers who were in the trenches, doing the same work, facing the same challenges, and celebrating the same victories," Jennifer reflected. This sense of camaraderie and shared purpose reinforced the impact of the training, ensuring that participants continued to grow and refine their practice long after the program officially ended.

Theme: Impact of Dyslexia Specialist Training

Effective reading instruction requires educators to have a strong foundation in literacy pedagogy, yet many of the participants shared that they entered the profession feeling unprepared to support striving readers. This section explores the impact of dyslexia specialist training on the participants' knowledge, instructional practices, and student outcomes. Participants described how gaps in their teacher preparation programs left them without the necessary skills to teach foundational literacy effectively. However, after completing the training, they shared that they gained a deeper understanding of dyslexia and structured literacy, leading to significant shift in their teaching methods. As the participants implemented their new knowledge, they observed positive changes not only in students' reading ability but also in their own confidence as literacy educators. This section highlights how professional learning can transform instruction, bridging

the gap between theory and practice to create meaningful improvements in student literacy outcomes.

Gaps in Teacher Preparation and Knowledge for Literacy Instruction

For many of the participants, the dyslexia specialist training highlighted significant gaps in their teacher preparation courses, particularly in foundational literacy instruction. April voiced her frustration with the overwhelming focus on theory in her teacher preparation courses, asking, "Why do we waste so much time on theory classes?" While she had learned about different literacy theories, she felt unprepared to apply effective reading instruction in her classroom, especially for striving readers. The gap between what she was taught and what she needed in practice left her feeling frustrated and unprepared.

While participants voiced frustration with their prior teacher preparation courses, it is important to contextualize their experiences within the timeframe of their training. At the time these educators completed their preservice programs, structured literacy and the science of reading were not yet widely adopted or emphasized in the same way they are today. This study does not serve as a critique of current teacher preparation programs, many of which have begun reforming their programs to better align with evidence-based reading practices (NCTQ, 2024; *Dyslexia: A State Guide*, 2022).

Cassie shared similar concerns, specifically regarding the emphasis on balanced literacy in her coursework. "We knew that we needed to include phonics, but we were never taught how to assess and teach phonics to our students," she explained. She noted that phonics was mentioned in her college coursework, but there was no structured approach to teaching phonics. She also admitted, "I honestly didn't know what phonemic awareness was and how important it was to a child's ability to learn to read." Her reflection revealed a flaw in her teacher preparation,

while certain concepts were introduced, the explicit, hands-on training needed to implement them in real classrooms was missing.

The participants' reflections underscore the evolving nature of teacher preparation programs and literacy instruction. As educational research continues to grow, so too must the systems that support teacher learning. This highlights the importance of ongoing professional development, not as a remediation of past deficiencies, but as part of a continuous process of improvement.

New Understanding

The training provided participants with a deeper understanding of dyslexia, allowing them to recognize it as a neurological condition rather than a matter of effort or intelligence (Shaywitz, 2020). Many participants entered the training with misconceptions about dyslexia and how it affected learning. Cassie reflected, "I always thought dyslexia was just kids flipping letters around. I never really understood that it was more about how their brains processed sounds and connected them to letters."

April expressed a similar realization, explaining, "I used to think some of my students just needed more time, but now I understand that waiting wasn't an intervention. I didn't know what my struggling readers actually needed, but now I do."

Kara shared how this realization was eye-opening for her as a teacher:

For years, I had students who couldn't sound out words, and I didn't know why. I thought maybe they just weren't trying hard enough. I see that they weren't getting the right instruction. That was a hard pill to swallow.

Changes in Teaching Instruction

Throughout the interviews, participants expressed a strong desire for change and reflected on where they had been in their own journey. Many shared a deep passion for transforming reading instruction, emphasizing the urgency of implementing new approaches. As conversations unfolded, a recurring theme emerged as participants described how their understanding of reading, particularly reading instruction, had shifted following their two-week dyslexia specialist training. This newfound knowledge and growth fueled their commitment to change, reinforcing their determination to apply evidence-based strategies in their classrooms.

This shift in instructional practice marked a significant turning point for participants, prompting them to move away from ineffective strategies. Prior to the training, many relied on literacy approaches that encouraged students to guess words based on pictures or context clues. However, after gaining a deeper understanding of the research and evidence supporting structured literacy, their teaching methods evolved substantially. Kara reflected on this transformation, stating:

I used to tell students to look at the picture or think about what word would make sense in the sentence. I understand now how to teach them to break down and decode words, and it's making a world of difference.

The training underscored the critical role of explicit phonics instruction, encouraging teachers to be intentional in their approach. Jennifer reflected on how this understanding transformed her perspective, stating:

I used to think phonics was just a small part of reading instruction, and I dreaded teaching it. Now, I see it as the foundation. With a better understanding of its importance and how to teach it effectively, I love it!

As these educators implemented their newfound understanding, they experienced a shift not only in their instructional methods but also in their confidence. Many had previously felt unsure about how to effectively support striving readers, but the training provided much-needed clarity. Emma reflected on this transformation, stating, “For years, I was teaching reading without truly understanding how students learned to decode words. I now have the knowledge and tools to support all my students, not just those with dyslexia.”

While participants understood that implementing the strategies from their dyslexia specialist training wasn’t an overnight fix, they remained dedicated to making the changes needed in their classrooms. Kara acknowledged that real progress took time but shared that she was already seeing steady improvement in her students’ reading abilities.

One of the biggest shifts for many participants was incorporating multisensory instruction, which they found to be a game-changer. April reflected on this change, saying:

Before the training, I had no idea how much multisensory instruction could help. I mean, I knew it was out there, but I never really thought about using it in my reading lessons. I see that getting kids to move, trace, or say things out loud really helps, not just my students with dyslexia, but even my students who struggle with focus.

Cassie had a similar realization, sharing:

I had kids who just couldn’t sit still and focus for long periods, and I used to think that was just something we had to work around. But when I started using things like sand trays, tapping out sounds, and even letting them use letter tiles to physically move things around, I saw them engage in a whole new way. It wasn’t just about keeping their hands busy, it helped them learn.

Emma also noticed how multisensory instruction made a difference in her classroom:

I used to feel frustrated when my kids weren't paying attention, and honestly, I thought it was just them needing to try harder. But now I see that giving them a way to interact with words beyond just looking at them on a page really makes a difference. My students with ADHD especially, when they could move while they learned, they stayed engaged so much longer.

The participants shared that as they continued applying what they had learned, they realized that these strategies weren't just helpful for students with dyslexia; they were beneficial for all learners. Multisensory techniques became a key part of their structured literacy approach, reinforcing their belief that evidence-based instruction had the power to make reading accessible for every student in their classrooms.

Student Impact

As participants integrated the evidence-based strategies from their training into their classrooms, they began noticing significant improvements in student engagement and confidence. Students who had previously struggled with reading started making steady progress. April recalled a particularly impactful moment, stating, "I had a student who used to dread reading, but one day he looked up at me and said, 'I can read this by myself now!' That moment reinforced just how valuable this training had been."

These examples reflect anecdotal trends suggesting that the training may be making a difference in student engagement and decoding skills. While not yet supported by formal assessment data, these observations represent a promising first step in instructional change.

Participants observed that students who once avoided reading activities became more engaged in learning. Emma reflected on this transformation, saying, "I had a student who used to

go to the bathroom or find excuses to leave during our reading block. Now, he was staying in class and participating because he was finding success.”

Kara also described a powerful shift in one of her students with dyslexia who had a history of chronic absences. At the beginning of the school year, during Back-to-School Night, the student’s parent voiced concerns about their child resisting school, expressing frustration over the daily struggle to get them out the door. However, as the semester progressed, the student’s attitude toward school began changing. “This same student was now coming to school without a fight,” Kara explained. The parent even approached her to ask, “What are you doing differently? My child wants to be here now.” Kara explained that she had implemented strategies from her dyslexia specialist training, and the parent was so encouraged by the change that they began advocating for more teachers in the district to receive the same training.

By equipping educators with research-based strategies, the program not only changed how these teachers approached reading instruction but also gave struggling students the skills and confidence they needed to succeed. As April put it, “This training didn’t just change the way I taught, it changed the way my students experienced reading. And that was the biggest impact of all.”

Jennifer reflected on the positive changes she had witnessed, expressing confidence in her students' growth, “I could already see that what we were doing was working. We were equipping students with the skills they needed to be successful," she stated. This realization had reignited her passion for teaching, giving her a renewed sense of fulfillment in the classroom. For the first time in years, she found herself eager to start each school day, knowing her instruction was making a real impact. "It was an amazing feeling to know I was truly teaching my students how to read and giving them what they needed to learn," she added.

Summary of Results

Chapter 4 presents an analysis of how rural educators who participated in dyslexia specialist training integrated their learning into their teaching practices. This qualitative phenomenological study focused on understanding how the training shaped their instructional methods and perceptions of literacy education. The chapter is organized into participant narratives and a thematic analysis based on Guskey's Model of Teacher Change (2002), highlighting key shifts in knowledge, instructional strategies, and perspectives on dyslexia.

One of the themes that emerged was a gap in teacher preparation for teaching reading. Participants shared that while their teacher education programs covered literacy theories, they lacked explicit instruction on how to teach foundational reading skills, especially to striving readers. Many teachers had been trained in balanced literacy methods, which encouraged students to rely on context clues and pictures rather than phonics-based decoding. After completing dyslexia specialist training, they recognized the shortcomings of these approaches and felt more confident using structured literacy methods that emphasized phonemic awareness and systematic phonics instruction.

Another challenge participants faced was navigating district-mandated curricula. Several teachers expressed frustration that their districts required them to use programs that claimed to be aligned with the science of reading but lacked essential components of structured literacy. As a result, they spent considerable time modifying the curriculum to ensure it met the needs of their students, particularly those with dyslexia. Despite these challenges, they remained committed to using research-based methods to improve reading instruction.

Beyond instructional changes, the emotional impact of ineffective literacy instruction became evident. Many participants described feeling frustrated and even guilty, realizing that

they had previously used ineffective strategies that did not provide students with the skills they needed. Seeing their students struggle without knowing how to help them took a toll on many teachers. However, after implementing structured literacy practices, they noticed a shift, not only in their students' reading abilities but also in their confidence and engagement. These moments reinforced the value of their training and the importance of using evidence-based reading instruction.

The study also highlighted the importance of ongoing support and mentorship. Participants emphasized that having access to mentors and professional learning communities made a significant difference in their ability to apply what they had learned. Many found comfort in knowing they were not alone in this journey and that they had a network of educators who shared the same challenges and goals.

Overall, the findings from Chapter 4 indicated that dyslexia specialist training had a lasting impact on these rural educators. The training helped them bridge gaps in their teaching knowledge, move away from ineffective methods, and implement structured literacy approaches that better served all students. Despite facing obstacles with district policies and curriculum limitations, they remained dedicated to making meaningful changes in their classrooms.

While the themes presented in Chapter 4 illustrate meaningful shifts in instructional practices and teacher perspectives, they also align with key components of Guskey's (2002) Model of Teacher Change. Early evidence of change was most visible in participants' implementation of new strategies and in their observations of student progress. These experiences appeared to shape developing shifts in beliefs, confidence, and professional identity. However, Guskey's model emphasizes that sustained belief changes, particularly long-term

transformation in teacher thinking, often requires extended evidence of improved student outcomes over time.

Although participants shared compelling qualitative and anecdotal evidence of change, such as increased student confidence and decoding ability, this study did not include quantitative data to measure academic progress over time. Because the study concluded at the end of the first semester following the training, it captured only the initial stages of change. The findings relied on participant interviews rather than formal assessments, making the evidence of impact encouraging, but preliminary.

From the lens of Guskey's Model of Teacher Change, the study captured the initial phases of transformation: teachers implemented new strategies, reflected on their effectiveness, and described changes in their instructional beliefs. However, the final stage of Guskey's framework, lasting change anchored in measurable student achievement, could not be fully confirmed within the timeframe of this study. The trend toward belief shifts was promising, but not conclusive.

A follow-up longitudinal study that includes both qualitative and quantitative measures would allow for a deeper examination of whether the instructional shifts described in this study lead to enduring changes in teacher practice and long-term academic growth for students. Such a study could help determine the full impact of dyslexia specialist training in rural classroom settings.

Chapter 5 - Discussion

The previous chapter presented the study's findings and quoted participants freely to represent the key themes. This chapter summarizes the research and findings, discusses how the results match the literature review, research questions, and theoretical framework, and explores the study's limitations. It also discusses the practical implications and offers suggestions for further investigation.

This study was grounded in Guskey's (2002) Model of Teacher Change, which posits that meaningful instructional change occurs through a process: teachers first learn new strategies, implement them, observe their impact on students, and then experience changes in beliefs and attitudes. While early findings from this study suggest that participants began to internalize changes in both instructional practices and beliefs, it remains unclear whether these shifts are permanent. The data indicated that teachers witnessed improvements in student engagement and reading outcomes, which seemed to affirm and reinforce their training. However, to fully understand the long-term effects of the training, including whether teacher beliefs continue to evolve and whether student outcomes improve sustainably, future research should revisit participants over time to measure lasting change, an essential next step in examining the full arc of Guskey's model.

Overview of the Study

This phenomenological study aimed at understanding the perceptions of veteran rural elementary educators who took part in the dyslexia specialist training program. The study focused on the impact of a CALT-aligned dyslexia intervention specialist training program on the participants' pedagogical practices and knowledge of literacy to help all learners, including those with dyslexia, learn to read. Through the analysis of educators' experiences, thoughts, and

knowledge, the study assessed their perceptions of the program's capacity to create effective change in teaching strategies.

The study was conducted based on Guskey's (2002) Model of Teacher Change, which states that quality professional development results in changes in instruction if teachers see the impact on students. In his model, Guskey explained that teacher change is a process that consists of the following stages: (1) New instructional strategies are introduced to teachers during professional development; (2) These strategies are implemented by teachers in their classrooms; (3) This results in improved student learning due to the new instructional strategies; and (4) Based on the above, teachers' beliefs and attitudes are modified.

The following research questions informed the present study:

1. How did veteran elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?
2. In what ways, if any, did the dyslexia training influence their teaching practice?

This study collected qualitative data through three interviews at different times during the participants' dyslexia specialist training and implementation process. A total of five participants took part in the study, each completing a total of three interviews to document their lived experiences. The first interview occurred before participants started the two-week dyslexia specialist training that consisted of 80 hours of learning content, including structured literacy, the science of reading, dyslexia, and evidence-based reading interventions. The second interview was conducted directly after the completion of the coursework.

Following the instructional phase, participants entered in a clinical practicum requiring a minimum of 60 hours of direct teaching experience, during which they applied structured literacy methods in real classroom settings. Throughout this practicum, each participant received at least

five observations from a mentor, who provided feedback and guidance to support effective implementation. The final interview was conducted after participants had the opportunity to apply their knowledge and instructional strategies with mentorship during the first semester following the training.

This study used qualitative interviews and thematic analysis to examine how these teachers' lived experiences with dyslexia specialist training influenced their instructional practices. Three key themes emerged and were explored in depth. The findings will be discussed in relation to the research questions and theoretical framework in the following section.

Interpretation of Findings

The findings of this study provided valuable insight into how veteran rural elementary educators experienced dyslexia specialist training (RQ1) and in what ways, if any, dyslexia specialist training influenced their teaching practices (RQ2). This section examines these findings in relation to the research questions, connecting them to existing literature and the theoretical framework guiding this study.

Three themes emerged in response to the research questions. These themes included challenges to applying dyslexia specialist training, educators' emotional and professional growth, and the impact of dyslexia specialist training.

Challenges to Applying Dyslexia Specialist Training

McChesney and Aldridge (2021) discovered four levels of barriers that impede the translation of professional learning into student outcomes: structural barriers, acceptance barriers, implementation barriers, and student impact barriers. The participants in this study faced many of these barriers during their dyslexia specialist training experience.

Research Question 1: How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?

While participants found the training to be transformative, several also described real challenges when trying to apply what they had learned—mainly due to restrictive district curricula and limited administrative support. Their experiences echo previous research showing that many commercial literacy programs lack the explicit, systematic phonics instruction needed for striving readers, and that top-down mandates can limit teachers’ ability to exercise professional judgment and adopt more effective practices (Coburn, 2005; Seidenberg, 2017; Moats, 2020). The misalignment between their training and the required curriculum often left participants feeling constrained and unsure how to integrate evidence-based strategies in a meaningful way.

Another barrier for participants was the lack of adequate time to integrate new knowledge and practices into their daily schedules. Many participants reported that their reading block was dominated by a district-approved curriculum that did not fully align with their training. This challenge is consistent with previous research highlighting that teachers struggle to apply new knowledge effectively without dedicated instructional time and appropriate materials (Fletcher et al., 2018).

Additionally, some participants described a lack of administrative support in providing resources to implement dyslexia interventions properly. However, those who received support from their administration found it easier to adapt their instruction, suggesting that institutional backing plays a critical role in sustaining instructional change.

Several participants described a disconnect between district leadership and classroom realities. They expressed frustration that literacy policies were often shaped by individuals who lacked current classroom experience. This finding supports research indicating that educational policies are frequently driven by market forces and political agendas rather than scientific evidence (Shanahan, 2020). Participants also shared how initiatives like LETRS training helped provide foundational literacy knowledge but lacked structured follow-through, leaving the participants without the necessary tools to implement what they had learned. These obstacles suggest that professional development alone is insufficient; teachers require institutional support, mentoring, and curriculum alignment to fully integrate research-based, effective, structured literacy practices into their instruction. This aligns with Guskey's model, ensuring that teachers receive initial training and ongoing support to effectively integrate new practices, leading to observable improvements in student outcomes (Guskey, 2002).

Emotional and Professional Growth of Educators

The participants shared that on their journey toward more effective literacy instruction, they experienced personal and professional growth. The findings are in agreement with Guskey's Model of Teacher Change, which states that meaningful professional development brings about changes in classroom practices, which in turn lead to improved student achievements and, eventually, to changes in teachers' beliefs and attitudes (Guskey, 2002).

Research Question 1: How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?

Many participants mentioned feeling helpless and doubtful when they realized their past teaching resources, curriculum, and approaches were inadequate in helping every child develop

his or her reading skills. This emotional burden is consistent with the literature, which shows that teachers often feel pressure and discouragement when their teaching does not result in the desired outcomes (Hargreaves, 1998). These emotional responses can be a trigger for looking for better approaches.

Participants said that the dyslexia specialist training they received increased their confidence and self-efficacy as they acquired the skills necessary to identify and support students with dyslexia. This empowerment aligns with Guskey's model, where observable improvements in student learning affirm teachers' belief in new instructional methods (Guskey, 2002). Research shows that targeted professional development improves teacher efficacy, which results in more effective teaching practices (Darling-Hammond et al., 2017).

Mentorship was pivotal in the participants' dyslexia specialist training experience, providing continuous guidance and support throughout the academic semester. This aligns with prior research demonstrating that sustained professional development, combined with mentorship, significantly improves teaching practices and student achievement (Desimone & Pak, 2017). Knight (2007), also emphasizes that ongoing mentorship is essential for teachers to successfully implement new instructional strategies, reinforcing the importance of structured support in professional learning.

The results from this study align with existing research demonstrating that professional development in evidence-based literacy instruction enhances teacher confidence and instructional effectiveness. Research indicates that when educators gain knowledge about dyslexia and explicit phonics instruction, they feel more capable of supporting students with diverse learning needs (Spears-Swerling, 2019). Guskey's (2002) Model of Teacher Change further supports this finding, emphasizing that teachers' beliefs and confidence in instructional

methods solidify as they witness positive student outcomes. Participants in this study echo these insights, describing how seeing their students' progress reinforced their commitment to change. Participants shared that through continuous guidance, support, and feedback, they refined their instructional practices, bridged the gap between theory and application, and experienced a significant shift in their mindset toward reading instruction. This underscores the importance of equipping educators with both knowledge and practical support, as confidence in literacy instruction is closely tied to improved student achievement and long-term instructional growth.

Impact of Dyslexia Specialist Training

The findings of this research stress the need to change teacher preparation programs so that teachers come into the profession with sound knowledge and practices of literacy as backed by research. While the participants went through the dyslexia specialist training, they began to think about their past professional learning and teacher education with literacy. The participants, however, expressed disappointment with the lack of training in effective reading instruction, identifying, and intervening in dyslexia. This aligns with Moats (2020), who pointed out that many teacher education programs do not equip teachers-to-be to teach reading through systematic and research-based literacy approaches, thus leaving them unprepared to help students with reading difficulties. This gap results in teachers experiencing uncertainty and annoyance when confronting various issues encountered in the classroom. Recent studies show that more than 90% of children can become fluent readers if their teachers use teaching strategies based on the science of reading (NCTQ, 2024). While many teacher preparation programs are making strides toward incorporating evidence-based approaches, gaps in structured literacy and phonics training can leave some educators feeling underprepared. As a result, teachers may need to seek

additional support on their own, which can lead to frustration as they work to meet the diverse needs of their students (Sawchuk, 2023).

This aligns with research that found that a teacher's knowledge and instructional practices play a crucial role in student reading achievement. In a study of 42 first-grade teachers, Piasta et al. (2009) examined how teachers' literacy-related knowledge influenced student outcomes. They found that students made the most significant gains in word reading when teachers with a strong understanding of literacy concepts (those in the 75th percentile) consistently provided explicit decoding instruction. However, teachers with the same level of knowledge who did not consistently teach decoding had students whose reading progress was no better than those taught by teachers with significantly lower literacy knowledge. Additionally, the students who made the weakest gains in reading were those whose teachers, despite consistently teaching decoding, had literacy knowledge at or below the 25th percentile. This study highlights that student reading growth is not just about how much a teacher knows. It's also about how effectively that knowledge is applied in daily instruction

Birsh and Carreker (2018) reinforce this point in *Multisensory Teaching of Basic Language Skills*, arguing that strong literacy instruction requires deep content knowledge and practical, evidence-based teaching strategies. Simply understanding the structure of language is not enough; teachers must also know how to translate that knowledge into systematic, explicit, and multisensory instruction, without professional development and teacher preparation programs that emphasize not only the “what” but also the “how” of literacy instruction, even knowledgeable teachers may struggle to support their students effectively. These insights align with the findings of Piasta et al. (2009), underscoring that high-quality literacy instruction

depends on teacher knowledge and consistent application of research-based reading practices in the classroom.

Ultimately, these interpretations suggest that teacher training programs and school districts must prioritize ongoing, evidence-based professional learning that provides both foundational literacy knowledge and practical strategies for implementation. As demonstrated by the participants, when teachers receive the right training and see tangible student progress, they become more invested in transforming their instructional approaches, creating long-lasting changes that benefit all learners.

Research emphasizes the critical role of professional learning in reshaping teachers' understanding of dyslexia. Many educators initially hold misconceptions, viewing dyslexia as a visual issue rather than a phonological processing difficulty (Washburn et al., 2014; Shaywitz, 2020). Participants in this study experienced a shift in perspective and recognized dyslexia as a language-based disorder that requires explicit, structured intervention rather than a wait-and-see approach (Kilpatrick, 2015; Spear-Swerling, 2019). This transformation highlights the importance of ongoing, evidence-based professional development in equipping teachers with the knowledge necessary to implement effective reading instruction.

These insights align with Guskey's 2002 Model of Teacher Change, which suggests that professional development alters teachers' beliefs when they see positive student outcomes. As participants implemented research-based strategies, their confidence grew, reinforcing the need for structured, long-term professional learning to close the gap between research and practice (Moats, 2020; Castles et al., 2018).

Research Question 2: In what ways, if any, did the dyslexia specialist training influence their teaching practice?

As participants better understood dyslexia and structured literacy, they described how their teaching practices began to shift. They reported feeling more confident in delivering explicit, systematic instruction, particularly in foundational literacy skills such as phonemic awareness and decoding. This transformation in instructional methods aligns with research showing that when teachers receive targeted professional development in evidence-based reading instruction, their ability to support students effectively improves (Moats, 2020; Spear-Swerling, 2019).

Guskey's (2002) Teacher Model of Change suggests that teachers' beliefs and attitudes about instruction evolve when they see the impact of new practices on student learning. In this study, participants echoed this process, noting that they observed meaningful academic gains among their students as they implemented their newly acquired knowledge. Consistent with prior research, explicit and systematic literacy instruction is needed to become proficient readers (Shaywitz, 2020; Kilpatrick, 2015).

Beyond academic progress, participants also noticed that their students became more engaged and confident in literacy activities. These observations align with research indicating that effective reading instruction enhances skill development and fosters a greater sense of self-efficacy in learners (Snow et al., 2005). When students experience success in reading, they become more motivated to engage with texts, reinforcing a positive cycle of literacy growth (Gambrell, 2011).

These findings address the research questions by demonstrating how dyslexia specialist training influenced teachers' knowledge and instructional approaches. They also highlight the

importance of professional development programs that provide teachers with the theoretical foundation and practical strategies necessary for effective implementation. As Guskey (2002) suggests, when teachers witness the direct impact of their instructional changes, they become more committed to sustaining these practices, ultimately leading to lasting improvements in student literacy outcomes.

Table 5.1 *Summary of Research Questions Answered in Relation to Themes*

Research Question	How It Was Answered in the Findings
RQ1: How did veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?	Participants described encountering curriculum barriers, administrative constraints, and time limitations while applying their training. However, mentorship and hands-on practice helped them overcome self-doubt and refine their teaching methods, leading to increased confidence.
RQ2: In what ways, if any, did the dyslexia training influence their teaching practice?	Teachers reported shifting toward structured, explicit instruction, adopting multisensory strategies, and witnessing improved student outcomes. Their success in implementing these practices reinforced their commitment to structured literacy as an essential instructional approach.

Implications and Recommendations

The study's findings offer important implications for rural schools, teacher preparation programs, professional development initiatives, and broader educational policies, particularly regarding literacy instruction and dyslexia intervention. The following list of those implications is based on interviews and a literature review.

Teacher Preparation Programs

The results of this study reinforce the need for systemic change in how teachers are prepared to teach reading. Research consistently shows that teacher knowledge and instructional

methods are essential in student reading achievement (Piasta et al., 2009; Shaywitz, 2020). However, some teacher preparation programs may not provide extensive coursework in the science of reading and how to implement structured literacy practices, which can limit new educators' ability to support striving readers effectively (Sawchuk, 2023). The results of this study also show that professional development is important, but it is not enough to guarantee good literacy instruction on its own. Addressing literacy challenges may require teacher education programs to enhance their coursework by incorporating more rigorous training in the science of reading and the application of structured literacy techniques. Without comprehensive coursework that explicitly teaches the science of reading, teachers enter the classroom underprepared to meet the diverse needs of their students (Moats, 2020; Spear-Swerling, 2019).

One of the unexpected findings from this study was how participants' backgrounds and previous educational experiences shaped their interpretation and application of dyslexia specialist training. Many participants shared that they entered the training with well-established beliefs about reading instruction. These beliefs were primarily formed by their own experiences as students, along with their experiences in their teacher preparation coursework, a process consistent with schema theory and teacher belief literature, which highlights early experience shape instructional frameworks (Anderson, 1984, Pajares, 1992). As a result, teachers trained in outdated literacy methods may struggle to incorporate research-based strategies and may experience cognitive dissonance when faced with evidence that goes against their previous beliefs (Festinger, 1957).

It is important to note that all participants completed their teacher preparation programs before the broader national momentum around the science of reading and structured literacy took hold. As a result, their initial training may not have emphasized evidence-based approaches now

recognized as essential for teaching reading effectively. This context helps explain why many of the participants described a need to “unlearn” prior methods and felt unprepared to address the needs of striving readers until undergoing dyslexia specialist training.

Several participants stated that shifting their mindset toward structured literacy was not a natural process. The emotional and cognitive struggle that the participants described highlights why professional development alone is insufficient; when teachers enter the classroom, they have already established instructional habits that may be difficult to change. When professional learning contradicts what educators have previously been taught or used in practice, it can create inconsistencies in implementation. This demonstrates the need for teacher training programs to provide teachers with theoretical knowledge of the science of reading and the practical application of structured literacy from the beginning to avoid the need for retraining later in their careers.

Many participants voiced frustration over the lack of preparation they received in their teacher education programs, particularly in understanding the science of reading and implementing structured literacy approaches. This agrees with literature that found that some teacher preparation programs do not equip teachers with the tools for successful literacy teaching (Moats 2020, NCTQ 2022; Sawchuk, 2023). Tortorelli et al. (2021) stressed the importance of teacher preparation programs incorporating instruction in the science of reading to ensure teachers are armed with research-based strategies.

Participants recalled being introduced to a combination of reading instruction approaches, including using textbooks and children's literature to support student learning. They were encouraged to foster a supportive classroom environment and identify potential adaptations or accommodations, yet they were not taught how to provide targeted remediation for striving

readers. Many participants stated that they did not recall learning about the science of reading during their coursework. They also noted that the literacy lesson plans they submitted did not require them to align with the concepts of structured literacy. This gap made them feel unprepared to assist striving readers.

Recommendation: Dyslexia specialist training in teacher preparation programs

Given the findings of this study and the broader research on teacher knowledge and literacy outcomes, Kansas colleges and universities should integrate dyslexia specialist training into teacher preparation programs rather than requiring training for licensure renewal after teachers have already entered the workforce. Dyslexia specialist training provides educators in-depth training on the science of reading, structured literacy, and intervention strategies for striving readers. Implementing this training into teacher preparation programs would mitigate the cognitive dissonance many in-service teachers experience when they are told they need to relearn literacy instruction. Thus, if pre-service teachers were taught explicitly and systematically about literacy science from the beginning, Kansas could greatly enhance teacher readiness, student literacy rates, and long-term instructional continuity.

This shift would also help mitigate the cognitive dissonance many in-service teachers experience when required to relearn literacy instruction. Kansas could significantly improve teacher preparedness, student literacy outcomes, and long-term instructional fidelity by ensuring that pre-service teachers receive explicit, systematic instruction in literacy science from the beginning.

This recommendation aligns with research demonstrating that teachers who receive early, structured training in the science of reading are more likely to implement research-based practices with confidence and consistency (Spear-Swerling, 2019; Kilpatrick, 2015).

Furthermore, state education policies would hold teacher preparation programs accountable for ensuring that literacy coursework aligns with evidence-based instructional practices rather than leaving individual teachers and districts responsible for filling in the gaps through professional development after teachers enter the classroom.

Prioritizing structured literacy training in pre-service education could help Kansas further strengthen teacher preparation efforts and contribute to improved student outcomes, while supporting the development of a more research-informed teaching workforce.

Professional Development and School Support

The findings from this study shed light on the need for a shift in how educators and school leaders approach literacy instruction. This study's participants stated that their new understanding of dyslexia and structured literacy changed how they taught. However, many participants shared that they faced resistance from colleagues and administrators unfamiliar with or hesitant to adopt research-based literacy practices, a challenge that aligns with Fullan's (2007) observations about resistance to educational change when beliefs and practices are deeply ingrained.

School administrators and curriculum directors play a key role in driving change; aligning district-purchased curricula with the science of reading and providing teachers with structured follow-up support can help ensure that professional development translates into lasting instructional improvements. Studies have demonstrated that sustained mentorship and coaching are key to effectively helping teachers apply new knowledge (Desimone & Pak, 2017). Research suggests that professional development alone is insufficient; teachers need ongoing mentorship, administrative backing, and curriculum alignment to successfully integrate research-based

literacy practices into their instruction (Fletcher et al., 2018). Even the most well-intentioned professional development efforts often fail to create lasting change without institutional support.

Recommendation: Implement sustained professional development models

School districts should prioritize long-term professional development models that include coaching and mentoring. Research suggests that sustained professional learning, where teachers receive feedback and support over time, leads to a higher implementation rate of research-based strategies (Desimone & Pak, 2017; Knight, 2007). To ensure literacy instruction is aligned with the science of reading, professional development efforts should focus on explicit, structured literacy instruction and dyslexia interventions, equipping teachers with the knowledge and practical skills needed for effective implementation.

Dyslexia Intervention and Student Achievement

This study highlights the importance of early and effective dyslexia intervention. Participants reported that after implementing the knowledge and structured literacy practices, they learned from their dyslexia specialist training, they observed improved student engagement and reading proficiency. This concurs with studies showing that explicit and systematic phonics instruction is most helpful for students with dyslexia (Kilpatrick, 2015; Moats, 2020). However, many participants also highlighted that their district's curriculum did not fully address their needs in this regard, making it hard to implement what they had learned once they were back in the classroom.

This disconnect underscores the need for district leaders to critically assess literacy curricula and ensure they align with the science of reading. Schools must hold curriculum publishers accountable for their claims of adhering to the science of reading and structured literacy principles, particularly as more states adopt legislation requiring literacy instruction to

align with the science of reading. Many states have begun implementing guidelines that require publishers to demonstrate how their programs meet research-based standards, ensuring that instructional materials provide explicit, systematic, and sequential literacy instruction (Spear-Swerling, 2019; Moats, 2020). While no single curriculum is perfect, many programs claim to follow the science of reading but merely incorporate scattered elements of phonics, fluency, and phonemic awareness without a cohesive, evidence-based framework. Research has consistently demonstrated that effective reading instruction requires an explicit, cumulative, and systematic approach to develop foundational skills and close learning gaps (Seidenberg, 2017; Castles, Rastle, & Nation, 2018). When curricula fail to align with these principles, students risk missing essential components necessary for reading success.

Beyond academic progress, participants observed that students became more confident and engaged in literacy activities when taught using structured literacy methods that align with the science of reading. This is consistent with research showing that when students experience success in reading, they develop stronger motivation and self-efficacy, which further contributes to academic growth (Gambrell, 2011). Schools must recognize that investing in teacher knowledge is not just about improving test scores; it's about fostering a classroom environment where all students can develop the literacy skills they need to succeed.

Recommendation: Strengthen curriculum alignment and oversight

To bridge the gap between the science of reading using structured literacy approaches and curriculum implementation, Kansas state education agencies and school districts should strengthen oversight of curriculum adoption processes and ensure materials fully align with structured literacy principles. Research has consistently demonstrated that explicit, systematic, and cumulative instruction is essential for closing literacy gaps and supporting striving readers

(Moats, 2020; Seidenberg, 2017; Kilpatrick, 2015). However, many commercially available literacy programs lack the structured, sequential scope and sequence necessary for developing foundational literacy skills (Castles, Rastle, & Nation, 2018).

To address this issue, Kansas should require curriculum publishers to provide rigorous, evidence-based research demonstrating how their programs align with the science of reading before approval for district adoption. This evidence must include a detailed scope and sequence outlining the systematic and explicit instructional approach embedded in the program, ensuring its alignment with Common Core Curriculum Standards and structured literacy principles (Spear-Swerling, 2019). Without this level of transparency, schools risk adopting programs that merely incorporate fragmented elements of phonics, fluency, and phonemic awareness rather than a comprehensive, research-backed instructional model (Shanahan, 2020).

Furthermore, state education agencies must hold publishing companies accountable for student progress by implementing data-driven evaluation measures. Research has shown that curriculum fidelity and high-quality intervention strategies directly impact student reading outcomes (Fletcher et al., 2018; Foorman et al., 2016). Therefore, intervention materials should include built-in progress monitoring tools that allow educators to track student achievement and measure the effectiveness of literacy over time (Shaywitz, 2020). To guarantee that every student receives high-quality, research-based, explicit, structured literacy instruction aligned with the science of reading, these recommendations should be enforced in Kansas.

Limitations

The research includes several limitations, many of which are typical in studies using phenomenological methodology. First, the findings are based on purposive sampling to explore the experiences of veteran elementary teachers from rural Kansas who completed a dyslexia

intervention specialist training. These educators entered the profession before recent changes in teacher preparation programs that are now beginning to include instruction in the science of reading and structured literacy. Because of this, their training and background may differ significantly from newer teachers who are receiving more current, evidence-based instruction. As such, the findings are not intended to be generalizable to all educators, training programs, or geographic contexts.

Second, the study relied on self-reported data collected through interviews. While participants were encouraged to share openly and honestly, responses may have been shaped by social desirability or individual interpretations of the questions. Although strategies like member checking and researcher reflexivity were used to strengthen trustworthiness, the interpretive nature of qualitative research still presents challenges to neutrality.

Finally, the study was conducted over the course of a single academic semester. The data reflect early-stage perceptions of teacher change rather than long-term instructional shifts or student outcomes. According to Guskey's (2002) model, meaningful and sustained change often unfolds gradually over time. Therefore, additional research would be needed to determine whether the patterns and insights captured in this study persist or evolve with continued practice and implementation.

Recommendations for Future Research

This qualitative study aimed to explore the lived experiences of veteran rural elementary educators who participated in dyslexia specialist training. Due to the study's limitations, more research is needed on this and related topics to increase the knowledge base in the field. Recommendations for future research are suggested.

Expand the scope of research

This paper is a qualitative study of veteran rural elementary educators to understand how their backgrounds and training influenced their instructional practices. However, future research should explore a more diverse group of educators across urban, suburban, and rural districts to build on this understanding. One key theme in this study was the influence of past educational experiences and teacher preparation programs on participants' instructional approaches. Since this study focused exclusively on veteran teachers, further research should consider perspectives from early-career educators or current student teachers. It could be helpful to analyze the practices of new teachers to gain meaningful insights into the effectiveness of teacher preparation programs and professional development initiatives in contemporary practice.

Conduct a quantitative research study following reading achievement of students before and after educators implement dyslexia specialist training.

The participants of this study mentioned that their dyslexia specialist training has positive effects on their student's academic achievement, especially in terms of reading proficiency and interest. Although their reflections give valuable qualitative insights, a quantitative study would be helpful to measure the direct effects of dyslexia specialist training on student reading outcomes. Future work could include analyzing standardized test results at the beginning and end of the period during which teachers receive this training to see the quantitative improvements in phonemic awareness, decoding, fluency, and comprehension. Moreover, a longitudinal study of student progress over several years could better show how matrix teaching, when applied systematically, affects long-term reading achievement. This kind of research could give school districts and policymakers much-needed information regarding the effectiveness and feasibility of dyslexia training programs for teachers.

Explore the role of policy and curriculum adoption

Future work should also determine the level to which district and state policies hinder or support teachers' capacity to incorporate structured literacy into their teaching effectively. Since many of the educators in this study experienced difficulties ensuring that their teaching was consistent with the ideas of structured literacy because of curriculum restrictions, it is essential to know whether the state's policies support or obstruct scientifically based reading instruction. Moreover, it is vital to determine whether making curriculum publishers responsible for aligning their products with the science of reading positively impacts student literacy rates. For instance, research could investigate how effective the curriculum approval processes are, how transparent the publishers are in showing that their products are consistent with structured literacy, and what long-term impacts these measures have on student achievement. These factors would be helpful for policymakers and educators who are trying to reduce the achievement gap and ensure that every child gets a high-quality, research-based education.

Measure student literacy growth over time

Future work should also adopt a longitudinal design to explore the lasting effects of dyslexia specialist training on student literacy growth and achievement. It would be helpful to follow students over time to gain a better understanding of whether the modifications made by the trained teachers result in long-term reading gains and achievement. Such studies could monitor reading benchmarks, such as decoding skills, reading accuracy and speed, comprehension, and general academic achievement. Furthermore, research could determine if students who have received explicit literacy teaching from trained teachers are more likely to be resilient readers and have a lower risk of developing reading problems than their counterparts. This study would also help determine if professional development and support should be

ongoing for teachers to sustain the integrity of structured literacy approaches. Thus, the evidence of these long-term outcomes would be helpful for policymakers, school districts, and teacher preparation programs to justify the need for high-quality dyslexia training and its impact on student achievement. Research should follow the students' reading development and achievement for several years to determine the effects of dyslexia specialist training on literacy development.

Investigate Long-Term Change in Teacher Beliefs and Student Outcomes

Future research needs to include longitudinal studies which track educators together with their students after the first year of training. The study identified early signs of change that matched Guskey's (2002) framework through strategy adoption and student outcome improvement perceptions, yet it remains essential to study the long-term maintenance of these practice and belief shifts. Research should examine how teacher attitudes about structured literacy instruction evolve over time and assess student achievement outcomes that result from these instructional methods. Post-studies would deliver advanced understanding of Guskey's final stage by showing how professional development affects instructional fidelity and teacher beliefs and literacy outcomes throughout the years after implementation.

In addition to broader longitudinal research, future studies should consider directly following up with the teachers who participated in this study. Revisiting these educators at regular intervals could provide insight into how their instructional practices and professional beliefs continue to evolve, especially after additional semesters of classroom implementation. Such follow-ups would allow for a more robust analysis of whether the early signs of instructional change and belief development identified in this research have been sustained or deepened over time. Furthermore, this could offer critical information about the supports and

conditions necessary for lasting teacher change, helping to clarify the full trajectory of Guskey's (2002) model in real-world classroom contexts.

Conclusions

The results of this study have implications for teacher preparation and professional development, as it highlights the importance of ensuring that teachers are adequately trained and prepared to use evidence-based literacy practices in the classroom. All the participants in this study told the researcher that their dyslexia specialist training not only enhanced their understanding of structured literacy but also changed how they taught their students. However, the study also identified several barriers, such as constraints in the curriculum, lack of support from administrators, and strong instructors' patterns of practice. These findings agree with previous studies that have claimed that professional development is inadequate if teachers are not provided with mentoring, high-quality materials, and institutional support to effect change (Guskey, 2002; Moats, 2020).

While traditional barriers within the education system may continue to prevent the widespread use of structured literacy approaches, teacher preparation programs should incorporate the science of reading and structured literacy as core components right from the beginning instead of expecting instructors to retrain later. In that case, tomorrow's teachers might begin practice with more assurance and the tools to help all students. Also, if states demanded that curriculum publishers prove that their products are based on structured literacy principles, schools could ensure that the materials they use promote and do not go against effective reading teaching. This study was on veteran rural elementary school teachers. Still, these findings apply to other teachers, so more research is needed on how district and state policies can support or hinder the transition to structured literacy.

In conclusion, the outcomes of this study suggest that there is a need for comprehensive change in the field of literacy education at the level of teacher education and in-service training. Therefore, if schools and policymakers focus on research-based reading teaching, students with dyslexia or similar reading disabilities may benefit from better literacy treatments and, consequently, better academic performance. This paper has also depicted some challenges that educators encounter in teaching and learning, but the overall impression is optimistic: when given the right tools, knowledge, and support, teachers are willing and capable of incorporating new strategies to enhance students' literacy development. Further research is needed to determine how these alterations can be improved and preserved in other educational contexts.

Epilogue – A Rallying Cry for Improving Literacy Education in the Future

As I reflect on the journey of this research, I am struck by a profound realization – we are at a pivotal time in history regarding how literacy is taught. This research has made me aware of the urgent need for systemic change. What began as exploring a dyslexic specialist training's impact on teachers has broadened into a pressing demand for educational reform.

This study has opened my eyes to substantial gaps in teacher preparation. For too long, we have failed to sufficiently equip educators with research-validated strategies and knowledge for effective reading instruction. Instead of prioritizing research-based methods, many programs offer only superficial literacy understanding. As a result, new teachers frequently feel underprepared, frustrated, and compelled to independently seek extra training, if possible. These instructional shortcomings ripple into classrooms, where students suffer through inefficient lessons, growing achievement divides, and a worsening literacy crisis.

Now, more than ever, we must take a hard, honest look at the present system's rationale and substance. Why do we not ensure all elementary teachers receive evidence-based reading training? Why do publishers' sometimes misaligned materials dictate instruction over scientific literacy principles? These inquiries necessitate answers, as the moment to implement change is upon us.

While improving education in our country is no small task, focusing on literacy provides a well-defined starting point. As the foundation for further learning, reading opens doors that remain shut without fluency. Students struggle not just in language arts, but across all disciplines when literacy lags.

Equally crucial is holding publishers responsible for products marketed to schools. In other industries, false claims about effectiveness breed legal consequence, yet some edtech

companies continue promises of “closing gaps” without evidence. We scrutinize car purchases more than literacy programs, failing to demand proof curricula work. Accountability everywhere else should apply here too, as corporate influence shapes the next generation.

This research affirms a long-held conviction now deeper understood—prioritizing teacher knowledge, evidence-based practices and reform. Success relies not on individuals alone but collective duty, rethinking teacher preparation, policies that enable growth and challenging developers to validate what they sell.

If literacy determines life trajectories, its instruction deserves more care than an afterthought. Flawed systems should cause proactive change, not decades of striving students. We must revamp practices, prepare educators well and guarantee high-quality, research-backed literacy for all who enter our classrooms.

While the path ahead remains uncertain, progress begins with each step taken in the right direction. This work aims to light the way towards a new vision of literacy—one where all who seek knowledge find an open door, and where we measure our success not by standards alone but by the lives we help to shape. By reexamining old assumptions and embracing new ideas, may we build a system as dynamic as the minds it seeks to nurture.

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Appendix A – IRB Approval



TO: Suzanne Porath
Curriculum and Instruction
Manhattan, KS 66506

Proposal Number: IRB-12201

FROM: Lisa Rubin, Chair
Committee on Research Involving Human Subjects

DATE: 05/03/2024

RE: Proposal Entitled, "TEACHERS' PERCEPTIONS OF THE STRUCTURED LITERACY INTERVENTION SPECIALIST PROGRAM."

The Committee on Research Involving Human Subjects / Institutional Review Board (IRB) for Kansas State University has reviewed the proposal identified above and has determined that it is EXEMPT from further IRB review. This exemption applies only to the proposal - as written – and currently on file with the IRB. Any change potentially affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption.

Based upon information provided to the IRB, this activity is exempt under the criteria set forth in the Federal Policy for the Protection of Human Subjects, **45 CFR §104(d), category:Exempt Category 1.**

Certain research is exempt from the requirements of HHS/OHRP regulations. A determination that research is exempt does not imply that investigators have no ethical responsibilities to subjects in such research; it means only that the regulatory requirements related to IRB review, informed consent, and assurance of compliance do not apply to the research.

Any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if the subjects are KSU students, to the Director of the Student Health Center.

Electronically signed by Lisa Rubin on 05/03/2024 2:26 PM ET

Appendix B – Approval from PFLC

April 29, 2024

To Whom It May Concern,

The Philips Fundamental Learning Center acknowledges Wendi Fox's doctoral research and grants her authorization to engage with and enlist participants for her study from the July Summer 2024 Structured Literacy Intervention Specialist training program.

Tammy Kofford, Senior Director of
Andeel Teacher Literacy Institute (Located at Phillips Fundamental L
Authorized Signatory's Name and Position Learning Center)

Tammy Kofford M.S.Ed, CALT, QI
Signature

4 / 30 / 2024
Date

Appendix C – Email for Participant Recruitment

Appendix C – Email for Participant Recruitment

Dear Educator,

I'm Wendi Fox, a doctoral candidate at Kansas State University, currently undertaking research for my dissertation. This study focuses on gauging the experiences and perceptions of those involved in the Philips Fundamental Learning Center's (PFLC) Dyslexia Specialist Training Program.

I invite participants enrolled in this program to contribute to our understanding of educational strategies for dyslexia and literacy education. Your insights will be an invaluable addition to the research in this field.

If you are interested in participating, please reach out to me at wgf@ksu.edu or call me at (785)632-7239. I will share the informed consent form with you and arrange a meeting to discuss it in detail. Upon agreement, we will proceed to confirm your participation with oral consent.

Should you have any inquiries or need further clarification, please feel free to contact me. Your consideration and time are greatly appreciated.

Thank you,

Wendi Fox

wgf@ksu.edu

Appendix D – Informed Consent

RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM

Title of the Study: Elementary Teachers' Perceptions of the Impact of a Dyslexia Intervention Specialist Program on Teaching Literacy

Researchers: Wendi Fox

DESCRIPTION OF THE RESEARCH

The Professional Development Program for Dyslexia Specialist trains teachers in the Science of Reading, offering proven strategies to support students showing signs of dyslexia or facing substantial challenges in reading and spelling. As a phenomenological study, this research will conduct three distinct interviews to delve into and articulate the lived experiences of educators who have participated in the program. It aims to explore teachers' perceptions of dyslexia, as well as any changes in their instructional practices and confidence levels as a result of the professional development program.

You have been invited to participate in this research study because you are enrolled in the Dyslexia Specialist program.

If you choose to participate, you will be asked to engage in three separate semi-structured interviews. These interviews will be recorded for transcription and coding purposes. However, all data collected will be labeled with pseudonyms. Any notes and recordings made for this research will be used only by the researchers unless you provide permission for use in presentations/publications. Audio recordings will be made of your interview for transcription and coding purposes. However, all data collected will be labeled with pseudonyms and any field notes and recordings made for this research will be used only by the researchers. The recordings will be kept for three years or until the final publication of the study is completed, whichever comes first. At that time the data will be deleted. All data will be kept in a locked space and any electronic files will be password protected.

WHAT WILL MY PARTICIPATION INVOLVE?

Should you agree to take part in this study, we will schedule three Zoom sessions with the researcher at different intervals: The first interview will take place now before you start the program, another right after you finish the two-week introduction course, and a final one at the end of the semester after you have had time to implement the program. These interview sessions will take about 30 minutes. If additional time is necessary, it will be arranged at your consent and convenience.

ARE THERE ANY RISKS?

If there are any questions you do not wish to answer, you may decline, discontinue the interview, or refuse to participate at any time without penalty.

As your privacy and confidentiality is important, your actual name will not be used in any publication, and any notes and recordings will be labeled with pseudonyms.

ARE THERE ANY BENEFITS?

There will be no direct benefits or compensation for your participation in this study.

HOW WILL MY CONFIDENTIALITY BE PROTECTED?

Your name and any identifying characteristics will not be used. If you participate in this study, the researchers would like to be able to quote you directly without using your name.

Participant information collected as part of the research, even if identifiers are removed, will not be used or distributed for future research studies.

WHOM SHOULD I CONTACT IF I HAVE QUESTIONS?

You may ask any questions about the research at any time. If you have questions about the research, you should contact the researcher – Wendi Fox (785) 632-7239 (wfox@ksu.edu).

Lisa Rubin, Chair, Committee on Research Involving Human Subjects, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224; Brad Woods, Associate Vice President for Research Compliance, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224.

Your participation is completely voluntary.

If you begin the study and change your mind about your participation, you may end your participation at any time without penalty.

Providing Consent

Before setting an appointment for the first interview session, please read this consent form. If you are satisfied with the information in this consent form, we can schedule a time/date for the interviews.

At the beginning of the interview the researcher will be recording your oral consent to participate in this research. The researcher will ask you to state your name and ask if you have read this consent form. You will have an opportunity to ask any questions about your participation in this research. The researcher will then ask if you consent to participate in this research and if you consent to having the interview audio-recorded. The researcher will then stop the recording of the oral consent. Your oral consent will not be associated with the data of the interview. The researcher will restart the recording for the interview.

Person Obtaining Consent

The participant has verbally acknowledged that he/she has read and understood the written Informed Consent. An explanation of the research was given and questions from the participant were solicited and answered to the participant's satisfaction. In my judgement, the participant has demonstrated comprehension of the information. The participant has provided oral consent to participate in this study.

The participant agrees to be video and audio recorded.	YES	NO
--	-----	----

The participant grants permission to be quoted directly in publications without using his/her name.	YES	NO
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Name of Researcher Obtaining Consent (printed)

Signature of Researcher Obtaining Consent

Date

Appendix E – Interview # 1 Protocol

Interview #1 Protocol – Before Training Begins

Interview Guide

The theoretical foundation for my research is grounded in Guskey's Model of Teacher Change, and I've tailored these questions to align with that model.

Guskey's Model of Teacher Change:

Professional Learning > Change in practice > Change in student learning > Change in teachers' attitudes and beliefs

Research Questions:

1. How did the veteran rural elementary teachers experience a dyslexia specialist training that included knowledge and application with mentoring?
2. In what ways, if any, did the dyslexia specialist training influence their teaching practice?

Introduction

Hi, and thanks for joining me today. I'm Wendi Fox, a doctoral student at Kansas State University. I'm here to chat with you about your experiences with a Dyslexia Specialist training program. This Calt-aligned dyslexia intervention specialist program designed to equip educators to support students who show signs of dyslexia. We'll be using the term 'dyslexic tendencies' during our talk to acknowledge the varying laws on dyslexia across states. In Kansas, only certain professionals can officially diagnose dyslexia (licensed physician, psychologist, or psychiatrist). Our conversation is part of a series of three interviews. The first interview will take place now before you start the program, another right after you finish the two-week introduction course, and a final one at the end of the semester after you have had time to implement the program. Do you have any questions about the consent form? Any questions before we start? Great, I will begin recording now.

1st Interview Questions

Before participation in the Dyslexia Specialist Program

Framework	Interview Question
Demographic Items	Please give me an overview of your experience as a teacher? <i>Possible follow-up questions: I'm interested in why you chose this profession, how long you've been teaching, the grades or subjects you've taught, and what you're teaching now. Also, do you see yourself continuing in this role, or do you have other plans for your career? Lastly, could you describe your school district?</i>
Guskey's Model Professional Learning	How do you define dyslexia? <i>Follow-up questions: What are the primary characteristics of dyslexia as you understand them? What characteristics of dyslexia have you experienced with your students? What are the early signs of dyslexia you look for in a student?</i>
Guskey's Model	Have you come across any common misunderstandings or myths in your classroom regarding dyslexia, and if so, what are they?

Professional Learning	
Guskey's Model Professional Learning & Change in Practice	Could you describe your current understanding of the Science of Reading and its principles? <i>Possible follow-up questions: How do you apply the principles of the Science of Reading in your classroom? In what ways has the Science of Reading influenced your instructional strategies? What challenges, if any, have you encountered while integrating the Science of Reading into your literacy instruction?</i>
Guskey's Model Professional Learning	Could you describe the professional development sessions or training you have participated in that specifically address dyslexia? <i>Possible follow-up questions: How have these professional development opportunities deepened your understanding of dyslexia? Which professional development session on dyslexia did you find most impactful, and why?</i>
Guskey's Model Professional Learning	In what ways, if any, have these professional development sessions you attended enriched your understanding of the Science of Reading?
Guskey's Model Change in Practice	What key strategies or insights have you gained from these professional development trainings that have influenced your instructional methods? <i>Possible follow-up question: Can you describe any changes you've implemented in your teaching practice as a result of these professional development sessions? How have these trainings helped you differentiate instruction for students with dyslexic tendencies? From these professional development trainings, you've attended, which specific strategies have proven to be the most successful? Additionally, could you describe any obstacles you've encountered when applying these strategies in your teaching practice?</i>
Guskey's Model Change in Practice	Describe a typical reading session. <i>Possible follow-up question: How do you apply the Science of Reading and/or Structured literacy into your daily practice?</i>
Guskey's Model Change in Practice	Can you give an example of how you would modify a reading/literacy activity for a child with dyslexic tendencies? <i>Possible follow-up questions: How do you differentiate instruction for these students? What strategies or methods do you use to help students with dyslexic tendencies, and how effective have they been? What types of interventions do you find most effective for students with dyslexic tendencies?</i>
Guskey's Model Change in Student Learning	How would you describe the academic performance of your students with dyslexic tendencies? <i>Possible follow-up questions: Can you share specific examples of how these dyslexic tendencies affect their performance in key subjects like reading and writing? What particular challenges have you noticed that these students face in the classroom?</i>
Guskey's Model Change in Student Learning	How would you characterize the classroom involvement, social interactions, attitudes, and overall welfare of students exhibiting dyslexic tendencies?

Guskey's Model Change in Teacher's Attitudes and Beliefs	What are your current beliefs about the most effective ways to teach reading /literacy to students with dyslexia? <i>Possible follow-up questions: What successes or challenges have you faced?</i>
Guskey's Model Change in Teacher's Attitudes and Beliefs	In what ways do you believe your understanding of dyslexia and reading instruction could improve? <i>Possible follow-up question: Could you specify any particular areas within the domain of dyslexia and reading instruction where you feel you need more knowledge or skills? Are there any gaps in dyslexia training that you feel need to be addressed in future professional development programs?</i>
Guskey's Model Change in Teacher's Attitudes and Beliefs	How do you feel about modifying your current teaching practices based on new learning from the upcoming professional development? <i>Possible follow-up questions: What factors might influence your decision to implement new strategies learned from this professional development? What kind of support would you need to feel more comfortable making these changes to your teaching practices?</i>
Guskey's Model Change in Teacher's Attitudes and Beliefs	On a scale of 1-10, how prepared do you feel about serving your students with dyslexic tendencies? Why did you select that number? <i>Possible follow-up question: What do you hope to gain from this professional development to move closer to a 10 on the preparedness scale?</i>
Closing	Do you have anything you want to add that we have not talked about?

I appreciate the time you've shared with me today. I will be transcribing this interview and will send you the transcript for your review. Should there be any part that you feel does not accurately reflect your viewpoints or emotions, please inform me, and I will reach out for clarification. Additionally, may I contact you if I require any clarifications during the transcription process? My goal is to ensure that your insights and experiences are authentically represented and that your voice is accurately conveyed in the transcript.

Appendix F – Interview #2 Protocol

2nd Interview Questions

Immediately after participation in the two-week Dyslexia Specialist Training Program Professional Learning, Knowledge, and Change in Practice

Framework	Interview Question
Guskey's Model Professional Learning	Please take a moment and tell me a little bit about your experiences with a Dyslexia Specialist Training Program. <i>Possible follow-up questions: How was the course structured? How did you feel when you went home in the evening? What thoughts did you have about the training and the information you learned? Was there anything you agreed with? Was there anything you disagreed with?</i>
Guskey's Model Professional Learning	Now that you have completed the professional development training, has your understanding of the Science of Reading and its principles changed? <i>Possible follow-up questions: Is there anything new that you've learned? How will you apply the principles of the Science of Reading in your classroom? In what ways do you feel the Science of Reading will influence your instructional strategies? What challenges do you foresee while integrating the Science of Reading into your literacy instruction?</i>
Guskey's Model Professional Learning	How would you define dyslexia now that you have completed the training? <i>Follow-up questions: What are the primary characteristics of dyslexia as you understand them? What characteristics of dyslexia have you experienced with your students? What are the early signs of dyslexia you look for in a student? How has your understanding of dyslexia changed since participation in this training?</i>
Guskey's Model Professional Learning	Have any misconceptions about dyslexia you've encountered been addressed by the training? If so, which ones? If not, what do you think the training needed to address?
Guskey's Model Professional Learning	What knowledge or insights have you gained from this professional development training? <i>Possible follow-up question: Were there any ah-ha moments? How was this professional development training different from other dyslexia and reading trainings you have attended?</i>
Guskey's Model Professional Learning	How was this professional development training been similar or different from other dyslexia and literacy training you have attended? <i>Possible follow-up questions: Did this training include any hands-on or practical components that were not part of other training you've attended? Can you describe any new perspectives or concepts that this training introduced that were not covered in previous trainings? Were there specific instructional strategies or tools presented in this training that differed from past experiences? If so, how?</i>
Guskey's Model Change in Practice	Which techniques or approaches from your Dyslexia Specialist Training do you feel will be beneficial for assisting students with dyslexic tendencies? Why? <i>Possible follow-up questions: Can you describe any changes you may implement as a result of this training? How will you use these methods to differentiate instruction for your students</i>

	<i>with dyslexic tendencies? What obstacles do you anticipate encountering when applying these strategies in your teaching practice?</i>
Guskey's Model Change in Practice	Describe what a typical reading session in your classroom looks like based on your Dyslexia Specialist Training. <i>Possible follow-up question: How is the Science of Reading and/or Structured literacy applied in this lesson?</i>
Guskey's Model Change in Practice	Based on the knowledge you received from the training can you give an example of how you now might modify a reading/literacy activity for your students with dyslexic tendencies?
Guskey's Model Change in Student Learning	What effects do you anticipate the new strategies and knowledge from this Professional Development will have on the educational outcomes of students with dyslexic tendencies in your class?
Guskey's Model Change in Student Learning	How do you foresee the application of the strategies and insights acquired from this professional development training influencing classroom participation, social dynamics, attitudes, and the general well-being of your students with dyslexic tendencies?
Guskey's Model Change in Teacher's Attitudes and Beliefs	In what ways, if any have your beliefs about the most effective ways to teach reading /literacy to students with dyslexia changed? If so, how? And why?
Guskey's Model Change in Teacher's Attitudes and Beliefs	Post training, tell me about how you feel about modifying your current teaching practices based on new learning from the Dyslexia Specialist Intervention professional development training? <i>Possible follow-up questions: What factors might influence your decision to implement new strategies learned from this professional development? What kind of support would you need to feel more comfortable making these changes to your teaching practices?</i>
Guskey's Model Change in Teacher's Attitudes and Beliefs	Post training, on a scale of 1-10, how prepared do you feel about serving your students with dyslexic tendencies? <i>Possible follow-up question: What additional support, information, or resources do you need to move closer to a 10 on the preparedness scale?</i>
Closing	Do you have anything you want to add that we have not talked about?

I appreciate the time you've shared with me today. I will be transcribing this interview and will send you the transcript for your review. Should there be any part that you feel does not accurately reflect your viewpoints or emotions, please inform me, and I will reach out for clarification. Additionally, may I contact you if I require any clarifications during the transcription process? My goal is to ensure that your insights and experiences are authentically represented and that your voice is accurately conveyed in the transcript.

Appendix G – Interview # 3 Protocol

Interview #3 Protocol – End of 1st semester

3rd Interview Questions

Following participation Dyslexia Specialist Training Program and having had the opportunity to integrate the techniques and knowledge into their teaching methods along with a semester of mentorship and 3 observations (end of 1st semester) Professional Learning, Knowledge, and Change in Practice, Change in Student Learning, and Change in Teachers' attitudes and beliefs

Framework	Interview Question
Guskey's Model Professional Learning	Start the interview by discussing the semester and how things are progressing. Discuss a little bit about their students (without names) and the class makeup: how many students, grade level, behaviors, academic levels, anything unusual about this school year, etc.
Guskey's Model Professional Learning Change in Practice	Can you describe the follow-up workshops you attended after the professional development training? <i>Possible follow-up questions: How many have you participated in? Share any key takeaways from these sessions. What new skills or knowledge have you integrated into your teaching as a result of these follow-up workshops?</i>
Guskey's Model Professional Learning	What type of support did you receive from the Dyslexia Specialist Intervention Facilitators and your mentor during the first semester of implementation? (resources, time to share and reflect, observation feedback, etc.) <i>Possible follow-up questions: How do you feel about this support? Was it helpful? Why or why not?</i>
Guskey's Model Change in Practice	Tell me about the role your mentor has played in your professional learning journey. <i>Possible follow-up questions: Have the observations by your mentor been beneficial? If so, how? If not, how can this be improved? Can you share a particular piece of advice or feedback from your mentor that has influenced your teaching?)</i>
Guskey's Model Change in Practice	Tell me about a typical reading session in your classroom. <i>Possible follow-up questions: Is the way you approach reading instruction different or about the same as before you went through a Dyslexia Specialist training Program? How? Why do you think that is?</i>
Guskey's Model Change in Practice	How do you feel the Dyslexia Specialist Training program has impacted, if any, your ability to incorporate Structured Literacy and the Science of Reading into your daily practice?
Guskey's Model Change in Practice	What key strategies or insights have you gained from your Dyslexia Specialist Training that have influenced your instructional methods? <i>Possible follow-up question: Can you describe any changes you've implemented in your teaching practice as a result of this program? How has this program helped you differentiate instruction for students with dyslexic tendencies? Which specific strategies have proven to be the most successful? Additionally, could you describe any obstacles you've encountered when applying these strategies in your teaching practice?</i>

Guskey's Model Change in Practice	Can you give an example of how you would modify a reading activity for a child with dyslexic tendencies?
Guskey's Model Change in Student Learning	What changes, if any, have you observed in the academic performance of your students with dyslexic tendencies since applying the strategies from your professional development?
Guskey's Model Change in Student Learning	Have you observed any shifts in your students' engagement, attitudes, or general well-being? <i>Possible follow-up question: Can you discuss what you believe to be contributing to these changes?</i>
Guskey's Model Change in Student Learning	In your opinion, what lasting impacts might the professional development program have on the learning experiences of your students?
Guskey's Model Change in Teachers' Attitudes and Beliefs	How has this training influenced your understanding of dyslexia, if at all? <i>Possible follow up question: Could you elaborate on the nature and reasons behind any changes in your perception?</i>
Guskey's Model Change in Teachers' Attitudes and Beliefs	In what ways has a Dyslexia Specialist program shaped or altered your approach and outlook toward teaching reading to students with dyslexic tendencies?
Guskey's Model Change in Teachers' Attitudes and Beliefs	On a scale of 1-10, how well prepared do you feel about serving your students with dyslexic tendencies now? Why did you select that number? <i>Possible Follow-up questions: Discuss how this is different than our first interview. When did this change? Why?</i>
Guskey's Model Change in Teachers' Attitudes and Beliefs	Overall, what are your perceptions of the professional development you received from your Dyslexia Specialist Training program? <i>Possible Follow-up question: What most valuable insights have you gained? What aspects of the program were most beneficial? Would you recommend this program to other educators? Why, or Why not?</i>
Guskey's Model Change in Teachers' Attitudes/Beliefs	What recommendations do you have for improving Dyslexia Specialist Training program? <i>(extra support, challenges that still need to be addressed, etc.)</i>
CLOSING	Do you have anything you want to add that we have not talked about?

I appreciate the time you've shared with me today. I will be transcribing this interview and will send you the transcript for your review. Should there be any part that you feel does not accurately reflect your viewpoints or emotions, please inform me, and I will reach out for clarification. Additionally, may I contact you if I require any clarifications during the transcription process? My goal is to ensure that your insights and experiences are authentically represented and that your voice is accurately conveyed in the transcript.

Appendix H – Debriefing Statement

Debriefing Statement

Dear Participants,

Your involvement in this study has been invaluable, and I extend my heartfelt thanks. Our study aimed to delve into the experiences of those who completed a Dyslexia Specialist Training program at the Phillips Fundamental Learning Center, filling a vital research gap concerning educators' views on this training.

Your contribution has enriched the ongoing scholarly dialogue surrounding educational strategies for dyslexia and literacy instruction. I sincerely appreciate your participation. Upon the study's completion, you will receive a summary of the findings. Should you have any inquiries regarding this research, please feel free to reach out to me at any time.

Thank you,

Wendi Fox
wgf@ksu.edu

