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Third-Grade Content Area Teachers Instructing Students with Dyslexia

Jennifer Waxman
Walden University

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Walden University

College of Education

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Jennifer Waxman

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the review committee have been made.

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Walden University
2022

Abstract

Third-Grade Content Area Teachers Instructing Students with Dyslexia

by

Jennifer Waxman

MA, Aurora University, 2015

MS, Walden University, 2005

BS, Aurora University, 1996

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

May 2022

Abstract

Researchers have found that teachers do not always understand how to educate students with dyslexia. The research problem addressed in this study was this gap in knowledge leading to a gap in practice regarding teaching students with dyslexia. The purpose of this basic qualitative study was to examine how and if third-grade general education content area teachers were providing interventions and instruction to meet the needs of third-grade students with dyslexia. The fundamental intervention with the strongest causal model in improving phonological abilities and reading development is the Orton-Gillingham methodology, which served as the conceptual framework for this study. This study was conducted across eight school sites: five public schools and three private schools. The descriptive data were collected using semistructured interviews of nine third-grade teachers and were analyzed using initial, axial, and selective coding. The analyses of the interview data indicated that the word dyslexia was not widely used, students with dyslexia were not diagnosed, and implementation of Orton-Gillingham procedures and interventions were not used within the classroom. The results also showed that all nine teachers used many other techniques to help their struggling students succeed. In addition, the results indicated that all nine teachers lack understanding and training but hope to learn more in the future. This research may contribute to positive social change for educators who want to bring dyslexia awareness and change into their school atmosphere to help students with dyslexia succeed. The positive social implications could occur as educators understand dyslexia, causing more students with dyslexia to receive the interventions, accommodations, and instruction to match their learning needs.

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Dedication

I would like to dedicate this document to my past and present students, and their families, which inspired me to change my teaching methods. Without all of you, I would have never understood the areas in which you struggle and the areas in which you excel. You are all truly amazing people, and I am a better educator because of you. Without my faith in the Lord, the support from my family, and the dedication of all of my students, I would have never become Dr. Waxman. God has intertwined us all to make this goal a reality. Without my faith in Jesus, and my trust in the Lord, I never would have been able to overcome the many obstacles to make this dream a reality.

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Chapter 1: Introduction to the Study

Dyslexia is an important issue in U.S. schools because 80%–90% of people with learning disabilities have a level of dyslexia (Miller, 2019). Dyslexia affects approximately 20% of the overall population (Miller, 2019). According to D’Mello and Gabrieli (2018), dyslexia is characterized by reading difficulties that cannot be explained by sensory or cognitive deficits, lack of motivation, or improper reading instruction. Of third-grade students identified with dyslexia, 75% continue to read poorly in high school when proper interventions were not used to remediate these students (D’Mello & Gabrieli, 2018). Additional consequences of these persistent reading difficulties include academic anxiety, increased likelihood of dropping out of high school, and decreased enrollment in postsecondary institutions. Over 70% of students with dyslexia, compared with 10% of typical readers in postsecondary settings, report difficulty in academic skills, such as notetaking, organizing essays, and written expression (D’Mello & Gabrieli, 2018).

Dyslexia primarily affects the student’s academics but manifests in reading and writing. Reading is the compass that guides all learning in all subjects, and if students cannot read, it is difficult for them to access the same education as their peers (Grogan, 2021). According to Fisher et al. (2019), students with dyslexia have primary deficits in single word reading, with an underlying phonological processing deficit. Phonological processing is composed, in part, of phonological awareness and decoding skills. Phonological awareness is the explicit understanding of the sound structure of language, and phonological decoding is the ability to use orthography to turn phonological units

into words. These phonological difficulties cause additional language impairments in semantics, syntax, grammar, and spelling, which affect both reading and language production (Fisher et al., 2019). Duff et al. (2016) showed that the Orton-Gillingham methodology provides successful reading instruction to students with dyslexia. Even though Orton-Gillingham is a research-based reading method for remediating students with dyslexia, it is not widely implemented due to a lack of familiarization, training, and foundational knowledge of dyslexia and Orton-Gillingham in educators (Sayeski et al., 2019).

Shaywitz and Shaywitz (2020) stated that, as with other learning disabilities, dyslexia is a lifelong challenge that begins at birth. Although the causes of dyslexia are unknown, neuroimaging has helped scientists determine that dyslexia is a hereditary disorder in which genetic differences of the brain affect literacy development. Students with dyslexia are often not identified until around 7 or 8 years old; however, strong evidence has shown that the building blocks of learning deficits are apparent at an even younger age. This language processing disorder can hinder reading, writing, spelling, and sometimes speaking (D'Mello & Gabrieli, 2018). Dyslexia is not a sign of poor intelligence, laziness, or impaired vision; children and adults with dyslexia have a neurological disorder that causes their brains to process and interpret language differently (Grogan, 2021). The phonological process impairment in students with dyslexia is due to a deficit in working memory, which temporarily stores and manipulates information vital to decoding, comprehension, reasoning, and learning (Reid, 2016). Although students with dyslexia have strong listening and verbal skills, working memory deficits inhibit the

organization of sounds, words, and passages into a cohesive sequence, which affects their overall fluency and comprehension abilities (Fisher et al., 2019).

According to Shaywitz and Shaywitz (2020), there is a myth that students with dyslexia see things backward. The students see the words correctly, but the processing of the written language gets mixed up. As a result, without intervention, when the student reads, prints, and spells, it is inaccurate much of the time. Students with dyslexia have difficulty with rote memorization because they have difficulty with automatization and securing details into long-term memory. Students who lack phonological knowledge and decoding skills often have difficulty with comprehension because they struggle with translating sounds into meaningful text (Fisher et al., 2019). If a student with dyslexia has the text read to them or is at their decoding level, they often do not struggle with comprehension (Fisher et al., 2019). Students with dyslexia have relatively strong oral language, but the decoding and fluency impairments cause comprehension struggles while reading independently (Reid, 2016).

General education teachers must have adequate, researched-based staff development to understand the needs of students with dyslexia within their classroom (Mills, 2018). The problem is that there was a gap in knowledge and practice in which teachers were not trained to meet the needs of students with dyslexia (Worthy et al., 2018). Teachers must be taught the signs and symptoms of dyslexia, understand the ramifications and interventions, and receive quality professional development to close this gap in practice. The purpose of this basic qualitative study was to examine how and if third-grade general education content area teachers were providing interventions and

instructions to meet the needs of third-grade students with dyslexia. This chapter includes the background, methodology, problem statement, purpose, and research questions of this study. I also discuss the conceptual framework, significance, limitations, and implications of this study in Chapter 1.

Background

Although dyslexia affects about 1 in 5 students in an elementary classroom, teachers are not often aware of the signs, symptoms, interventions, and accommodations for students with dyslexia (Miller, 2019). Educators misunderstand that they must teach a student with dyslexia in a way that coincides with the student's learning style (Shaywitz & Shaywitz, 2020). The National Institute of Child Health and Development and the International Dyslexia Association (IDA) defined dyslexia as a:

Specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that 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 reduced reading experience that can impede the growth of vocabulary and background knowledge. (Grogan, 2021, p. 3)

Students with dyslexia commonly have a deficit in working memory and phonological processing, which causes them to have difficulty recalling and retaining stored information (Mills, 2018). Phonological deficits in spoken and written words are

evident in children and adults with dyslexia, including children in the prereading stage (Reid, 2016). There is a heightened risk for the development of dyslexia to emerge when these phonological deficits are identified (Shaywitz & Shaywitz, 2020). These deficits are significant in reading fluency and comprehension because the students have extreme difficulty reading multisyllabic or unfamiliar words (Mills, 2018). Reading must be taught to accommodate this difficulty in accessing and processing the written language (Holahan et al., 2018). There is no easy or quick solution to teaching students with dyslexia to overcome these challenges. Teachers must help students with dyslexia to make connections between the morphological qualities in words using a multisensory approach (Reid, 2016).

The Orton-Gillingham methodology is an established multisensory approach for teaching students with dyslexia and includes orthography, morphology, and phonology in a systematic and explicit manner (Shaywitz & Shaywitz, 2020). Explicit instruction is an approach that involves direct instruction; the teacher demonstrates the task provides guided practice with immediate corrective feedback before the student attempts the task independently (Shaywitz & Shaywitz, 2020). Sayeski et al. (2019) stated that the terms dyslexia and Orton-Gillingham are often used in conjunction with one another, yet much is misunderstood about both terms. The IDA defined dyslexia as “a specific learning disability that is neurobiological in origin and results in difficulty with accurate or fluent word recognition, reading, and spelling” (Sayeski et al., 2019, p. 241). Dyslexia is commonly and incorrectly associated with difficulty in visual processing (Sayeski et al., 2019). Although Samuel T. Orton and Anna Gillingham established the Orton-

Gillingham methodology in the 1930s and 1940s, it is considered the signature approach for addressing students with reading disabilities.

Private schools or schools specific to students with dyslexia often implement Orton-Gillingham, but public schools may not have equal access to this approach; therefore, putting students with dyslexia from lower socioeconomic backgrounds, including culturally and linguistically diverse students, at higher risk (Sayeski et al., 2019). When teachers utilize evidence-based interventions to help students employ multisensory techniques, the students increase their learning across all content areas (Mills, 2018). Teachers must be equipped with the knowledge of how to teach these interventions and provide appropriate accommodations.

Problem Statement

The problem under study was the need to examine how third-grade content area teachers were providing interventions and instruction for students with dyslexia in the classroom setting to identify the gaps in knowledge, which leads to a gap in practice, to inform change (see Worthy et al., 2018). Researchers who study dyslexia have come to a consensus that there is much unknown regarding content area teachers' knowledge and teaching practices regarding dyslexia (Worthy et al., 2018). This gap in knowledge leads to a gap in practice beginning at the university level because many teachers do not learn how to teach students with dyslexia in teacher training courses (Worthy et al., 2018).

If students begin to struggle in reading, these difficulties often become more pronounced in third grade because students are required to read more independently at this grade level (Holahan et al., 2018). During kindergarten through second grade,

children learn to read; however, third-grade students read to learn content in each academic area (Vernon-Feagans et al., 2018). Researchers have proposed that all content area teachers must learn how to assess a student's reading difficulties, target instructional needs, and identify and deliver evidence-based intervention strategies for students with dyslexia (Washburn et al., 2017). It is not enough for classroom teachers to only have content knowledge in all subjects, but they must also understand the successful strategies to teach students with dyslexia (Washburn et al., 2017). Students with dyslexia will continue to struggle academically unless teachers are equipped to meet their diverse learning needs (Vernon-Feagans et al., 2018).

Purpose of the Study

The purpose of this basic qualitative study was to examine how and if third-grade general education content area teachers were providing interventions and instructions to meet the needs of students with dyslexia. The results of this study could be used to provide recommendations for closing the lack of knowledge that leads to a gap in practice regarding teaching students with dyslexia. The results could also be used to improve preservice and in-service training for delivering interventions and instruction to students with dyslexia.

Research Questions

The following three research questions guided this study:

RQ1: How are third-grade students with dyslexia assessed and identified in the research setting?

RQ2: How are third-grade content area teachers providing instruction and

interventions based on the Orton-Gillingham approach to students with dyslexia to help them succeed in the classroom?

RQ3: How are third-grade content area teachers providing instruction and interventions to students with dyslexia to help them succeed in the classroom other than with the Orton-Gillingham approach?

Conceptual Framework

Morton and Frith (1995) used the causal model to describe the biological, cognitive, and behavioral origins of developmental disorders, such as dyslexia (Reid, 2016). Causal modeling in qualitative research represents relationships between these variables (Morton & Frith, 2001). Frith (1990) defined dyslexia as a neurodevelopment disorder with a biological origin and behavioral signs extending far beyond reading and written language difficulties. A complete understanding of dyslexia links together the physiological, cognitive, and behavioral impacts of the condition (Frith, 1990).

The fundamental intervention with the strongest causal model in improving phonological abilities and reading development is the Orton-Gillingham methodology, which served as the conceptual framework for this study (see Ring et al., 2017). Children with dyslexia have a phonological deficit that negatively impacts their ability to decode and spell in English (Holahan et al., 2018). Students with dyslexia have difficulty deciphering alphabetic code, which leads to word-decoding deficits and hinders the development of literacy skills (Holahan et al., 2018). Multisensory reading interventions, such as the Orton-Gillingham approach, that utilize systematic phonics have been shown to address the core phonological deficits found in students with dyslexia (Schlesinger &

Gray, 2017).

Schlesinger and Gray (2017) concluded that multisensory approaches, including Orton-Gillingham, have a foundation in Paivio's dual coding theory (DCT), suggesting two separate coding systems for internal forms of mental representations used in memory. Paivio (1986) found that a verbal system for linguistically coding information and a nonverbal system for coding mental images engages a child's sensory modalities, including visual, auditory, and tactile systems. Researchers have found that the dual coding theory framework of multimodal instruction has enhanced learning in students with dyslexia (Schlesinger & Gray, 2017). Accessing multiple modalities integrates nonverbal working memory and improves oral narrative abilities using structural language measures (Fisher et al., 2019).

Complex linguistic tasks integrate foundational language abilities and executive functions, such as working memory and phonological processing (Fisher et al., 2019). Shaywitz and Shaywitz (2020) indicated that the three main areas of the brain that affect literacy skills, working memory, and phonological processing are the left occipitotemporal cortex, the left temporoparietal cortex, and the left temporoparietal left inferior frontal cortex. Students with dyslexia are shown to have disconnections in these three areas of the brain, so they must have specialized, research-based interventions to learn to read to accommodate brain differences. The left occipitotemporal cortex is essential to the automatic visual processing of words and print. Activation of this region of the brain consistently identifies sounds by written or printed symbols. This brain area affects early literacy skills, such as identifying the alphabet, both in symbol and sound,

rhyiming, and phonemic awareness. Temporoparietal regions of the brain involve cross-modal integration, which increases engagement of brain regions and is associated with the development of phonological skills related to learning to read.

Shaywitz and Shaywitz (2020) also concluded that students with deficits in the temporoparietal cortex have difficulty with phonological awareness; working memory; sight words; decoding; and stringing sounds into words, sentences, and passages. The left inferior frontal cortex's role in reading is more complex than the purposes of the other areas because activation of this area is associated with fluency, verbal working memory, phonological and semantic processing, silent reading, speech, and long-term memory (D'Mello & Gabrieli, 2018). Shaywitz and Shaywitz stated the coordination between the occipitotemporal, temporoparietal, and inferior frontal regions is consistently associated with developing reading connections. Interventions that are phonologically based can improve reading in students with dyslexia because the three affected areas of the brain are remediated.

Reid (2016) stated the Orton-Gillingham interventions address the phonological deficits found in students with dyslexia. As stated in the phonological deficit theory, students with dyslexia have a phonological impairment that affects tasks such as, but not limited to, phoneme manipulation, verbal short-term memory, rapid naming, decoding, spelling, and fluency (Bishop & Snowling, 2004 as cited in Reid, 2016). These phonological deficits play a prominent role in reading impairment in students with dyslexia.

Orton-Gillingham is a multisensory intervention that provides instruction in

phonological awareness and systematic phonics, including letter-sound correspondence, decoding, and spelling (Ring et al., 2017). Samuel Orton and Anna Gillingham developed this multisensory approach to explicitly help students with dyslexia connect letters and sounds (Shaywitz & Shaywitz, 2020). In this approach, students heavily rely on sight, sound, and touch to learn how to read and spell every syllable of every word (Shaywitz & Shaywitz, 2020). This approach is different for students with dyslexia because multiple pathways make cognitive connections consistent with rules and patterns, which allows them to successfully decode and build reading fluency (Reid, 2016).

Nature of the Study

In this basic qualitative study, I conducted one-on-one, semistructured interviews with nine third-grade teachers to determine how they met the needs of students with dyslexia. The teachers were from five different public elementary schools and three different private schools located in Georgia, North Carolina, and the northern part of Illinois. The interview data were analyzed to determine if third-grade teachers could identify if a student has dyslexia and if they understood how to teach and accommodate students with dyslexia.

The data analysis occurred after I conducted all personal interviews with the third-grade teachers. Saldaña (2021) stated that descriptive data coding involves examining the qualitative data gathered during interviews and translating the words, phrases, or sentences into codes or labels. In this study, I derived the data codes from initial, axial, and selective coding. Coding categories included setting, situations, perceptions, feelings, activities, strategies, relationships, and social codes. From these categories, themes and

subthemes emerged through the analysis process. I used NVivo software to assist me in locating particular themes in the qualitative data. NVivo is software that supports qualitative and mixed methods research and is designed to help organize, analyze, and find insights in unstructured or qualitative data (Jackson & Bazeley, 2019).

Definitions

In this section, I provide definitions of terms to help the reader understand this study.

Accuracy: The ability to recognize or decode words correctly (Rae, 2018).

Decoding: Applying knowledge of sound-symbol correspondences to correctly pronounce a written word; word recognition (Rae, 2018).

Explicit instruction: An approach involving direct instruction; the teacher demonstrates the task and provides guided practice with immediate corrective feedback before the student attempts the task independently (Shaywitz & Shaywitz, 2020).

Fluency: The ability to read a text accurately, quickly, and with appropriate expression (Rae, 2018).

Intervention: A specific program or set of steps to help a student improve in an area of weakness (Rae, 2018).

Multisensory teaching methods: Instructional methods that involve multiple senses (e.g., hearing, seeing, tactile/kinesthetic) to teach a skill, such as print-sound awareness and reading (Shaywitz & Shaywitz, 2020).

Orthography: The writing system of a language, including spelling, punctuation, and capitalization rules (Rae, 2018).

Orton-Gillingham: This intervention helps students understand how sounds and letters are related and how they act in words. Students also learn how to attack a word and break it into smaller pieces. The Barton System is a multisensory approach involving the visual, auditory, tactile, and kinesthetic senses. The Wilson System is another example of Orton-Gillingham (Shaywitz & Shaywitz, 2020).

Phonological awareness: The ability to perceive and manipulate the sounds, word parts, or words of a language (Sandman-Hurley, 2019).

Processing speed: The ability to quickly and accurately perform simple cognitive tasks (Grogan, 2021).

Assumptions

An assumption for this research study was that the third-grade teachers would be open to sharing what they know and, more importantly, do not know regarding their students with dyslexia. I also assumed that teachers would not be hesitant to answer questions based on their knowledge of dyslexia. Another assumption was that each school had a unique operating structure, diverse leadership, and different expectations for professional development, which impacted the research and resulted in this study. These assumptions were necessary because it was important to know if the teachers had prior knowledge of instructing students with dyslexia. This was vital to help me understand where and if a gap in knowledge and practice occurred.

Scope and Delimitations

A delimitation of the study was the focus on third-grade general education teachers. I chose this population of teachers because third grade is a pivotal year in

reading development. Challenges often start to escalate in third grade, and students with dyslexia become very frustrated, especially if the dyslexia goes undiagnosed (Miller, 2019).

Limitations

One limitation of this study was the small sample size, which limited the ability to generalize the findings to other grade levels. Another limitation was that some of the teachers in the study did not know which students in their classrooms had dyslexia. Without knowing the students with dyslexia, it was challenging to help them rationalize what was or what was not happening in the classroom. A third limitation was using the word dyslexia because in many school districts, using the term dyslexia is against district policy. Students identified with a specific learning disability (SLD) are often students with dyslexia (Shaywitz & Shaywitz, 2020). A final limitation involved the situation in the country with the COVID-19 pandemic. Many schools had a policy for guests in the building or the school day was held entirely remotely. Therefore, I conducted the participant interviews via Zoom.

Significance

This study is relevant to the field of special education because I examined how teachers met the needs of students with dyslexia. Teachers are often portrayed as complacent and resistant to understanding dyslexia, but teachers would like to learn more about dyslexia (Worthy et al., 2018). Teacher educator programs often lack the curriculum to give teachers the tools to understand dyslexia (Worthy et al., 2018). The proper education of teachers is critical because the reading intervention students with

dyslexia receive will affect their ability to succeed academically (IDA, 2017). The results of the study could be used to improve training for teachers and help them understand dyslexia.

According to Shaywitz and Shaywitz (2020), dyslexia is not a rare learning struggle because approximately 15%–20% percent of the student population has dyslexia. The lack of teacher training in dyslexia awareness has led to academic failure among this population of students, which is often magnified in third grade (Shaywitz & Shaywitz, 2020). A common theme in dyslexia research questions the extent to which teacher preparation courses and professional development for teachers helps them better understand dyslexia (Washburn et al., 2017). Preservice teacher candidates need to learn explicit, multisensory strategies, such as Orton-Gillingham-based interventions, to effectively teach students with dyslexia, but this is not happening (Worthy et al., 2018).

Duke (2019) reported that third grade is pivotal because students begin reading to learn instead of learning to read at this grade level. They no longer depend on their decoding skills to read the content in their academic texts. If students with dyslexia do not have the proper reading interventions, they may develop guessing strategies instead of strategies to help their decoding impairment (Duke, 2019). The lack of remediation is especially concerning because researchers have found that students who are not proficiently reading by third grade are 4 times more likely to drop out of school than proficient readers (Sutter et al., 2019) These students account for three fifths of students who eventually drop out of school or fail to graduate with their peers on time (Sutter et al., 2019). By examining the content used to teach students with dyslexia in this study,

the results may motivate teachers to use research-based interventions to help students overcome their reading struggles.

Students with dyslexia who remain undiagnosed and have persistent difficulty learning to read are more likely to experience failure beyond elementary school (Washburn et al., 2017). This failure often leads to long-term negative impacts on educational, social, and emotional factors, including dropping out of school and limited access to jobs and careers (Washburn et al., 2017). Without research-based interventions appropriate for students with dyslexia, their literacy struggles will be magnified in third grade and the struggles will continue to escalate through the upper elementary, middle, and high school years (Partanen et al., 2019).

Educating teachers on the delivery of dyslexia-appropriate interventions can result in the students with dyslexia receiving the education they need and deserve. When educators understand how to identify dyslexia and provide proper interventions, these students can then receive appropriate teaching and interventions, leading them to achieve academic success and possibly reduce self-esteem and emotional difficulties (Boas, 2020). These positive social changes could impact the learning trajectory of this population of students.

Summary

Teachers need to be aware of the symptoms and solutions for a student with dyslexia. With 15%–20% of their population of students having dyslexia, this study was essential to investigate what or what was not accomplished in the classroom (see Boas, 2020). It was not enough to assume that teachers already know how to address the

struggles presented with dyslexia, especially if they never had formalized training for this learning disability; instead, there was a need to examine how teachers implemented Orton-Gillingham strategies in their classrooms. In Chapter 2, I will outline the extant research on dyslexia and the research showing how the Orton-Gillingham approach is particularly effective for students with dyslexia.

Chapter 2: Literature Review

Dyslexia remains one of the most misunderstood reading disabilities among doctors, teachers, and parents (Miciak & Fletcher, 2020). Shaywitz and Shaywitz (2020) defined the Greek root *dys-* to mean difficulty with and *-lexia* means language. Dyslexia translated means difficulty with language, specifically spelling, reading, writing, and speech. Dyslexia is a genetic brain difference that causes difficulty with language despite intelligence, motivation, and education (Grogan, 2021). Due to brain differences, people with dyslexia must be taught with an intensive reading intervention in the form of a practical, logical, and multisensory intervention, such as the Orton-Gillingham methodology (Reid, 2016).

This chapter includes a description of the literature search strategy used to investigate the background and conceptual framework of dyslexia related to teacher awareness. This exhaustive literature review also shows the effectiveness of the Orton-Gillingham methodology when remediating a student with dyslexia. Finally, in this chapter, I also discuss the scientific and historical research involving the research questions, problem statement, and significance of this study.

Literature Search Strategy

I conducted a comprehensive and exhaustive literature review using online databases accessible through the Walden University Library, including EBSCO, ERIC, and SAGE Journals. In addition, Google Scholar was used to locate peer-reviewed journals. The key terms used for this search included *dyslexia*, *third grade*, *reading skills*, *misunderstood*, *drop-out rate*, *academic implications*, *anxiety*, *depression*, *teachers*,

professional development, Orton-Gillingham, strategies, university training, language processing, phonological deficit disorders, multisensory, accommodations, interventions, symptoms, warning signs, dual coding theory, and foundational language.

During the search process, I found several pieces of literature from prominent, published researchers in the field of dyslexia. The authors of this literature included Sally Shaywitz, Maryanne Wolf, Gavin Reid, and Kelli Sandman-Hurley. In addition, literature was located using research from the Yale Center for Dyslexia and Creativity, the IDA, the National Center for Learning Disabilities, Bright Solutions for Dyslexia, Center for Public Education, and the Dyslexia Training Institute.

The peer-reviewed journals used as sources in this study were limited to those with publication dates in the past 5 years. I initially conducted an exhaustive search for research on teachers' understandings of dyslexia and the signs, symptoms, interventions, and accommodations. The resulting articles led me to additional peer-reviewed sources through the sources provided on the articles' reference lists. The topic of teachers' understandings of dyslexia was the most difficult to find since very few research studies were conducted in the United States on this topic. When this dissertation is published, I hope it will be a catalyst for future researchers who wish to make a difference in teaching educators about their students with dyslexia.

Conceptual Framework

The fundamental intervention with the strongest causal model in improving phonological abilities and reading development is the Orton-Gillingham methodology, which served as the conceptual framework for this study (see Ring et al., 2017). Children

with dyslexia have a phonological deficit that negatively affects their ability to decode and spell in English (Boas, 2020). Students with dyslexia have difficulty deciphering alphabetic code, which leads to word decoding deficits and hinders the development of literacy skills (Schlesinger & Gray, 2017). Multisensory reading interventions, such as the Orton-Gillingham approach that utilizes systematic phonics, have addressed the core phonological deficits found in students with dyslexia (Schlesinger & Gray, 2017).

Paivio's DCT is a scientifically sound, functional framework for studying cognitive psychology (Hartland et al., 2008). Paivio proposed that both verbal and nonverbal importance signify mental representations (Hartland et al., 2008). In the DCT, Clark and Paivio (1991) suggested two cognitive systems: representation and processing of nonverbal objects and the other specializing in language. While these two systems are separate, the interaction between the two parts results in the dual coding of information. In the DCT, equal weight is given to both verbal and nonverbal processing and has accounted for significant cognitive abilities, such as spatial skills, problem solving, symbolic function, dual language, and intelligence.

According to Paivio (1986), dual coding is the verbal and nonverbal systems and their representation of events. Verbal and nonverbal systems connect words to form a mental image, whether that of an object or the ability to read the word and apply a context. The verbal system units represented in words are called logogens, and the nonverbal system units are called imagens (Hartland et al., 2008). Clark and Paivio (1991) referred to logogens as verbal entities, either spoken or written, and explained that they are organized in terms of associations to help understand the word. Imagens refer to

mental images and nonverbal entities and are organized in the part-to-whole representation of words. Logogens, written or spoken language, will be stored and processed verbally, but imagens will be used to connect visually to form words (Clark & Paivio, 1991).

Orton-Gillingham methodology is an example of a way of strengthening existing representations and connections in the brain to activate contexts and concepts. An example of DCT generates when imagery activates mental images (Clark & Paivio, 1991). This imagery produces interpretations that lead to reading words, and the words turn into sentences and passages. The imagens, or mental images, combined with the logogens, the verbal entities, organize the associations in a part-to-whole relationship (Clark & Paivio, 1991).

According to Schlesinger and Gray (2017), substantial research and evidence have concluded that children with dyslexia have a primary, phonologically based deficit making it difficult to decode. This deficit negatively impacts children's ability to read and spell because it interferes with acquiring letter knowledge and deciphering alphabetic code. These struggles lead to decoding problems and severe impairments in reading, writing, and spelling.

Orton-Gillingham, a phonics-based methodology, is a systematic and explicit approach to reading instruction found particularly successful in students with dyslexia. Boas (2020) stated that even when students do not struggle with dyslexia, Orton-Gillingham is an effective way to teach all children to read. When teachers lament that they do not have time to teach students with dyslexia differently, they need to understand

that all students in their class can learn from this methodology. Systematic phonics instruction, such as Orton-Gillingham, has been proven to successfully help educators teach students with dyslexia the essential phonics elements, letter-sound correspondence, and spelling patterns as the foundation of reading skills.

Orton-Gillingham matches the concepts in DCT because the children use multiple senses to learn the essential concepts of reading (Reid, 2016). With the internal forms of nonverbal mental representation used in memory combined with the verbal system for coding linguistical information, a student engages the visual, auditory, and tactile sensory modalities to enhance learning (Shaywitz & Shaywitz, 2020). Experiments and research within the DCT framework of multimodal instruction show that multisensory reading instruction's theoretical explanation and pedagogical benefits lead to reading success among students with dyslexia (Schlesinger & Gray, 2017).

Clark and Paivio (1991) reported that DCT is grounded in Orton-Gillingham methods because these methods are used to activate the brain's processes that help students with dyslexia learn to read. Three types of processing are identified in DCT. First, representational processing involves the direct activation of verbal and nonverbal representations. Within Orton-Gillingham, this occurs when the students use multisensory modalities to learn the English language sounds. Second, referential processing activates the verbal and nonverbal systems and how they work together to make words or pictures. The explicit and systematic method in which sounds are introduced in Orton-Gillingham helps the students with dyslexia become successful readers because the words logically build upon one another. Third, associative processing involves the ability to recall

information from related connections. According to Shaywitz and Shaywitz (2020), Orton-Gillingham helps students with dyslexia use individual sounds to build syllables and syllables to create longer words. The words turn into phrases, which turn into paragraphs, which turn into short stories. Eventually, the students, who once had difficulty reading tiny words, can read longer stories and novels.

Literature Review Related to Key Concepts and Variable

Identification of Dyslexia

Students with dyslexia, despite average-to-above average intellectual abilities, have difficulty with decoding, fluency, and spelling, which impacts comprehension due to a lack of automaticity (Shaywitz & Shaywitz, 2020). People with dyslexia have deficits in phonological awareness, phonological memory, and/or rapid naming (Miller, 2019). A student with any of these deficits, beyond the initial stage of reading instruction, in kindergarten or first grade, despite years of solid reading instruction and/or intervention, shows hallmark signs of dyslexia (Shaywitz & Shaywitz, 2020). A student with these deficits needs reading instruction that is structured, systematic, and explicitly points out connections between spoken and written language, including letter/sound correspondences and blending skills (Shaywitz & Shaywitz, 2020).

One assessment testers use to identify dyslexia is the Comprehensive Test of Phonological Processing-2 (CTOPP-2). According to Wagner et al. (2013), educators use the CTOPP-2 to assess the processing components of phonological awareness, phonological memory, and rapid naming. Phonological awareness refers to the recognition and accessibility to oral language's phonological structure, including

identification, manipulation, and sensitivity to different phonological segments. Students with dyslexia that score low in this area have difficulty with phonemic awareness, rhyming, blending, and segmenting words. Wagner et al. also stated the next component of the CTOPP-2, phonological memory, refers to the ability to code information phonologically for storage in short-term memory, otherwise known as working memory. Students who score below average in phonological memory struggle with decoding, auditory memory, auditory discrimination, and memorization of arbitrary facts. These random facts include sight words, math facts, history dates, names, and math formulas. The third component of the CTOPP-2, rapid symbolic naming, involves the efficient retrieval of phonological information from long-term or permanent memory for quick and repeated execution in a sequence of operations. Students with dyslexia that struggle with rapid symbolic naming have difficulty decoding multisyllabic words, poor memory, and extremely poor fluency. Wagner et al. further stated that students only need deficits in one of these composites to present dyslexia symptoms. The phonological processing deficit is prominent in 80% to 90% of students with dyslexia (Shaywitz & Shaywitz, 2020).

Dyslexia is a hereditary condition characterized by difficulty decoding, manipulating, and understanding written language (Miciak & Fletcher, 2020). Indicators in the preschool years include delayed speech, mixing up sounds and syllables, confusion of left versus right, trouble memorizing the alphabet, and difficulty learning to rhyme (Rae, 2018). Warning signs in the elementary years include all of the preschool signs, plus dysgraphia, illegible handwriting, letter and number reversals continuing past first grade, difficulty spelling and telling time, trouble with rote memorization, and difficulty

finding the correct word while speaking (Rae, 2018). In addition, beginning in early elementary and continuing through adulthood, people with dyslexia exhibit slow, choppy, inaccurate reading, which includes guessing words based on shape or context; ignoring suffixes; not recognizing the same word in subsequent sentences or pages; extreme difficulty learning sight words; and consistently misreads prepositions, such as at, to, for, and of (Shaywitz & Shaywitz, 2020). In high school through adulthood, people with dyslexia have the same warning signs as elementary students plus extremely poor written expression in comparison to oral expression, difficulty mastering a foreign language, difficulty reading printed music, poor grades in many classes, anxiety, depression, low self-esteem, and potential for behavioral issues due to feeling like a failure in academics (Shaywitz & Shaywitz, 2020). Additionally, middle school, high school, and college students with dyslexia have difficulty copying off the board during lectures; copying items, such as math problems from a book; difficulty writing down notes as the instructor is speaking; and difficulty completing tests in a timely manner due to slow, below-grade level reading (Rae, 2018). The student with classic dyslexia symptoms is average to above-average intellectual ability but struggles with reading, writing, and spelling, even after years of quality phonics and reading instruction (Shaywitz & Shaywitz, 2020).

In addition to the warning signs of dyslexia, these students also have many strengths. Students with dyslexia can often think outside the box; understand concepts in 3D; have exceptional empathy and compassion; and are creative and innovative with strengths in art, science, construction, athletics, and entrepreneurial skills (Rae, 2018). Shaywitz and Shaywitz (2020) concluded that people with dyslexia have a keen ability to

figure out complex puzzles or concepts, have a large verbal vocabulary to coincide with their above-average expressive and receptive language, and have excellent listening and oral comprehension skills. People with dyslexia best learn through hands-on experiences rather than rote memorization, have superb higher level thinking skills, and have an imagination that allows their creative gifts to flourish (Shaywitz & Shaywitz, 2020).

Implications of Dyslexia on Struggling Readers

The implications of failing to identify struggling readers with dyslexia may cause them to go their entire lives without understanding why they struggle, which can cause powerful academic and emotional difficulties (Reid, 2016). Dyslexia is marked by weakness in orthographic awareness, decoding, encoding, and spelling (Mills, 2018). Orthographic awareness refers to the knowledge of the writing system and the visual aspects of reading, spelling, grammar, and patterns of words (Mills, 2018).

The common reading errors among people with dyslexia include guessing based on shape, seeing the same letters in a different order, b/d/p/q confusions, omitting or adding letters, and guessing words based on context (Sandman-Hurley, 2019). If a student is continually making these errors, fluency is affected. A solid foundation in decoding and encoding skills is necessary to become a fluent reader (Holahan et al., 2018). Without fluency, the reader struggles with comprehension, despite their strong oral and listening vocabulary (Holahan et al., 2018). These fluency issues will affect every aspect of the student's educational journey (Sutter et al., 2019). Sometimes students with dyslexia can be misdiagnosed as having a comprehension issue when the problem is decoding, fluency, and word attack skills (Boas, 2020).

Students with dyslexia also struggle with spelling (Shaywitz & Shaywitz, 2020). Holahan et al. (2018) stated poor spelling affects the quality of a student's writing. Accurate spelling requires solid phonological processing and phonics skills, but people with dyslexia struggle in both areas. Poor spelling cannot correct itself by using a computer to generate essays or reports; however, students with dyslexia choose the incorrect word from a list of words in spell check (Boas, 2020). Shaywitz and Shaywitz (2020) determined that weak spellers will memorize for a spelling test but will not remember correct spelling later or in written work. Spelling problems will continue unless the student receives explicit and systematic instruction.

Grogan (2021) indicated the difficulty with dyslexia in the educational system is that educators focus on communication, assignments, and assessments centered around reading and writing, but the most significant weaknesses of students with dyslexia include reading and writing. Assignments and assessments are often paper and pencil tasks rather than evaluations that focus on creativity, art, technology, visual, or verbal skills, which are strengths for students with dyslexia. When students struggle with spelling or fluency, it takes them longer to process their reading and writing (Grogan, 2021). In addition, students might limit their vocabulary to words they can write rather than longer, more complex words they would like to use (Holahan et al., 2018).

Undiagnosed dyslexia can lead students to develop conditions such as anxiety or depression. Comorbidity of anxiety and depression in students with dyslexia is significantly higher than students without a reading disability (Hendren et al., 2018). Researchers have proposed that anxiety directly results from these students' school failure

(Hendren et al., 2018). The low self-esteem associated with school failure adds a risk of depression among students with dyslexia (Miller, 2019). The general anxiety and depression are directly linked to the poor school experience and the feelings of helplessness to improve their academic skills (Miller, 2019). These emotional and psychological risks add to the importance of training teachers on how to teach students with dyslexia. These students are bright, intelligent students who need a different learning approach to reading (Boas, 2020). Duff et al. (2016) discussed that approximately 40% of United States elementary-age students are considered nonfluent readers. According to the National Assessment of Educational Progress, 65% of fourth-graders and 64% of eighth-graders scored at or below the basic reading achievement level. Furthermore, school psychologists received more referrals for students with reading concerns than any other academic area, and of the students identified with learning disabilities, 80% had a deficit in reading (Duff et al., 2016).

Research-Based, Multisensory Interventions

Research-based, multisensory programs, such as Orton-Gillingham, follow specific principles crucial to teaching students with dyslexia (Ring et al., 2017). It is essential to the reading and writing growth of students with dyslexia to provide an intervention that focuses on reading and spelling (Sandman-Hurley, 2019). These components improve decoding, word attack, and spelling, enhancing overall fluency (Sandman-Hurley, 2019). As fluency improves, comprehension also improves, contributing to progress in all academic areas (Ring et al., 2017). The difference in Orton-Gillingham and other reading interventions stems from the incremental and cumulative,

explicit, and extensive instruction in the six areas of literacy (Duff et al., 2016). In addition, the programs focus on decoding, encoding, word analysis, vocabulary development, comprehension, and metacognition (Duff et al., 2016). Students do not proceed to the next step in the program until mastery occurs at the current level. Orton-Gillingham is also unique because it involves sound tiles; tapping out sounds and syllables; marking syllables; and fingerspelling as multisensory techniques (Sayeski et al., 2018). The texts presented in the intervention are controlled, meaning only the sounds and sight words mastered are used in the materials (Duff et al., 2016). The sounds are taught in a logical sequence to help students read, spell, and comprehend words beginning with a simple consonant-vowel-consonant pattern to words with five or six syllables (Sayeski et al., 2018).

Dyslexia remediation happens with a multisensory, structured approach to literacy (IDA, 2017). These reading interventions are systematic and explicit instruction, helping students understand how sounds and letters are related and how they act in words (Bautista, 2019). Students also learn how to attack a word and break it into smaller pieces using visual, auditory, tactile, and kinesthetic strategies (Bautista, 2019).

Extensive research shows most students, regardless of their disability level, learn to read with systematic and explicit reading instruction (Berrett, 2018). Duff et al. (2016) explain that systematic instruction refers to scaffolding the six essential components of literacy, which include: (a) phonemic awareness; (b) phonics; (c) fluency; (d) vocabulary; (e) comprehension; and (f) writing. Explicit instruction includes frequent student responses, immediate teacher feedback, and careful student monitoring.

Lack of Teacher Training Using Orton-Gillingham Methodology

Yurdakal and Kirmizi (2015) conducted a study regarding the knowledge of dyslexia of third and fourth-grade teacher candidates. The study results concluded the candidates had not taken courses with dyslexia training and had not attended any professional development related to dyslexia. The researchers published that the teachers had limited knowledge of essential characteristics of dyslexia but did not have enough experience on how to analyze, remediate, or accommodate these students. The teachers also stated that the students with dyslexia fall behind their peers, but the teachers lack experience closing the gap for this population of students. In addition to the academic gap, the teachers noticed that the students with dyslexia also struggled with self-confidence, making them introverted and isolated (Yurdakal & Kirmizi, 2015).

Washburn et al. (2017) discovered that the first sign of reading difficulty occurs in kindergarten through third grade. Teachers must have an accurate and researched-based understanding of dyslexia to address learning concerns appropriately. The researchers conducted three studies with 271 novice teachers with 0-5 years of teaching experience, inquiring about their dyslexia knowledge. Of the teachers surveyed, 97% understood that the home environment does not cause dyslexia, and 96 % realized that intelligence is separate from dyslexia. However, 69% held misconceptions about the diagnosis of dyslexia, and 56% had misconceptions about dyslexia. Additionally, 88% felt they were not prepared to work with students with dyslexia (Washburn et al., 2017).

A problem in schools is that students diagnosed with reading disabilities, such as dyslexia, do not show academic growth in reading, despite years of special education

interventions (McMahan et al., 2019). Some students receive intervention most of their academic lives, yet 74% of students who read below grade level in third grade remain below grade level in ninth grade (IDA, 2017). The problem may be that teachers lack the training to properly understand symptoms, solutions, interventions, and accommodations of students with dyslexia.

Characteristics of Orton-Gillingham

Orton-Gillingham is one program that helps close deficits in all areas of reading by adhering to principles (Berrett, 2018). A quality Orton-Gillingham intervention must be multisensory, sequential, cumulative, individualized, explicit instruction (Ring et al., 2017). Students with dyslexia successfully learn to read and spell by seeing, hearing, saying, and writing the sounds and words (Mills, 2018). The instruction is taught in a logical and sequential order helping students understand simple and complex words (Mills, 2018). Each skill, rule of language, and strategy for reading and spelling words are taught using these principles and assumes a student has deficits in the most foundational written language skills (Ring et al., 2017).

Grogan (2021) stated that even an older elementary, middle, or high school child can struggle with phonemic awareness and phonics after years of phonics or reading intervention. Struggling readers must become strong in these skills before they succeed in reading and literacy. A quality intervention must help a student in all areas.

The disconnect between what teachers understand about dyslexia and the delivery of appropriate interventions causes the students with dyslexia to have difficulties with language-based activities (IDA, 2017). Researchers have observed that elementary

teachers do not see themselves as proficient in knowing the characteristics, diagnosis, interventions, and accommodations for students with dyslexia (Worthy et al., 2018). When teachers have a limited understanding of dyslexia interventions based on best practices and theories, such as the Orton-Gillingham methodology, the students do not receive the interventions and accommodations to succeed due to a gap in effective methods (Berrett, 2018). When teachers are open to learning about the identification process for students with dyslexia, they can implement appropriate interventions (Berrett, 2018).

Research Benefits of Orton-Gillingham

Duff et al. (2016) cited several studies in which the efficacy of Orton-Gillingham has proven successful when the programs are taught with fidelity. The first study included 220 students in Grades 3 through 12 who were reading at least 2 years below grade level and had not succeeded in any other reading programs. These students received direct instruction in special education pull-out programs. The average reading growth was 4.6 grade levels in word attack, 1.6 grade levels in comprehension, and 1.9 grade levels in total reading on the AIMSWeb R-MAZE. These results are promising because this student made little to no gain in other programs. A second study cited 375 students' progress in Grades 3 through 8 collected over a 2 year time. The results indicated that students in all grades demonstrated significant growth in decoding, word attack, comprehension, and total reading on the AIMSWeb R-MAZE (Duff et al., 2016).

In addition to looking at previous studies, Duff et al. (2016) conducted a one-year study to contribute to the literature regarding Orton-Gillingham interventions, specifically

the Wilson Reading System, for a student with disabilities. The program was initially developed specifically for students with dyslexia but has since expanded to other students with other reading disabilities. This study included 51 students (53% male, 47% female) from six schools (five elementary, one middle school), and most had either a learning disability or language impairment (Duff et al., 2016). After one year of the Orton-Gillingham intervention, students made significant improvements both in fluency and comprehension. The normative growth rate in oral reading fluency is 0.12 words per week in an academic year. The students improved by 0.17 words per week on the AIMSweb R-CBM, making improvements higher than national standards (Duff et al., 2016).

Summary

The gap in the literature in which this study filled was to bring awareness and knowledge about causes, symptoms, and interventions for students with dyslexia to educators and administrators. This published study will be given to the participants and their administrators, hopefully using the information to make a change in schools. In addition, this dissertation could be used to fill the gap in the literature related to Orton-Gillingham practices.

The most significant stumbling block preventing students with dyslexia from reaching their full potential, and following their strengths, is the widespread ignorance about dyslexia. Early diagnosis and intervention can alleviate reading, writing, and spelling frustration in students with dyslexia. Students are not often recommended for special education services until they are two or three grade levels behind their peers in

reading. Educators often realize a student is not improving with classroom teaching and reading interventions but do not know how to help the student. Unfortunately, without the training to provide the needed Orton-Gillingham interventions, special education will not be conducive to meeting a student's needs with dyslexia. School personnel have difficulty understanding the science and neurological origin of dyslexia or the implications dyslexia causes in the classroom. To continue to bring dyslexia awareness to schools, teachers need better training in dyslexia and Orton-Gillingham interventions. Chapter 3 describes the research method for this study. Research design, rationale, and methodology are outlined. The chapter also includes a description of the participant selection, locations, instrumentation, and data analysis plan. Finally, ethical procedures are clearly outlined in Chapter 3.

Chapter 3: Research Method

The purpose of this basic qualitative study was to examine how and if third-grade general education content area teachers were providing interventions and instructions to meet the needs of students with dyslexia. The results of this study could be used to provide recommendations for closing the gaps in knowledge and practice regarding teaching students with dyslexia. The results could also improve preservice and in-service training for delivering interventions and instruction to students with dyslexia by all teachers.

Chapter 1 of this study included the background, problem, purpose, research questions, and an overview of this research study. In Chapter 2, the extant research about dyslexia was reviewed, including research that showed how the Orton-Gillingham approach is particularly effective for students with dyslexia. In Chapter 3, I discuss the setting, research design, rationale, methodology, and procedures of this research study.

Research Design and Rationale

Creswell and Creswell (2018) explained that basic qualitative research is a research approach to explore and understand the meaning individuals or groups give to a social or human problem. The research process involves emerging questions, small sample sizes, data collected in participants' settings, and the researcher's interpretation. The final report is flexible in structure with importance placed on individual meaning and the reporting of a complex situation (Creswell & Creswell, 2018).

The role of qualitative research in special education research is to discover meaning, investigate processes, and gain insight by having an in-depth understanding of

an individual, group, or situation (Creswell & Creswell, 2018). Special educators use qualitative research data to attempt to take action and make a positive change in their academic environments. Several factors of qualitative research make conditions ideal for its use among special education researchers. First, qualitative research is flexible because it occurs in the participants' natural environment (Yin, 2017). The participants must feel safe and secure while taking part in the study. Second, qualitative researchers use descriptive data rather than numerical data to understand findings to generalize to other scenarios (Yin, 2017). The researcher can take an interactive role in getting to know the participants and understanding their environmental contexts (Creswell & Creswell, 2018). Researchers are as interested in the process as in the outcomes.

Regarding special education, Yin (2017) described qualitative research as the ability to convey information using descriptions to better understand people with disabilities and those who interact with them. Special education researchers are experts in their fields, and this type of research allows them to conduct studies in an area in which they are passionate. Qualitative studies often serve as a basis for additional research by exploring, explaining, and describing experiences from research participants' perspectives.

Some limitations to qualitative research are similar to those of any study, such as the implication that the study lacks scientific rigor or credibility and is often not truthful. Qualitative researchers adhere to well-established procedures to ensure their research findings (Yin, 2017). However, specific limitations to qualitative data do exist. First, due to the nonrandomization of sampling, participants are limited and selective, making it

difficult to generalize results to the greater population (Creswell & Creswell, 2018).

Second, the research instruments produce a high volume of data that could be difficult to analyze and interpret. Reporting qualitative data can be more challenging to explain for readers to understand. Results reported in charts and numbers, such as in quantitative research, are often easier to interpret. Third, the researcher's presence during data collection can affect the participants' behaviors and responses. The researcher's personal biases can also cause a limited perspective on collecting and analyzing data (Yin, 2017).

One rationale for using the basic qualitative research design for this study was the ethical practices in relation to the Orton-Gillingham intervention. It would have been unethical to offer Orton-Gillingham methodology to a control group of students but not to the remaining groups. Additionally, completing this dissertation did not adhere to the time commitment of studying participants for several years to document the benefits of receiving a specific intervention. Second, the research could contribute to a discussion on if a gap in knowledge leads to a gap in practice when teaching students with dyslexia. This study relied on rich conversation with and a deeper understanding of fewer participants. Third, a basic qualitative study design allowed for the transcription of the participants' interview responses. This study did not require the collection or use of quantitative data.

Role of the Researcher

Creswell and Creswell (2018) reported that qualitative researchers strive to create a respectful and close relationship with participants. The researcher is involved in the participants' day-to-day activities, either by observations or interviews, allowing the

researcher to gain an in-depth understanding of participants. Qualitative researchers involve participants in the decision-making process regarding data selection, organization of data, and writing the final report. Qualitative researchers analyze and interpret data describing the study's social, cultural, and historical context (Yin, 2017).

My role in this study was the researcher employing an unbiased approach, despite my passion for teaching students with dyslexia. I did not assume that the students were not receiving appropriate interventions or accommodations within the third-grade classroom.

Methodology

I used the qualitative method to answer the research questions regarding experiences or the environment. Guest et al. (2012) described the qualitative researcher's relationship with participants as less formal, allowing the participants to respond more elaborately and with greater detail. The specific design used in this study was a basic qualitative study with multiple participants at multiple sites. A basic qualitative study focuses on answering "how" and "why" questions, and as the researcher, I did not use specific interventions with those involved in the study. The boundaries of the study were not clear, and the data revealed connections between the experiences, perspectives, and context. The involvement of multiple participants allowed me to explore the differences between settings and participants to replicate or find discrepancies in the findings. The research questions aligned with a basic qualitative study design. Across the multiple school sites, I was able to answer how the third-grade students were being identified with dyslexia, if Orton-Gillingham interventions were implemented, and what strategies were

being implemented within the classroom to help students with dyslexia succeed. The following research questions guided this study:

RQ1: How are third-grade students with dyslexia assessed and identified?

RQ2: How are third-grade content area teachers providing instruction and interventions based on the Orton-Gillingham approach to students with dyslexia to help them succeed in the classroom?

RQ3: How are third-grade content area teachers providing instruction and interventions to students with dyslexia to help them succeed in the classroom other than with the Orton-Gillingham approach?

Procedures for Recruitment, Participation, and Data Collection

Setting

The setting for this research study was three private and five public elementary schools in Illinois, Georgia, and North Carolina. Due to the COVID-19 pandemic occurring at the time of this study, I could not go inside the school buildings. All the teacher interviews occurred via Zoom.

Participant Selection

Purposeful sampling involves choosing a small group of participants representing a population that will help answer the research questions (see Creswell & Creswell, 2018). Homogeneous sampling occurred in this research study because the participants had similar experiences and attributes (see Creswell & Creswell, 2018). I did not contact third-grade teachers via email to participate in the study until after receiving Walden University Institutional Review Board (IRB) approval to conduct the study.

I conducted one-on-one, semistructured interviews with nine third-grade teachers via Zoom to determine how they met the needs of students with dyslexia. The teachers were from eight different private and public elementary school settings in Illinois, Georgia, and North Carolina. The interview data were analyzed to determine if third-grade teachers understand how to identify if a student has dyslexia and how to teach and accommodate students with dyslexia.

Teachers from private and public schools were invited to participate in the study. In a letter to school principals, I explained the basis of the study on dyslexia and interventions that were appropriate for students with dyslexia and asked the principals to contact the third-grade teachers in their buildings to see if they were willing to participate. The teachers that were willing to participate contacted me on their own after receiving the information from their principal. After the teacher contacted me, I sent them an invitation and consent form further outlining the study. Once the teacher agreed to join the study, they were offered suggested days and times for their interview via Zoom. Before starting the interview and collecting data, the participant signed the informed consent form. All participants volunteered on their own accord to take part in the study. All participants were active and certified teachers who were teaching third grade.

Instrumentation

Nine third-grade teachers participated in one-on-one, semistructured interviews via Zoom for this study. The data collection involved interviewing the teachers about their background regarding dyslexia training and understanding using the interview protocol (see Appendix). In the interviews, I asked questions regarding their education,

training, professional development, and classroom experiences related to students with dyslexia. The goal of the interviews was to answer the research questions examining if the teachers had any students diagnosed with dyslexia and how they were providing instruction to students with dyslexia. The interviews were video and audio recorded, with approval from the participants, and lasted approximately 60 minutes. As stated above, due to the COVID-19 pandemic, the interviews occurred via Zoom.

Data Analysis Plan

Yin (2017) described qualitative research as a standard in educational studies because it involves conducting research in naturalistic settings to give participants a voice for their feelings and perceptions. Researchers acquire a massive amount of descriptive data in qualitative studies. Data analysis in qualitative research involves preparing and organizing data, reviewing and exploring data, coding data into categories, constructing descriptions, building themes, and reporting and interpreting data (Yin, 2017).

In this basic qualitative study, I related and justified theories to explain the choice of methodology, built upon the literature review, and gave a new perspective on the problem within the context of the third-grade classrooms. During the interviewing process, I learned about the participant's background, experience, and knowledge regarding students with dyslexia.

Saldaña (2021) stated that coding involves the researcher examining the qualitative data gathered during interviews or observations and translating the words, phrases, or sentences into codes or labels. The codes for this study included setting, situations, perceptions, feelings, activities, strategies, relationships, and social codes.

These codes led to categories and then to the themes. The physical organization of the data was imperative for understanding the coding process.

Data analysis involved coding the plethora of descriptive data collected during the teacher interviews. Saldaña (2021) suggested using initial, axial, and selective coding. Initial coding involves segmenting the data into similar groupings or categories that emerge within the various participants' different contexts. Next, axial coding involves taking the categories discovered in the initial coding process to identify and group data into themes. Finally, selective coding consists of organizing the themes to articulate the understanding of the problem or theory within the study.

Saldaña (2021) described the constant comparative method as the process of coding and categorizing qualitative data that leads to answering the questions and problems of the study. The constant comparative method allowed me to have a fluid move from data collection to analysis. I used the aforementioned forms of coding when analyzing data from the nine interviews.

I transcribed all qualitative data into a Microsoft Word document and uploaded it into the NVivo software program, which is designed to support researchers in analyzing descriptive data from interviews, surveys, and observations. NVivo is software that supports qualitative and mixed methods research that is designed to help organize, analyze, and find insights in unstructured or qualitative data (Jackson & Bazeley, 2019). Once the descriptive data were uploaded, NVivo helped me identify patterns and percentages of keywords or phrases used throughout the data. NVivo also gave me a centralized location to work more efficiently by saving time; organizing, storing, and

retrieving data; uncovering connections missed by analyzing manually; and rigorously backing up findings with evidence (see Jackson & Bazeley, 2019).

Creswell and Creswell (2018) described qualitative interpretation as helping the researcher understand the more significant meanings of the perspectives. Creswell and Poth (2018) explained that social constructivism is the paradigm for the foundation of basic qualitative inquiry. Social constructivism is when researchers seek a deeper understanding of the world they live and work in. Open-ended questioning allows the researcher to listen carefully to what their participants say or do in their settings. The qualitative researcher must understand that their personal views and experiences shape their data interpretation. The researcher uses the data from the interviews to construct the meaning of the research questions and looks for complexity in the importance of the participants' views of the experience (Creswell & Poth, 2018).

Creswell and Poth (2018) explained that qualitative researchers utilize basic qualitative research to describe the similarities or differences between participants. The researcher collects data from each participant and composites the individual experiences to answer the research questions. The data collection involves interviewing subjects with the same experiences. The descriptive study incorporates the "how," "what," and "why" of the participants' experiences (Creswell & Poth, 2018).

This study's data analysis took place after I had completed all personal interviews with the third-grade teachers. The purpose of the data collection process was to answer the research questions. The perspective of this study was related to third-grade teachers' instruction of students with dyslexia, and the context of the experience was the third-

grade classroom.

Trustworthiness

In a basic qualitative study, the researcher gathers qualitative data to explore the experiences and perspectives and uses data to test relationships in the qualitative data (Creswell & Creswell, 2018). The justification for this design was to research and analyze a problem by utilizing a small sample size to examine the perspectives and experiences of the participants (Yin, 2017). Also, this basic qualitative study is a bounded system. In a bounded system, the study has boundaries of time, place, activity, and a common denominator (Yin, 2017). The boundaries include the participants limited to third-grade teachers, and the common denominator is the teachers' understanding of dyslexia.

Creswell and Poth (2018) explained that several factors made the study trustworthy in a basic qualitative study. First, the emphasis on a single concept or idea. Second, the participants are heterogeneous in their experience, and the group size can vary from 3-15 participants. For this research study, the single idea was the nine third-grade teachers' knowledge on their instruction of students with dyslexia. Third, the data collection involved a systematic process in interviewing participants who had the same experience and used descriptive passages to culminate the data from the interview process. (Creswell & Poth, 2018). The purpose of qualitative research attempts to discover the event, object, concept, situation, or perspective that the participants attribute to their experiences (Creswell & Creswell, 2018). Qualitative researchers examine their own experiences, biases, and assumptions and attempt to show empathy by entering the world of their participants (Creswell & Creswell, 2018).

Evidence of Quality

Creswell and Creswell (2018) explained the first key element to the evidence of quality is the researcher gives readers a sense of the participants' lives through the narrative report. Second, the researcher threads together the stories in chronological order and embeds the critical events in the narrative platform. Third, the researcher will report the essential themes from the qualitative data. Finally, the researcher invites the participants to look at the data collected and involves the participants in shaping the final story told in the narrative research report.

Yin (2017) described the four criteria of credibility, dependability, transferability, and catalytic authenticity to evaluate qualitative research studies. Credibility and control of researcher bias involve the participants' perceptions of the setting or events and how they match the researcher's findings. First, the researcher spends substantial time devoted to data collection. It is essential the researchers develop meaningful interactions with participants to enhance credibility. Second, credibility involves the investigation that the researcher's interpretations of the data are valid. All qualitative researchers have multiple data sources to ensure that the studied problem is represented correctly (Creswell & Creswell, 2018).

Dependability involves tracking the procedures and processes during collecting and interpreting data (Yin, 2017). The researcher provides a detailed description of data collection and analysis procedures, including audio or video interviews (Yin, 2017). Transferability in qualitative research refers to the degree of similarity between research sites in the eyes of the reader (Creswell & Creswell, 2018). Factors in transferability

include detailed descriptions in context and background of setting, participants, interactions, cultures, and policies (Yin, 2017). Finally, catalytic authenticity refers to the qualitative researcher collaborating with the participants to identify areas needed for change, plan how to make a change, and stimulate the participants to take an active role in changes (Creswell & Creswell, 2018).

Ethical Procedures

The protection of human subjects was strictly adhered to by following the principles of the beneficence of treatment, which maximizes good outcomes and minimizes risk, respect for participants by protecting the autonomy and ensuring well-informed, voluntary participation, and justice, which was the fair distribution of risk and benefits (Creswell & Creswell, 2018). Strict administration protocol ensured data collection met ethical and standardized procedures. Once Walden University's IRB approved the study (Approval No. 03-10-21-0022227), I began to seek participants for the study. There was no data collected prior to IRB approval. The participants were explained the purpose of the study, expectations of the participants, including the amount of required time spent to be part of the study, explanation of any psychological or social risks, and the insurance that participation in the study was completely confidential and voluntary, and the participants could withdraw at any time.

Summary

The purpose of this basic qualitative study was to examine how and if third-grade general education content area teachers were providing interventions and instructions to meet the needs of third-grade students with dyslexia. This study was conducted via Zoom

with third-grade teachers in Illinois, Georgia, and North Carolina. The procedures for identifying and selecting participants and collecting and analyzing data were included in this chapter. In addition, methodology, ethical considerations, outlining the procedures of protecting human subjects, and quality evidence were summarized in Chapter 3. The results of the study are published in Chapter 4.

Chapter 4: Results

The purpose of this basic qualitative study was to examine how and if third-grade general education content area teachers were providing interventions and instructions to meet the needs of students with dyslexia. The results of this study could be used to provide recommendations for closing the gaps in knowledge and practice regarding teaching students with dyslexia. The results could also improve preservice and in-service training for delivering interventions and instruction to students with dyslexia.

In Chapter 4, I discuss the setting where the teacher interviews took place as well as the data collection and analysis processes. The results of the study are provided in relation to the three research questions. Evidence of trustworthiness is also presented in this chapter. Chapter 5 will contain discussion of the findings, conclusions, and recommendations of this study.

Setting

The interviews for this basic qualitative study occurred after school hours and outside of teacher contract hours. Due to the COVID-19 pandemic, all interviews occurred via Zoom. The teachers who participated all felt the fatigue and stress of teaching during the pandemic, but each willingly participated in the interview without any coercion. The interviews took place at a time that was best for each teacher and occurred at home, during school breaks, in the classroom, on the weekend, or weekdays.

Each of the nine participants taught third grade and reached out to me based on the initial email to building/district administrators. The participants received an email from their building principal with my contact information and details of the study. All

teachers hold an elementary teacher certification for their state, and one was also a certified reading specialist. Eight of the teachers were general education teachers, and one was a special education teacher in a self-contained, third-grade classroom. Four teachers taught at private schools, and five of the participants taught in public schools. Each teacher obtained their degrees through an accredited university teacher education program. The range of teaching experience with the participants was between 2 and 23 years. All the participants were female.

Data Collection

The data collection for this doctoral study involved one-on-one, semistructured Zoom interviews with each participant. The interviews lasted between 25 and 75 minutes, using the preapproved interview questions. Both the participants and I asked follow-up questions as needed for clarification purposes. Each interview was recorded and stored on my personal computer, which I am the only one with the password for. Each interview was transcribed using the Otter.ai program, and the transcripts were stored on the same personal computer. The data collection process occurred as planned and outlined in Chapter 3. The only unusual circumstance, as mentioned above, was that the interviews had to happen via Zoom due to the COVID-19 pandemic because I was not permitted to go into school buildings due to the pandemic. Because I had to conduct the interviews via Zoom, I was not limited to my geographical location in Illinois, so the participants were drawn from Illinois, Georgia, and North Carolina.

Data Analysis

After all nine semistructured interviews were completed, the data analysis process

began. I carefully transcribed each interview after uploading it into the Otter.ai software. Once I had each interview transcribed, NVivo was used to search for words that the participant repeated within the first interview. After the NVivo process, I read through each of the transcripts again to double-check that I found all keywords. I kept a detailed list of these words, which served as the codes. I then proceeded to complete the same process for the remaining eight interviews. After there was a list of codes for each participant, I made a color-coded chart in a Word document to merge the interview data into the same codes by color. The colors allowed me to analyze the codes into categories. Finally, themes emerged from each category. The last step involved placing the themes under the related research question to connect and organize the data.

The findings from this basic qualitative study emerged from one-on-one, semistructured interviews with nine third-grade teachers from eight different elementary schools in Illinois, Georgia, and North Carolina. To start the interview, I asked each teacher the number of years she had been teaching and how long she had taught third grade. The purpose of each interview was to answer the following research questions:

RQ1: How are third-grade students with dyslexia assessed and identified in the research setting?

RQ2: How are third-grade content area teachers providing instruction and interventions based on the Orton-Gillingham approach to students with dyslexia to help them succeed in the classroom?

RQ 3: How are third-grade content area teachers providing instruction and interventions to students with dyslexia to help them succeed in the classroom other than with the Orton-Gillingham approach?

The goal was to understand the perspectives and experiences of the third-grade teachers in teaching students with dyslexia.

Data analysis occurred throughout the study. The data were coded alpha-numerically for each participant, with Teacher 1 as T1, Teacher 2 as T2, Teacher 3 as T3, and so on for all nine teachers. This ensured the confidentiality of each participant. In addition, I adhered to confidentiality by not mentioning the names of any school site. After analyzing the data from each interview, I understood the perspectives and experiences of the teachers in regard to teaching students with dyslexia. The participants' perspectives and experiences aligned with the purpose of this basic qualitative study. In addition, I was able to understand the areas in which the teachers needed additional support or knowledge.

As I was analyzing the interview data, some of the codes that emerged included teacher experience, lack of teacher training, no diagnosis of dyslexia, SLD, Orton-Gillingham, classroom interventions, dyslexia signs, Individualized Education Program (IEP), testing, professional development, university courses, desire to learn more, empathy for struggling learners, and social/emotional support of students. Table 1 shows the themes that emerged from the categories as they align with the three research questions.

Table 1*Themes for Research Questions*

Research Questions	Themes
RQ1: How are third-grade students with dyslexia assessed and identified in the research setting?	<ol style="list-style-type: none"> 1. Lack of training and understanding in identifying dyslexia 2. Lack of dyslexia training in teacher preparation coursework 3. Specific learning disability in comparison to dyslexia 4. Diagnosis of dyslexia
RQ2: How are third-grade content area teachers providing instruction and interventions based on the Orton-Gillingham approach to students with dyslexia to help them succeed in the classroom?	<ol style="list-style-type: none"> 5. Orton-Gillingham instruction and interventions
RQ 3:How are third-grade content area teachers providing	<ol style="list-style-type: none"> 6. Non-Orton-Gillingham instruction 7. Desire to help struggling learners

I asked the participants to review the transcript of their interview for accuracy.

Each teacher verified that no further comments or additions were needed for any interviews. In the next section, I explain the themes that emerged for each research question.

Themes

Theme 1: Lack of Training and Understanding in Identifying Dyslexia

When analyzing how students are identified and assessed for dyslexia, the first theme that emerged was the lack of training and understanding in identifying dyslexia. T1, T3, T4, T5, T6, T7, and T8 explained that they did not understand how to identify if students in their classroom had dyslexia. T1, T3, T4, T6, T7, and T8 admitted that they did not know or understand the signs and symptoms associated with students that had

dyslexia. T4 remarked,

It is very, very hard to get anyone to even say the word dyslexia. If we aren't even allowed to discuss the condition, how am I supposed to know how to identify these students? I wish we would just call it what it is.

It was evident in all nine interviews that the teachers were frustrated with the lack of professional development and training and desired to learn more about dyslexia. None of the public school teachers received any professional development training on dyslexia; however, all four of the private school teachers revealed that their administrators had provided some training regarding students with dyslexia. T5 explained, "I am thankful I at least have a little knowledge of Orton-Gillingham and dyslexia, but I still do not feel equipped in the classroom." The training described by these teachers included basic knowledge of dyslexia and a general overview of the Orton-Gillingham approach. However, the teachers felt they did not have enough training, resources, materials, or time to implement the strategies correctly.

Theme 2: Lack of Dyslexia Training in Teacher Preparation Coursework

Each teacher commented that they did not learn about dyslexia in their education classes at the university level. T1 discussed that she had never had dyslexia instruction included in university coursework or district professional development. Only one of the nine third-grade teachers said she briefly learned about dyslexia in one of her courses at the university level. T4 stated that in one class, her Exceptional Learning course, she did "not have any specific training. Just all the things you already hear about dyslexia, such as flipping their d's and b's, or they can't read numbers and are unable to spell."

Theme 3: Specific Learning Disability in Comparison to Dyslexia

The concept of SLD was a recurring theme among each public school participant. All five public school teachers had students with eligibility in SLD but not dyslexia. T6 explained, “I have five students with IEPs under the category of specific learning disability. Among other struggles, these students have difficulty with decoding, spelling, reading fluency, and memorization of math facts.” SLD is the special education eligibility for which students with dyslexia are eligible for special education services (Shaywitz & Shaywitz, 2020). All of the public school teachers were from Illinois, and the districts had not used the term dyslexia but instead used SLD. T3 commented,

As far as diagnosis with dyslexia, even if the signs and symptoms are present, it just isn't stated that way. We don't understand how to identify dyslexia, but from my limited knowledge of it, my SLD students have the same struggles.

Theme 4: Diagnosis of Dyslexia

The category of SLD students having similar traits as students with dyslexia led to the theme of diagnosis of dyslexia. The public school teachers understood that their SLD students in their classrooms had similar characteristics to students with dyslexia even though they were not diagnosed with dyslexia. Two of the four private school teachers reported having students diagnosed with dyslexia in their third-grade classroom. T8 commented, “When the results came back, the parents were glad to have found the answers to the struggles for their child. They knew it was going to be a long journey to get him the help he needed.” Students did not go through the IEP process in private schools unless they pursued testing in their public school system. The private school

teachers did not discuss any SLD students.

Theme 5: Orton-Gillingham Instruction and Interventions

When analyzing how third-grade teachers provide instruction and interventions using Orton-Gillingham, one theme that emerged through the analysis process was that all nine teachers wanted to learn more about the Orton-Gillingham methodology. When asked about Orton-Gillingham techniques in the classroom, T7 remarked, “I have heard of it, and I just think it has a good structure. I would love to learn more. Someday I would also love to be trained.” Each of the four private school teachers was familiar with Orton-Gillingham interventions. One private school teacher used an Orton-Gillingham program within her classroom, and the other three private school teachers used Orton-Gillingham techniques. Among the five public school teachers, the special education teacher used Orton-Gillingham techniques but not a complete curriculum.

Theme 6: Non-Orton-Gillingham Instruction

In analyzing how third-grade teachers help students succeed without using Orton-Gillingham, the five public school teachers revealed that students with SLD were given interventions outside the classroom and that Orton-Gillingham programs were not used. The category of the non-Orton-Gillingham interventions emerged from this theme. The interventions used in the public schools were Leveled Literacy Intervention and Corrective Reading. T6 explained, “We’re using Corrective Reading decoding right now in our district. Corrective Reading drills the materials, but I want them to know the reading and spelling rules because I have seen that help kids.” Throughout all nine interviews, other non-Orton-Gillingham programs and techniques mentioned included

Fountas and Pinnell Leveled Literacy, Words Their Way, Reading A-Z, and Heggerty.

Theme 7: Desire to Help Struggling Learners

The final theme that emerged through the analysis process was that all nine teachers wanted to help their struggling learners. The teachers had tried their best to work with the struggling students to bring them up to grade level in the academic areas. All nine teachers revealed that they met with their struggling students one-on-one or in extra small group time, and these sessions were in addition to their regularly scheduled reading group times. The teachers used tiles, whiteboards, modified lessons, and audio comprehension activities to help their SLD students and their students with dyslexia. In addition, T1, T4, T7, and T8 spent an extended amount of time expressing how they were worried about their struggling learners' social and emotional health. T7 commented,

I would say I think that feeling of being left behind they really understand. You can totally start to see where they lose their confidence in their education and then their abilities to do things, such as read and spell.

Results

Three research questions guided the analysis of the study. I organized the teachers' responses gathered during the interview process by research question. In addition, the data showed apparent differences between the answers among the public school teachers and the private school teachers in some instances. The data were separated to compare the public school teachers and the private school teachers when necessary.

Research Question 1

Public School Teachers

SLD. The five public school teachers commented that their students were not assessed or identified as having dyslexia. However, it was established that the students with similarities to dyslexia were labeled as having a SLD, with deficits in reading fluency, phonics, spelling, and math fluency. The everyday struggles among these students included reading at least two grade levels below third grade, poor word attack strategies, reading fluency, comprehension, and letter reversals. Three out of five public school teachers commented that their students with SLD also still spell phonetically and continue to write many numbers and letters backward, neither of which was developmentally appropriate for a student at the end of third grade. T4 said,

I have watched these SLD students receive interventions through the years, I have worked with them as best as I could, yet I see little or no growth from the beginning of the year to the end. This is very concerning to me.

Students identified with SLD are often students with dyslexia (Shaywitz & Shaywitz, 2020). SLD is defined, in part, as

a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. (Lindstrom, p. 191, 2019)

Although the regulations listed above include dyslexia, the list is not exhaustive (Lindstrom, 2019). According to the Learning Disabilities Association of America, 75-80% of students with SLD have reading difficulties consistent with characteristics of dyslexia (Lindstrom, 2019). In the case of the five public school teachers in this study, they did not know which students in their classrooms had dyslexia. Dyslexia was not a widespread diagnosis in public or private school settings. Each of the public school teachers in this study had students with eligibility in SLD, but none were diagnosed with dyslexia. This limitation occurred because different terminology was used within different settings to describe a reading problem or learning disability, such as dyslexia, reading disorder, or specific learning disability (Lindstrom, 2019). This was partly because students eligible under the Individuals with Disabilities Act (IDEA) to receive special education services must have a disability that falls under one of the 13 IDEA disability categories (Lindstrom, 2019). The confusion regarding terminology is coupled with confusion on how to identify, remediate, and accommodate students with learning disabilities (Lindstrom, 2019). Additional understanding of the IDEA law and the specific signs and symptoms of dyslexia could help school personnel understand the connection between dyslexia and the IDEA category of SLD (Lindstrom, 2019).

Assessment and Identification Process. Each public school teacher commented that the district school psychologists completed the evaluation and eligibility of SLD. T1 explained that the SLD eligibility "is completed through summative assessments that are part of the district evaluation process." Each of these teachers had students with IEPs in their classroom with eligibility in SLD with an impairment in reading. Some of the

students also had impairments in writing or math. Some SLD students began the school year with the SLD eligibility, and others completed the process during the school year. Each public school teacher commented that it takes about 2 years for the SLD students to receive eligibility to qualify for intervention through special education programming. Before the special education placement and issuance of the IEP, students go through the rigorous RTI process to determine academic weaknesses that qualify them for services. T4 commented, “After we do RTI, Response to Intervention, this determines the special ed route; some go to see a special education teacher, some go to a reading interventionist, and some receive small group instruction within the classroom.” Once it was determined through the RTI process that a student needed to be further evaluated, the school psychologist began the IEP process.

Discrepancy. There was a discrepancy in answering Research Question 1 because third-grade students were not diagnosed or assessed for dyslexia in the public school setting. However, students with the hallmark signs and symptoms of dyslexia were eligible for SLD. In addition, the public school teachers represented in this study did not know how to assess or identify students with dyslexia because the term dyslexia was not used in any of the public school research settings represented in this study.

Private School Teachers

Assessment. Two of the four private school teachers explained that they had students with dyslexia within their classrooms. Like the public school process, the private school teachers explained that getting students assessed and identified with dyslexia began with the teachers. When a teacher noticed that a student struggled with the third-

grade academics, they took notes and collected assignments with evidence of the struggle. The two private school teachers without students with dyslexia in their classroom were familiar with the process of having a student assessed for dyslexia.

All four private school teachers remarked that students that needed to be tested for dyslexia must be referred to a private child psychologist. The private schools represented in this research study did not have any onsite testing available. The referral process began with the teachers meeting with the principal to discuss the academic concerns regarding the struggling student. Next, the principal and teacher set up a conference with the parents. In that conference, it was recommended that the parents seek outside, professional testing for their child. Each teacher commented that the parents were given information on beginning the testing process. Parents also had the opportunity to seek their testing location based on insurance and financial parameters. T5 remarked, “Parents are usually receptive because, by this point, they know something is going on with their child. They are desperate for answers and advice on how to help their child.” Parents could also contact their local public school to obtain the referral process to have their child assessed through the public school system. One of the private schools had staff that could conduct a prescreening for dyslexia using the CTOPP-2 assessment. When the CTOPP-2 was given and the student scores below-average, it was recommended that students pursue further testing for dyslexia.

Identification Process. Some universal comments among the private school teachers regarding what led to a student suggested for testing were that the students were no longer improving at their own pace in reading, writing, or math. Second, the lack of

growth was causing a substantial academic gap among their peers. The struggling students were falling farther and farther behind their peers. T8 remarked,

These struggling students are well below their peers in things like decoding and spelling. But, they are excellent in comprehension, and their oral language is incredible. Their writing does not match the words coming out of their mouth.

You can tell the process to get things on paper is very difficult for them.

Academic struggles included spelling, reading fluency, decoding, phonics, math fluency, and handwriting. In addition, this population of students also struggled with memory and organizational tasks. All four private school teachers remarked that these students were incredible thinkers with high-level vocabulary, did not struggle with oral or listening comprehension, and were gifted in areas related to art, music, or athletics.

Comparative Conclusion for Research Question 1

In conclusion, there were some differences between the public and private school teachers to answer Research Question 1. The public school teachers represented in this study had an intensive, two-year process in which students were assessed to determine if they had a learning disability. The RTI process ended with a special education placement for some students but began with the teachers and was orchestrated and implemented using the entire special education team. Students with struggles similar to dyslexia were not identified as having dyslexia. Instead, they were eligible under SLD, one of the codes used to determine special education eligibility in the U.S. public school system under IDEA. T1, “This conversation is very interesting. I have a student with all of the characteristics of dyslexia, but her evaluation does not say dyslexia. It is interesting to me

that they just won't use the label dyslexia." Each of the public school teachers represented in this study had students with IEPs, with eligibility in SLD, but did not have students diagnosed with dyslexia.

Students must get private testing to diagnose dyslexia in the private school setting. The private schools did not have the RTI process but had a similar approach to recommend students for testing. Two out of the four private school teachers had students in their classrooms diagnosed with dyslexia.

Research Question 2

Use of Orton-Gillingham. Five out of nine teachers in this study remarked that they understood Orton-Gillingham. Four of the teachers either had never heard of Orton-Gillingham or used the methods. T8 discussed that Foundations, an Orton-Gillingham curriculum from Wilson Reading, was used as the reading curriculum in all kindergarten-second grade classrooms. Teachers in Grades 3 through 5 used the Zaner-Blosner reading curriculum while incorporating Orton-Gillingham strategies.

A hallmark of the Orton-Gillingham curriculum is the use of colored tiles to represent the phonemes of the English language. T6 and T9 commented that they utilized colored tiles as part of small-group instruction sessions with struggling learners. T6, "The letters on the colored help the students associate consonants, vowels, and digraphs to the sounds they make. This is the first step in the reading process." T2, T5, T6, and T9 remarked that they used pseudowords, syllable division, marking vowels, and spelling patterns, which are additional Orton-Gillingham characteristics.

T9 commented that when students with dyslexia saw the building resource teacher, The Barton Reading and Spelling System was taught. T9 said, “We have offered this service for a couple of years. I have really seen the difference in the students that need this extra intervention.” The Barton System was an Orton-Gillingham intervention used to teach students one-on-one in an intensive setting. Students who received the Barton intervention did at least 2 hours a week. This intervention was not used within the third-grade classroom, but this additional resource was available for struggling students in this building. This service was in addition to regular classroom instruction and cost the parents extra tuition for their child to receive this intervention.

Comparative Conclusion for Research Question 2

In conclusion, to answer Research Question 2, four out of five of the public school teachers in this study did not use any Orton-Gillingham-based strategies in the classroom. The special education teacher commented that she used some Orton-Gillingham strategies with her SLD students to supplement the regular curriculum.

Two out of four private school teachers used Orton-Gillingham strategies with their students diagnosed with dyslexia. One private school teacher commented that students with dyslexia could receive The Barton System for intensive intervention with the resource teacher.

Research Question 3

Non-Orton-Gillingham Strategies. Each of the nine teachers in this study had similar answers to Research Question 3. First, the teachers collectively said they worked with this struggling population in intensive, small-group instruction. These groups were

based on ability and were fluid. This means that the students moved in and out of groups based on academic needs. The teachers tried to make the groups as individualized as possible and limited the groups to three to four students. T5 described her small groups as,

A time to listen to how they struggled when they read to me. I encourage them to whisper read. And that way, they can hear themselves read. Of course, we're trying to break words apart and try to recognize patterns.

Second, the teachers in this study sent home decodable texts for the students to practice at home. These books were introduced and mastered in class before they were sent home. The teachers received feedback that these books built confidence in this struggling population of students because they practiced reading to their families. T3 remarked,

In terms of reading aloud and practicing, I will send home some books to read at a correct level. I encourage them to read out loud and track with their finger so that they are in the right spot.

Third, a similar intervention used by six out of nine teachers in the study was the program called Fast Forward. Fast Forward is a program designed to improve fluency and grammar. T9 described Fast Forward as,

A schoolwide fluency program that also addresses grammar. It can be used with elementary through high school students. We have students in every grade using the program. We have seen positive results.

Each student received individualized instruction 90 minutes a week in this technology-based program. Some classrooms utilized iPads for instruction, while others used laptops or desktop computers.

All nine of the teachers mentioned using the program called Fountas and Pinnell in the classroom. This program helped the teachers level their students for reading groups. Fluency and comprehension were assessed, and each student was assigned a level between A-Z. The teachers collectively mentioned that their students with dyslexia or SLD typically scored between two and three grade levels behind their peers. Students were leveled using this program at least three times per year. If a teacher felt like a student was ready to move reading groups, the teacher assessed the student with Fountas and Pinnell and placed students at a new reading level. T5 commented, “We use Fountas and Pinnell to level the students, and then we use Reading A-Z to give students reading material at their individualized level. This helps to build their fluency and accuracy.”

Words Their Way, Heggerty, and WonderWorks were non-Orton-Gillingham programs that the teachers collectively used within their classrooms. Words Their Way was a spelling, phonics, and vocabulary program. Students were tested and placed in groups based on their knowledge of spelling patterns. The activities used in this program included word sorts, word hunts, games, drawing, and labeling of phonemic sounds. Heggerty Phonemic Awareness Curriculum comprised daily lessons focusing on phonemic awareness, letter and sound recognition, and language awareness. T6 said of this program, “I really like how this program is laid out. The concepts build on one another. The students are used to the routine and enjoy the activities.” In addition,

rhyming, alliteration, sentence segmenting, syllable blending, and sound segmentation were taught using this program. Lessons were designed for use in a whole-group setting and took between 10-15 minutes a day to complete.

The five public school teachers used the program called WonderWorks within their classrooms. WonderWorks is a research-based reading curriculum that includes teacher modeling to guided practice. This program helps students become independent readers by building solid foundational skills, developing close reading skills, differentiated instruction, and providing a digital component for independent, individualized practice.

The five public school teachers also mentioned programs where their students received a pull-out intervention. These programs were not Orton-Gillingham-based. Corrective Reading, PALS, and Leveled Literacy Instruction were used in the intervention groups outside the classroom.

Desire to Help Students. An overall theme that each of the nine teachers mentioned was their desire to help this struggling population find exciting and successful activities. The teachers said their students had unique talents, including art, athletics, theater, dance, and piano playing. T8 commented, “I love helping my students, especially my struggling students, find their gifts. It is amazing because it seems as if my students that have dyslexia are extra talented in the arts and sports.” In addition, the teachers collectively tried to help all their students, not just the struggling students, use positive self-talk strategies. The teachers mentioned that the struggling students had much self-doubt, verbalized that they felt as if they were being left behind, and lost confidence in

their ability to improve in the areas in which they struggled. Students were encouraged to use "I can" statements rather than "I am not good at this" or "I can't do this at all." The teachers tried to help their struggling students understand their worth was more than the grades they received. T6 described growth mindset as, "Your brain is a muscle. You are smart. You will not be stuck at this same spot, academically, forever. Yes, it is hard. But I need to coach them to use and believe positive self-talk." The students were more than a number and had many essential qualities inside and outside the classroom.

Accommodations. Some accommodations and tools used in the classroom to help this population of students included whiteboards, audiobooks, and speech-to-text software. The teachers also read tests aloud, allowed dictated answers, and encouraged technology for students who prefer to type. T8 remarked,

I allow accommodations such as audiobooks, dictation, peer notetakers, extra time, or a quiet space for testing. I will do anything for the student to show me what they know. They are smart students that need to give us the information in a different format. I am okay with that. More than okay with that, actually.

The teachers had also utilized programs to turn PDFs into pages in which the students can either type or use an e-pen to complete. In addition, the teachers provided extra time on tests and assignments and quiet locations for these students whenever possible.

Conclusion for Research Question 3

Each of the nine participants used non-Orton-Gillingham strategies to help students in their classrooms succeed. In addition, they were familiar with the accommodations to help students access the same educational experience as their peers.

The teachers have a desire to learn more about the students with dyslexia. Finally, they work with each of their students to help them find activities they thrive.

Evidence of Trustworthiness

This was a basic qualitative study in which data from semiformal interviews was used to research how third-grade content area teachers were instructing students with dyslexia. The boundaries of this study included the participants limited to third-grade teachers, and the common denominator was the teachers' understanding of dyslexia.

Yin (2017) described the four criteria of credibility, dependability, transferability, and catalytic authenticity to evaluate qualitative research studies. Credibility and control of researcher bias involve the participants' perceptions of the setting or events and how they match the researcher's findings. First, the researcher spends substantial time devoted to data collection. The researchers must develop meaningful interactions with participants to enhance credibility. As the researcher in this study, I had meaningful interactions with each participant. I built a rapport with each teacher and allowed questions and comments throughout the interview. At the end of each interview, I encouraged each participant to reach out with any additional questions or requests. I was touched that each participant thanked me for doing this vital research. T2 commented,

Thank you for your enlightened conversation today. I hope our lines of communication can stay open long after the study. I am eager to learn more from you about dyslexia and how to help students with dyslexia. I do not feel equipped to do so yet, but I hope that will change in the future.

To orchestrate further change in the private and public settings, I could be a catalyst in

helping the teachers from this study understand dyslexia and implement successful interventions and strategies to help their students succeed.

Dependability involves tracking the procedures and processes during data collection and interpretation (Yin, 2017). The researcher provides a detailed description of data collection and analysis procedures, including audio or video interviews (Yin, 2017). In this study, I videotaped and audio recorded each interview. The interviews were stored on a device to which I am the only person with access. In addition, I used software to help transcribe and organize the data for the analysis stage.

Transferability in qualitative research refers to the degree of similarity between research sites in the eyes of the reader (Creswell & Creswell, 2018). Factors in transferability include detailed descriptions in context and background of setting, participants, interactions, cultures, and policies (Yin, 2017). Each participant in this study was a third-grade teacher. Each teacher was responsible for teaching all reading, math, science, and social studies content. Each participant taught in an elementary school, but all nine teachers had some online teaching experience during the school year due to COVID-19.

Finally, catalytic authenticity refers to the qualitative researcher collaborating with the participants to identify areas needed for change, plan how to change, and stimulate the participants to take an active role in changes (Creswell & Creswell, 2018). At the end of each interview, the teachers expressed their thanks to me for having a meaningful conversation about dyslexia. The teachers asked many questions and expressed that they wished they knew more about the subject and desired to change their

classrooms and schools. Several teachers asked me to reach out to the school principals to teach their entire team about dyslexia.

Ethical Procedures

The ethical procedures outlined in Chapter 3 were strictly adhered to during data collection. I did not directly contact participants but allowed them to seek out the interview procedures. Some teachers contacted me due to correspondence from their principals, and others received the initial invitation through district administrators. I clearly outlined the purpose and procedures for the interview process. The details of the study remained confidential between the participants and me. None of the participants withdrew from the study in the middle of the interview process, even though they were given the opportunity.

Summary

This chapter included information regarding the setting, qualifications, background, and classroom experience of each of the nine participants. The teachers had the opportunity to answer questions related to dyslexia and the use of Orton-Gillingham strategies in their third-grade classrooms. The content in this chapter related some of the differences between private school versus public school experiences. In public schools, the term dyslexia was not used to diagnose students with struggles similar to dyslexia. Instead, these students were tested by the school psychologist within the building and given the special education eligibility of SLD. The public schools did not have Orton-Gillingham interventions within their buildings. The term dyslexia was used in private schools, but students must be tested and diagnosed at the parents' expense through a

clinical psychologist. Not all educators in private schools had access to Orton-Gillingham interventions; some needed to access this specialized teaching through private tutoring.

The second half of this chapter provided an analysis of the research questions. In addition, Chapter 4 discussed data collection and data analysis. Finally, the chapter ended with evidence of trustworthiness. Chapter 4 provided information regarding the setting where the teacher interviews took place. Chapter 5 concludes this study by providing discussions, conclusions, and recommendations.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this basic qualitative study was to examine how and if third-grade general education content area teachers were providing interventions and instructions to meet the needs of students with dyslexia. Nine third-grade teachers participated in Zoom interviews for this study. Five teachers taught in a public school, and four in private schools. Two teachers were from North Carolina, one from Georgia, and six from the suburbs of Chicago in northern Illinois.

In public schools, the word dyslexia was not used to diagnose this struggling population of students; instead, these students were tested by the school psychologist within the building and given the special education eligibility of SLD. The public school systems did not have Orton-Gillingham interventions within their buildings. The term dyslexia was used in private schools, but some students had to be tested and diagnosed at the parents' expense through a clinical psychologist. Not all educators in private schools had access to Orton-Gillingham interventions; some needed to access this specialized teaching through private tutoring. All nine teachers used other strategies and curriculums to help students in their classroom succeed.

Interpretation of the Findings

The findings from this study extend the current knowledge as described in the literature review in Chapter 2. In this section, I share the findings of the study and explain how they confirm, disconfirm, or extend knowledge compared to the peer-reviewed literature in Chapter 2.

Research Question 1

Research Question 1 was: How are third-grade students with dyslexia assessed and identified in the research setting? Compared to the peer-reviewed literature, the results related to this question were both confirmed and disconfirmed. The public school teachers confirmed that the diagnosis of dyslexia was not used within their school symptoms. The answer to Research Question 1 could be disconfirmed compared to the peer-reviewed literature because students were not identified as having dyslexia. However, the knowledge of SLDs was extended because students with the classic symptoms of dyslexia fall into this category. The private school teachers confirmed how students with dyslexia were identified within their educational settings.

The five public school teachers commented that their students were not assessed or identified as having dyslexia. However, they established that the students with similarities to dyslexia were labeled as having a SLD with deficits in reading fluency, phonics, spelling, and math fluency. Two private school teachers explained that they had students with dyslexia within their classrooms. Like the public school process, the private school teachers explained that getting students assessed and identified with dyslexia began with the teachers. When a teacher noticed that a student struggled with the third-grade academics, they took notes and collected assignments showing evidence of the struggle. The two private school teachers without students with dyslexia in their classroom were familiar with the process of getting a student assessed for dyslexia.

Each of the teachers in this study had students that matched the profile of dyslexia. As mentioned in Chapter 2, students with dyslexia, despite average-to-above

average intellectual abilities, have difficulty with decoding, fluency, and spelling, which impacts comprehension due to a lack of automaticity (Shaywitz & Shaywitz, 2020).

People with dyslexia have deficits in phonological awareness, phonological memory, and/or rapid naming (Shaywitz & Shaywitz, 2020). A student with any of these deficits, beyond the initial stage of reading instruction, in kindergarten or first grade, despite years of solid reading instruction and/or intervention, shows hallmark signs of dyslexia (Shaywitz & Shaywitz, 2020). As mentioned in Chapter 4, students identified with a SLD are often students with dyslexia (Shaywitz & Shaywitz, 2020). A SLD is defined, in part, as

a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. (Lindstrom, 2019, p. 191)

In addition, this population of students also struggled with memory and organizational tasks. All the teachers remarked that these students were incredible thinkers with high-level vocabulary; did not struggle with oral or listening comprehension; and were gifted in areas related to art, music, or athletics.

All teachers in this study taught third grade. Each of the five public school teachers had students with eligibility in SLD in their classrooms, but none were diagnosed with dyslexia. All four private school teachers had students in their classrooms

that matched the profile of dyslexia, but only two of the four teachers had students diagnosed with dyslexia.

Students had to obtain private testing to diagnose dyslexia in the private school setting. The private schools did not have the RTI process, but they had a process to recommend students for testing.

Research Question 2

Research Question 2 was: How are third-grade content area teachers providing instruction and interventions based on the Orton-Gillingham approach to students with dyslexia to help them succeed in the classroom? The results of this study confirmed that three out of the nine participants were using Orton-Gillingham strategies in their classroom to remediate students with dyslexia or a SLD. Four out of nine participants either had never heard of Orton-Gillingham or were not currently using these strategies within their classroom. Based on the literature review in Chapter 2, the findings of this study could be used to extend the knowledge of Orton-Gillingham to teachers of students with dyslexia or reading disabilities.

Characteristics of Orton Gillingham

In answering Research Question 2, five out of nine teachers in this study remarked that they understood Orton-Gillingham. Four of the teachers either had never heard of Orton-Gillingham or used the methods. One teacher discussed that Foundations, an Orton-Gillingham curriculum from Wilson Reading, was used as the reading curriculum in all kindergarten-second grade classrooms at their school.

Lack of Teacher Training Using Orton-Gillingham Methodology

I discovered a discrepancy in the data from this study. The discrepancy is that teachers lack the training to properly understand symptoms, solutions, interventions, and accommodations of students with dyslexia. A problem in schools is that students diagnosed with reading disabilities, such as dyslexia, do not show academic growth in reading, despite years of special education interventions (McMahan et al., 2019). Some students receive intervention most of their academic lives, yet 74% of students who read below grade level in third grade remain below grade level in ninth grade (IDA, 2017). The results from this study could provide an opportunity to extend knowledge for teachers and administrators to learn more about dyslexia and the research-based approaches to remediating students with dyslexia and a SLD.

Each of the nine participants remarked that they did not feel equipped to teach students with dyslexia because they did not understand the condition of the learning disability or the required programs. T4 commented, “I have not had experience with Orton-Gillingham, but I have been doing my own research to try to get my hands on this material to help my students.” They explained they received very little training in their teacher preparation courses, even those with degrees emphasizing reading struggles or special education. They all expressed a desire to have some hands-on professional development first to learn more about dyslexia. T6 commented, “People assume teachers know more about specific disabilities than we really do. And there are so many I think it’s hard for programs to cover everything.” Second, they also desired to learn more about Orton-Gillingham, how this helps students with dyslexia, and how they can implement

strategies within the classroom. The dialogue prompted from this study could lead to some of this training that could then lead to change within their educational settings.

In conclusion, four out of five of the public school teachers in this study did not use any Orton-Gillingham-based strategies in the classroom. Duff et al. (2016) explained that systematic instruction refers to scaffolding the six essential components of literacy: (a) phonemic awareness, (b) phonics, (c) fluency, (d) vocabulary, (e) comprehension, and (f) writing. Explicit instruction includes frequent student responses, immediate teacher feedback, and careful student monitoring. All nine teachers expressed a desire to learn more about dyslexia, SLDs, and Orton-Gillingham as well as how the three were related.

Research Question 3

Research Question 3 was: How are third-grade content area teachers providing instruction and interventions to students with dyslexia to help them succeed in the classroom other than with the Orton-Gillingham approach? The results from this study can be confirmed with the extant literature because all nine teachers described ways they were helping students with dyslexia and a SLD succeed within the classroom.

Each of the nine teachers in this study had similar answers when asked this question. The teachers collectively said they work with this struggling population in intensive, small-group instruction. These groups were based on ability and were fluid. This means that the students can move in and out of groups based on academic needs. The teachers tried to make the groups as individualized as possible and limit the groups to three to four students in number.

An overall theme that each of the nine teachers mentioned was their desire to help

this struggling population of students find exciting and successful activities. In Chapter 2, I described the gifts of students with signs and symptoms of dyslexia, including that students with dyslexia can often think outside the box; understand concepts in 3D; have exceptional empathy and compassion and are creative and innovative with strengths in art, science, construction, athletics, and entrepreneurial skills (see Rae, 2018). Shaywitz and Shaywitz (2020) concluded that people with dyslexia have a keen ability to figure out complex puzzles or concepts, have a sizeable verbal vocabulary to coincide with their above-average expressive and receptive language, and have excellent listening and oral comprehension skills. People with dyslexia learn best through hands-on experiences rather than rote memorization, have superb higher level thinking skills, and have an imagination that allows their creative gifts to flourish (Shaywitz & Shaywitz, 2020).

Some of the gifts the teachers mentioned about their students include art, athletics, theater, dance, and playing the piano. The teachers tried to help their struggling students understand their worth was more than the grades they received and That the students were more than a number and have many essential qualities inside and outside the classroom.

Limitations of the Study

Qualitative researchers adhere to well-established procedures to ensure their research findings (Yin, 2017). However, specific limitations to qualitative data do exist. The first limitation common among qualitative researchers is the small sample size of eight to 10 participants. This study had nine participants. Purposeful sampling involves choosing a small group of participants representing a population that will help answer

Research Questions 1, 2, and 3 (see Creswell & Creswell, 2018). Purposeful, homogeneous sampling occurred in this research study because the participants had similar experiences and attributes (see Creswell & Creswell, 2018). During this unprecedented time of the COVID-19 pandemic in this country, teachers were very overwhelmed. It was challenging to find the minimum number of participants.

A second limitation of the study was using the word dyslexia because in many school districts, using the term dyslexia was against district policy. Students identified with a SLD are often students with dyslexia (Shaywitz & Shaywitz, 2020). In the case of the five public school teachers in this study, they did not know which students in their classrooms had dyslexia. Dyslexia was not a widespread diagnosis in the public or private school settings included in this study. Each of the public school teachers in this study had students with SLD eligibility, but none of the students were diagnosed with dyslexia. This limitation occurred because different terminology was used within different settings to describe a reading problem or learning disability, such as dyslexia, reading disorder, or specific learning disability (see Lindstrom, 2019). This is partly because students eligible under IDEA to receive special education services must have a disability that falls under one of the 13 IDEA disability categories, and dyslexia is not one of these categories (Lindstrom, 2019). The confusion regarding terminology is coupled with confusion on how to identify, remediate, and accommodate students with learning disabilities (Lindstrom, 2019). Additional understanding of the IDEA law and the specific signs and symptoms of dyslexia can help school personnel understand the connection between dyslexia and the IDEA category of SLD (Lindstrom, 2019).

A final limitation involved another struggle with the COVID-19 pandemic in the country at the time of the study. Many schools had a policy for guests in the building, or school was conducted entirely remotely. I could not enter the building to conduct classroom observations or interviews for the study. During the IRB process, my study was changed from an exploratory case study with interviews and observations to a basic qualitative study with interviews to accommodate this limitation. I completed all of the participant interviews via Zoom. The data I received from the interviews was more than sufficient for this qualitative study.

Recommendations

Based on the interview responses of the nine third-grade teachers from both public and private schools, I developed the following recommendations to increase the support educators and administrators receive in the areas of dyslexia awareness and Orton-Gillingham interventions. First, I would like to recommend that universities provide a course in dyslexia to all teacher candidates. Universities must offer teacher training programs that support teachers' journeys in supporting emergent readers and writers (Bernadowski, 2017). Teachers must accurately understand what dyslexia is, is not, and how they can support students with dyslexia (Johnston, 2019). At the very least, the course on exceptional learners should have a significant amount of time dedicated to students with dyslexia and a SLD. In the last several years, 33 federal and state laws regarding dyslexia legislation have been passed in the United States (Johnston, 2019). These initiatives are meant to push for change for teachers to understand and provide

interventions, accommodations, and strategies to teach students with dyslexia (Johnston, 2019).

As mentioned in the literature review in Chapter 2, Yurdakal and Kirmizi (2015) conducted a study regarding the knowledge of dyslexia of third- and fourth-grade teacher candidates. The study results concluded the candidates did not take courses with dyslexia training and did not attend any professional development related to dyslexia. The researchers published that the teachers had limited knowledge of essential characteristics of dyslexia but did not have enough experience on how to analyze, remediate, or accommodate these students. The teachers also stated that the students with dyslexia fall behind their peers, but they lack experience closing the gap for this population of students. In addition to the academic gap, the teachers noticed that the students with dyslexia also struggled with self-confidence, making them introverted and isolated. It is impossible for teachers to help identify students that could potentially have dyslexia if they do not understand the condition themselves.

I have started working with universities in my vicinity to bring dyslexia awareness to university classrooms. I have been invited as a guest lecturer. I have also been invited to teach a course at the university level at a local campus. I could use this research to recommend as many universities and community colleges as possible.

Second, I would recommend that the administrators from the schools represented in this study provide an extensive professional development opportunity to learn about dyslexia to their entire staff. Peltier et al. (2020) remarked that teachers equipped with the knowledge of dyslexia could bring a conceptual change to an entire population of

students. Clearing up misconceptions regarding dyslexia can also be a positive outcome from this specialized training. Teaching educators about dyslexia will improve student outcomes (Peltier et al., 2020). I would first offer a hands-on simulation to help educators understand the signs, symptoms, interventions, and accommodations regarding students with dyslexia. In this simulation, I would also help the educators understand that if they have students with IEPs within their classrooms with SLD, they could have dyslexia. This professional development would improve knowledge regarding dyslexia and the IDEA eligibility of SLD. Dyslexia is defined as a "Specific Learning Disability (SLD), neurobiological in origin, and manifested by difficulty with word recognition or fluency skills, reading decoding, and spelling skills" (Naglieri & Feifer, p. 12, 2020). When administrators and educators understand dyslexia, the signs and symptoms, and how to remediate it, an entire population of students could have a different outcome.

Third, if administrators decide to implement programs utilizing Orton-Gillingham strategies, I recommend that the teachers are correctly trained on using these programs. Orton-Gillingham is not the same as other programs the teachers had already taught. Bernadowski (2017) explained that evidence-based materials and instruction are essential for teachers to feel supported teaching students with dyslexia. Orton-Gillingham is the instructional method often used with students with dyslexia. Orton-Gillingham is a unique methodology using a multisensory pedagogical approach to solidify phonics and literacy skills into long-term memory. Sufficient knowledge and training in effectively delivering this instruction significantly increase the impact teachers can make in improving the skills and self-confidence of students with dyslexia (Bernadowski, 2017).

If a teacher does not understand the reasoning, application, and program process, it is almost impossible to deliver this remediation with fidelity. This training should be hands-on, using all of the materials and steps within the program. If we want teachers to change to a different way of teaching, we must give them the proper tools.

Teachers and administrators that learn from concepts printed in this dissertation and study could change the educational trajectory for many students. If the student is older and giving up on school, suicidal, a behavior concern, or an unmotivated student, the proper intervention could change their lives. These students are bright, intelligent students who need a different learning approach to reading (Boas, 2020). Duff et al. (2016) discussed that approximately 40% of U.S. elementary-age students are considered non-fluent readers. According to the National Assessment of Educational Progress, 65% of fourth graders and 64% of eighth graders scored at or below the basic reading achievement level.

Furthermore, school psychologists receive more referrals for students with reading concerns than any other academic area, and of the students identified with learning disabilities, 80% have a deficit in reading. With the proper intervention, preferably at an early age, these statistics can change. But, it could take the entire educational community to make these changes.

Implications

Undiagnosed dyslexia can lead students to develop conditions such as anxiety or depression. Comorbidity of anxiety and depression in students with dyslexia is significantly higher than students without a reading disability (Hendren et al., 2018).

Researchers have proposed that anxiety directly results from these students' school failure (Hendren et al., 2018). The low self-esteem associated with school failure adds a risk of depression among students with dyslexia (Miller 2019). The general anxiety and depression are directly linked to the poor school experience and the feelings of helplessness to improve their academic skills (Miller 2019). These emotional and psychological risks add to the importance of training teachers on how to teach students with dyslexia.

Snowling et al. (2019) stated that poor decoding, spelling, and fluency skills ultimately affect comprehension in every subject. Even after years of classroom reading instruction and research-based interventions, some students still do not progress in reading skills (Shaywitz & Shaywitz, 2020). These students lack the foundational skills of reading—phonemic awareness, short vowel sounds, consonant sounds, long vowel sounds, blends, digraphs, and syllabication (Snowling et al., 2019). These students need a different approach to remediate all of these areas (Shaywitz & Shaywitz, 2020).

Some students struggle for many years before educators and administrators can understand the reason for the reading difficulties (Miller, 2019). For so many students, the fact that many of these struggling students might have dyslexia goes undetected simply because many educators are confused about dyslexia (Miller, 2019). If a bright student with average or above-average IQ continues to fall further and further behind in reading, despite quality classroom teaching and many years of reading intervention, dyslexia might be the issue (Shaywitz & Shaywitz, 2020). I hope this research study about dyslexia could help educators and parents identify kids with this struggle. One

educator, administrator, parent, and student could change an entire school population to understand better the implications, gifts, and remediation for students with dyslexia.

Conclusion

As I embark on the end of my doctoral journey and the culmination of this study, I hope to profoundly influence students' lives, mentor colleagues, and make a positive impact in my community. I hope that I can use the results of this dissertation to make positive social change for the students with dyslexia and SLD, their parents and families, and their educators. The positive social implications will occur as educators understand dyslexia causing more students with dyslexia to get the interventions, accommodations, and instruction to match their learning needs. I want everyone to understand the journey and knowledge I gathered through my doctoral studies and research to make an immediate change. Every administrator and educator must go through the same extensive process I did, which began as a teacher in the third-grade classroom. I hope my passion for my students, the parents, other teachers, and the community has been evident throughout this doctoral coursework and dissertation.

When I began my career in 2000 teaching kindergarten, I did not understand either the word dyslexia or the condition that causes such profound academic struggles. I eventually moved to teach third grade. Most of my students were thriving beyond my expectations. However, there seemed to be a specific population of students that seemed to struggle in reading, writing, and spelling no matter the intervention or strategy presented to them. This troubled me. I realized these students all had some of the same struggles, which included: extremely messy handwriting, horrific spelling, choppy

fluency, awful decoding skills, but impressive oral and listening vocabulary and comprehension. These students were bright students having trouble accessing third-grade material due to their reading struggles.

I began to look inside myself to see what I should be doing to help this struggling population of students. They did improve, but their progress was still well below their peers. It dismayed me that there were always a handful of kids that I could not bring to grade-level in reading, no matter how hard I tried. I felt like a failure.

One of my former third-grade students was diagnosed with dyslexia in fifth grade. The parents came to me with this news. I was amazed to hear about the dyslexia condition. With all of my education and special training, including as a licensed reading specialist, I was never taught about dyslexia. The parent asked me to tutor her daughter using a particular program, an Orton-Gillingham intervention. I was willing to do anything to learn how to help these struggling students. Once I received the Orton-Gillingham material, I instantly knew most of my past struggling students had the same struggles, and this program could help.

My passion for struggling learners has evolved into a lifetime commitment. This year, I made a massive change in my career path. I moved from the Chicago area to Naples, Florida, to work in a school for students with dyslexia and other learning disabilities. I have used my knowledge and training over the last 13 years to bring the best, research-based interventions to a school dedicated to these learners. In time, I hope to make even more changes and work in public schools to bring dyslexia awareness to the general population. In addition, I plan to work with the schools represented in this study

to bring dyslexia simulations, lectures, hands-on learning, and training in Orton-Gillingham to each of the campuses. The struggle I face is my patience in getting all this accomplished.

I would like to end this dissertation with a personal account from one parent. This parent trusted me when I first learned about dyslexia and allowed me to work with two out of four of her children. I had no idea what I was doing at the time, but she knew her children needed help, and she was desperate to see improvement. Eventually, I worked with a third child from this family. Her words succinctly sum up the journey many families faced when understanding dyslexia was lacking in the academic world and the excitement when these students were finally understood. This note was written several years ago, and now both kids are doing well post-high school. Both are either in college or pursuing other passions and career goals.

LeAnn Harbaugh stated (personal communication, October 4, 2014),

Like many families, our journey with dyslexia spans several generations. My husband has struggled with dyslexia his entire life. School was very difficult, reading was painful, spelling was agonizing, and hope for the future was often dismal. Very little help was available for easing this situation while my husband was a young and growing student. Although very bright and creative, he had to work extra hard to earn low to average grades all the way through college. As a young father, he hoped his children would never have to endure the same.

Our second son began having difficulty in pre-school learning letters and numbers. We chose to add one more year of pre-school in order to better prepare

him for kindergarten. His first few years of school were difficult but manageable. He was identified as eligible for the resource department in second grade where he worked on reading and spelling with the resource teacher several days a week. His skills did not improve.

By third grade, reading and writing were getting more difficult and more frustrating. He worked very hard but felt that he was a failure. This continued through fourth and fifth grade, and by the end of fifth grade, he hit THE WALL and became emotionally depressed, angry, and exhausted. As parents, we felt helpless, believing there was little we could do to help. We were unaware of any interventions and thought that just like his dad, our son would be subject to a life of frustration, hard work, and feelings of failure.

One day, Jenny Salowitz (now Jenny Waxman) told us about a program called the Barton System that she believed could help our son if he was indeed dyslexic. We were excited to hear of something that could benefit our son and family. That day was the beginning of a new paradigm for our family. Our son was immediately tested and diagnosed with profound dyslexia. Several months later, his younger sister was also diagnosed with mild-moderate dyslexia. Although this news was unfortunate, at least now we had hope that something was available to help them both.

Two of our four children were now diagnosed with dyslexia and immediately began to tutor with Jenny Salowitz through the Barton System. It did seem somewhat daunting that they would need to progress through ten books in

the program. We knew this could take up to three years to complete, so we took it one day at a time. The kids would often grumble and complain about having to go to tutoring. They did not see the "results" at first and so did not enjoy putting the time and effort into what seemed tedious and tiring to them.

We tutored year-round to make progress as quickly as possible. I am so grateful to Jenny, who continually encouraged my kids when they would get discouraged or tired with the tutoring. She helped them to see how bright the future would be for them when they made it through the program. As my son and daughter worked through book after book in the Barton System, we started to see significant changes in their lives. My son, who almost never read a book for pleasure, read two novels over the summer. My daughter's reading fluency began to get better, and her spelling improved. Little by little, we saw big changes

After three years of hard work and perseverance, they both completed their ten books. What an accomplishment!! I continue to be amazed at their grades, their reading and writing abilities, and, most especially, their confidence. They have both been on the honor roll, making A's and B's in all their classes. Amazing and wonderful! As a parent, I am so grateful that our kids had the opportunity to be impacted so significantly by the Barton System. Thank you to Susan Barton and Jenny Salowitz. My husband is especially thankful that his children do not have to bear the same future that he endured. Truly, their lives have been changed forever.

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Appendix: Interview Questions

Interview Questions:

Please tell me how long you have been teaching third grade.

Please tell me if you have any experience teaching students with dyslexia.

Do you know if any of your students have dyslexia within your classroom? If so, how was this reported to you?

Once you find out you have students with dyslexia, how do you adapt instruction for these students within your classroom?

How are students assessed as having dyslexia?

How are students identified as having dyslexia?

How are you using Orton-Gillingham in the classroom with students with dyslexia?

Can you talk me through a lesson?

Can you tell me on a day-to-day basis what happens in your classroom regarding students with dyslexia?

If you are not using Orton-Gillingham, what are you using to provide instruction to students with dyslexia?

Are you aware of which interventions, if any, these students receiving outside the classroom, perhaps in a resource room, with a reading specialist, or within a special education setting?

What specific struggles, academic, social, or emotional difficulties do students with dyslexia encounter?

Given the struggles you have just listed, how do you help them succeed or overcome that particular struggle?

Do you have anything else you would like to add to our discussion?