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Professional Development Addressing Assessment and Intervention for Students with Dyslexia

in Response to California's Legislation A.B. 1369

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Abstract

As dyslexia receives more attention in state legislation, schools and teachers need to understand dyslexia. This project is an introductory professional development presentation that begins with an explanation of historical and current research about dyslexia and then turns to assessment and interventions. A suggestion of how to fit interventions inside a multi-tiered level system is provided. Examples of a structured, explicit and multi-sensory lessons are included. Finally, different programs that prescribe to the Orton-Gillingham approach are compared. The purpose of this project was to create a concise and usable professional development for educators and parents regarding California's new dyslexia legislation, how to screen for dyslexia, and what classroom interventions are considered best practice.

Table of Contents

Chapter 1: Introduction.....	5
Problem Statement.....	6
Significance of Research.....	8
Literature Preview.....	9
Methodology.....	11
Definitions.....	12
Chapter Summary.....	13
Chapter 2: Literature Review.....	15
Understanding Dyslexia.....	15
Assessment.....	17
Laws.....	19
Conclusion.....	22
Chapter 3: Methodology.....	23
Introduction.....	23
Design.....	23
Audience and Setting.....	24
Instruments.....	24
Procedures.....	25
Summary.....	29
Chapter 4: Professional Development.....	30
Title Page and Agenda.....	30
Section 1: Historical Perspective of Dyslexia Research.....	31
Section 2: Brain Research.....	32
Section 3: Definition of Dyslexia.....	36
Section 4: Myths and Misconceptions.....	37
Section 5: Dyslexia Legislation in the U.S. and California.....	40
Section 6: Discovering Dyslexia and Assessment.....	40
Section 7: Interventions.....	46
Chapter 5: Discussion.....	55
Lessons Learned.....	55

Recommendations for Implementation.....57

Limitations.....58

Conclusion.....59

References.....61

Chapter 1: Introduction

Dyslexia, a familiar term, is commonly misunderstood. Those with dyslexia often baffle their teachers and parents, because while they struggle with several academic tasks, they excel in other areas. In the documentary *Embracing Dyslexia*, individuals with dyslexia narrated personal accounts of being called “lazy” or “stupid” by peers, teachers, or parents (Macias, 2013). Some became quiet or withdrawn in class, hoping that no one discovered what they could not do. Teacher preparation programs barely touch upon the subject, yet the groundbreaking work of Shaywitz and subsequent researchers thereafter indicated that there are likely to be at least one student with dyslexia in each classroom (2003). As a result of this lack of training, students are going undiagnosed and not getting the assistance they need. All of this combined has left untold numbers of people with emotional scars that follow them throughout life (Macias, 2013). This no longer needs to be the case, but it takes action on the part of legislators, districts, educators, and parents in to shift the educational experience for students with dyslexia to a more positive one.

Fortunately, this is not a recently discovered issue. In fact, there is a long history of research that aims to discover the root of dyslexia and what to do about it. During the late 1800’s, “congenital word-blindness” was described in medical journals. It was not until 1918 that the word dyslexia was used. During the next 70 years medical professionals looked for neurological patterns, while researchers examined educational practices and psychology in search of answers (Lerner, 1971). From the onset, the causes of dyslexia and how to treat it have been confusing. It is possible that dyslexia has been wrought with myths and misperceptions, based not on facts but the opinions. Teacher educator programs have not dedicated time during certification programs to develop an understanding of dyslexia and appropriate interventions.

Current theories on dyslexia maintain that there is a neurological difference between “typical readers” and those with dyslexia (Foss, 2016). Legislation at both the national and state levels has begun to address the educational needs of students with dyslexia. In September 2016, the United States Senate passed Senate Resolution 576, which called upon Congress, schools, and state and local educational agencies to “recognize the significant educational implications of dyslexia that must be addressed” (California Department of Education, 2017). Interestingly, California took action a year earlier with Assembly Bill 1369, calling for district superintendents to create guidelines for students found with dyslexia. Districts are instructed through legislation to make a plan for both finding and providing services to students with dyslexia. Students with dyslexia are most often general education students, and the interventions and supports must be interwoven into the curriculum. The hope is that with more early screening and intervention for dyslexia, there will be less students falling below grade level standards and entering special education programs.

Problem Statement

The volume of literature about dyslexia in combination with the push from legislators to find and provide services for students with dyslexia sets a sharp contrast to the information and training being provided to pre-service teachers. The need for comprehensive and effective resources for educators is clear. Spafford and Glassor (2005) wrote, “Based on current research, there is no one program or remedy for optimizing the learning or school and life successes for individuals with dyslexia, but there are many current best methods/practices/strategies and research-based programs that have shown documented successes.” Furthermore, districts are moving away from the discrepancy model of viewing learning challenges and towards multi-

tiered systems and supports to meet the needs of diverse learners. The discrepancy model, sometimes criticized as the “wait and see” model, requires that students be two years behind to qualify for an Individual Education Plan (IEP). This means that students are often left unidentified until third grade or later; thus, missing the opportunity for early intervention. Intuitively teachers know that early intervention is best but may feel unprepared to provide such interventions. As educators move to the Response to Intervention model (RTI), interventions are implemented and documented before a student would enter the IEP process. The realization that likely 20 percent of students are affected by some form of dyslexia (Shaywitz, 2003 & Sandman-Hurley 2016) increased attention given to dyslexia in state legislation and the need for early interventions. More educators and parents realize they need a concrete plan. The purpose of this project was to create a concise and usable professional development for educators and parents regarding California’s new dyslexia legislation, how to screen for dyslexia, and what classroom interventions are considered best practice.

This research project was guided by three main subjects: understanding dyslexia and dyslexia legislation, assessing for dyslexia, and resources for general education and reading specialist teachers to guide their decisions about interventions. To begin, educators working with students suspected of or identified with dyslexia must understand what brain research tells us about dyslexia and recognize the historical perspective of how dyslexia has been handled in schools over the past decades. Both have led to the current legislation A.B. 1369, which calls for program guidelines to be developed within school districts for students with dyslexia. From here the logistical question arises, “How are educators and districts responding to this legislation and held accountable?”

First, educators must use standardized screening and evaluation tools such as the Feifer Assessment of Reading (FAR) to objectively determine if dyslexia is the cause of a student's reading difficulty (2017). Therefore, this project reviewed how the FAR assessment determines dyslexia and the different subtypes of dyslexia. Ideally assessments guide instruction, which is a key feature of the FAR because it matches possible interventions with the different subtypes. This project reviewed these interventions with academic literature to report which interventions have been shown to be effective for students with dyslexia. The purpose of this project was to create a concise and usable professional development for educators and parents about California's new dyslexia legislation, how to screen for dyslexia and what classroom interventions are considered best practice. The overarching goal was to inspire educators and parents to move forward with the creation of plans for assessment and interventions grounded in current research about dyslexia.

Significance of the Research

The aim of this project was to sift through the information about dyslexia and distill from it the most pertinent details about the condition of dyslexia, ways to assess for it, and suggestions about how to find and provide services and interventions for students with dyslexia. Through this work, I addressed some of the vast number of myths and assumptions surrounding dyslexia. These myths and assumptions are held not only by society but teachers as well. In fact, Washburn, Joshi and Contell (2011) examined the level of knowledge held by preservice teachers and found they did not show a sufficient understanding of dyslexia.

There is wide range of estimated persons with dyslexia. Spafford and Grosser (2005) reported that there is an estimated 2.19 to 20 percent of the population that could be classified as

dyslexic (p.3). This leads to the question, “Are schools properly screening for dyslexia?” and “Are they providing best practice strategies once they are found?” Districts need to have procedures in place to screen and evaluate students for dyslexia, and teachers and parents need to be well informed about these procedures and what to do next.

First, educators must use standardized screening and evaluation tools such as the Feifer Assessment of Reading (FAR) to objectively determine if dyslexia is the cause of a student’s reading difficulty. This project reviewed how the FAR assessment determines dyslexia and the different subtypes of dyslexia. Ideally assessments guide instruction, which is a key feature of the FAR because it matches possible interventions with the different subtypes. The FAR was chosen among other assessments for dyslexia because of its ability to differentiate these subtypes and thus help to pinpoint interventions. This project also reviewed these interventions alongside academic literature to report which interventions have been shown to be effective for students with dyslexia. It provides an overview and training for general education teachers, reading specialist, and parents on how to best assess and serve students with dyslexia.

Literature Preview

There is extensive research spanning the past decades relating to dyslexia, such as Shaywitz’s (2003) Connecticut longitudinal study. This research laid the groundwork for more recent texts that clearly outline how to identify and help students with dyslexia. Examples of such texts are Sandman-Hurley’s (2016) book *Dyslexia Advocate!* and Foss’(2016) book *The Dyslexia Empowerment Plan: A Blueprint for Renewing Your Child’s Confidence and Love of Learning* . This project built upon the themes of understanding dyslexia including legislation, assessment, and interventions. It provides educators and parents a resource with current

information about dyslexia and what it means for students at all grade levels. A review of the legislation at the state and national level is provided along with a historical perspective that led to this legislation. Second, a more in-depth review of the FAR assessment which determines dyslexia subtypes and recommends specific interventions for these subtypes is explained. Finally, the interventions will be listed and the research that supports or discredits them are analyzed.

Methodology

Dyslexia is a concern for all teachers, as accommodations and supports for students with dyslexia need to be present throughout the students' academic life. Since this project is to be a resource and training for teachers, reading specialists and parents, a survey gauged their understanding and perceptions about dyslexia, state and federal legislation, dyslexia assessments, and interventions for students with dyslexia. Secondly, a presentation for parents and teachers about dyslexia was based on this survey provided information about current information on dyslexia, procedures for screening and evaluation and different types of supports and interventions. The time constraints of this project do not allow for a full certification of the Orton-Gillingham training, so the aim of this presentation is to inspire more teachers to seek training so they can correctly implement the program in the general education classroom.

Definitions

Assembly Bill 1369 (A.B.1369)

This bill asked the Superintendent of Education to create guidelines for educators that suggest best practices for evaluating and providing services for students with dyslexia. These guidelines are to include “an evidence-based, multi-sensory, direct, explicit, structured, and sequential approach” (AB 1369, 2015) and complete it by the 2017/18 school year.

Dyslexia

Dyslexia is 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 growth of vocabulary and background knowledge. (IDA 2002)

Feifer Assessment of Reading (FAR)

“The FAR is a comprehensive assessment of reading and related processes. It is unique in that it will help you determine the examinee's specific subtype of dyslexia to inform decisions about appropriate interventions” (Feifer and Nadar, 2015).

Orton-Gillingham Method

“In the 1930s neurologist Dr. Samuel T. Orton and educator, psychologist Anna Gillingham developed the Orton-Gillingham approach to reading instruction for students with dyslexia. This theory combines multi-sensory techniques along with the structure of the English language.

Those items taught include: phonemes and morphemes, such as prefixes, suffixes, and roots. Common spelling rules are introduced as well. Multi-sensory education incorporates the three learning pathways, which are: auditory, kinesthetic, and visual” (Orton-Gillingham, 2018).

Orton-Gillingham is an approach and many programs have stemmed from it, so no single program can be named the Orton-Gillingham program (Sandman-Hurley,2016).

Multi-Tier System of Support (MTSS)

The California Department of Education’s (CDE) definition of Multi-Tiered System of Support (MTSS) provides a basis for understanding how California educators can work together to ensure equitable access and opportunity for all students to achieve the Common Core State Standards (CCSS). MTSS includes Response to Instruction and Intervention (RtI2) as well as additional, distinct philosophies and concepts. (California Department of Education, 2017).

Chapter Summary

The term dyslexia, at times avoided due to the confusion surrounding it, is becoming more understood. Brain research and decades of research of interventions have filled in some of the puzzle pieces. Pre-service and in-service teachers of all ages will most likely encounter students with dyslexia. Disseminating accurate information about dyslexia, learning how to screen and evaluate for dyslexia, and knowing how to provide supports so students with dyslexia have full access to the curriculum are key to success for students with dyslexia. Furthermore, current perspectives on dyslexia reveal that many individuals with dyslexia have unique talents often in the areas of the arts, multidimensional thinking, originality, awareness of patterns, and keen perceptive (Spafford and Grosser, 2005). Therefore, it is to society’s benefit to ensure that these students have a positive experience in school. The direction provided by legislation, reliable

assessments and researched-based interventions all provide hope for those with dyslexia, their parents and teachers. It is the opinion of the author that government, schools, educators and parents need to become more informed about dyslexia and more equipped with tools to provide appropriate supports and interventions for students with dyslexia.

Chapter 2: Literature Review

Introduction

Because of a challenge with diagnosing and understanding dyslexia, myths and assumptions have permeated throughout our society (Spafford, 2005). What causes it genetics or environment? Is it a visual impairment or neurological? Are the symptoms consistent across individuals? Can it be cured? The International Dyslexia Association lists treatments and instructional practices (2018) that are backed by evidence, but there are also those that are not. Stafford (2005) explained that the myths surrounding dyslexia have caused controversial treatments to emerge claiming to “cure” dyslexia. How is a parent or teacher desperate to help a child struggling with reading to know what to do? This review of literature synthesizes the vast quantity of literature available into recent and relevant information to help guide parents and teachers in first determining if dyslexia is a possibility and what interventions are considered best practice. The first theme reviews the current thoughts about dyslexia and brain research, which has led to a further subdivisions of types of dyslexia. At the same time myths will be included and corrected. Second, a review of legislation in the United States and specifically California is explained. Finally, empirical evidence that supports select assessments and interventions designed to evaluate and support individuals with dyslexia is reviewed.

Understanding Dyslexia

Educators have turned to science to understand dyslexia. Woollams (2014) stated, “We can see what elements are necessary for fluent reading and where these processes are housed in the brain.” Researchers have theorized that dyslexia stems from visual deficits, since individuals with dyslexia may not process visual information correctly (Spafford & Grosser, 2005, p 11). However, Shaywitz (2004) explained that a neurological anomaly prevents their brains from

gaining access to the word analyzer and phoneme producer areas of the brain. As the left side of the brain relies on words, the right hemisphere relies on visual and kinesthetic information. Feifer (2017) explained that brain research is showing that individuals with dyslexia may have an auditory rhythm deficit and therefore are unable to process continuous speech patterns which leads to poor phonemic awareness. Feifer (2017) continued by citing Shaywitz's (2003) comparison of a non-impaired reader who primarily activated the posterior portions of the brain compared to an impaired reader who does not fully activate the posterior regions but instead activates the frontal lobes.

It is important to consider brain research when thinking about dyslexia for two reasons; first if educators believe that dyslexia is a neurological difference instead of a behavioral difference, they may approach the student with more empathy and second, interventions that use this brain research should help to develop best practices. Hudson (2017) concluded in her review of brain research surrounding dyslexia that, "Imaging research has demonstrated that the brains of people with dyslexia show different, less efficient, patterns of processing during tasks involving sounds in speech and letter sounds in words. Understanding this has the potential to increase the confidence teachers feel when designing and carrying out instruction for their students with dyslexia" (p.514).

Feifer (2017) cited the work of Barquero, Davis, and Cutting to explain the evidence emerging that the brain of dyslexic individuals compensates for deficits in two ways: There is hemispheric normalization where the left hemisphere asserts itself and hemispheric compensation where brain structures that support memory are activated. This is important because it gives validation to the intervention efforts such as multi-sensory and structured

literacy programs, and will help to further motivate educators to consistently provide interventions that have been supported by empirical studies and brain research.

Grosser and Spafford (2005) and Feifer (2017) described three subtypes of dyslexia:

- a. Dysphonetic: individuals have a poor understanding of phoneme-grapheme connections and phonological awareness.
- b. Dyseidetic: poor ability to recognize sight words
- c. Dysphonetic/Dyseidetic (mixed): poor phonological processing and sight word recognition

These subtypes are relevant because screenings and evaluations can further pinpoint the reading impairment and guide the interventions more exactly. In fact, assessments are beginning to suggest specific interventions based on these subtypes (Feifer, 2017).

Assessment

Shaywitz (2003) wrote, “The apparent large-scale underidentification of reading-disabled children is particularly worrisome because even when school identification takes place, it occurs relatively late- often past optimal age for intervention” (p. 30). This causes educators to reconsider the discrepancy model, the idea that a student should be considered to have a disability when there is a discrepancy between ability and performance. This causes a child to be more likely to be assessed and given interventions well into third grade. Furthermore, the time a child could have received sustained and early interventions is lost. The International Dyslexia Association (2017) echoed this sentiment by saying, “Early intervention or additional direct instruction should begin as early as kindergarten or first grade for struggling readers when the gap is small and students benefit from brain plasticity advantages for learning language-based

information. When a student is not achieving at an average rate, additional instruction (e.g., an additional hour of direct instruction for grades one through three) may be provided immediately to help them catch up. Student progress must be monitored using reliable and valid progress monitoring measures to be sure the gap is closing. Analysis of data must drive all school team decisions about a student’s program and learning profile.”

Teachers and parents must be clear on what signs to consider and act appropriately. Shaywitz (2004), Spafford (2005), and Sandman-Hurley (2016) all list letter reversals and the idea that individuals with dyslexia “see” words backwards as a myth. Instead Shaywitz (2004) identified clues to dyslexia in a young child as delay in learning to speak, difficulties in pronunciation, and insensitivity to rhyme. Clues in an older child as linking letters to sounds, lack of attention to the internal working of words, and problems with fluency. Sandman-Hurley (2016) described specific tasks that are difficult for a child with dyslexia, such as: reading words in isolation, spelling, phonemic awareness, fluency and math word problems. She explained that dyslexia presents itself differently in individuals; therefore, there is no one profile of a dyslexic individual.

The Feifer Assessment of Reading (FAR) was created with the neuroscience and subtypes of reading impairment in mind (FAR, 2018) and was chosen as an example of a screening and assessment tool for this reason. The screening and assessment reveal specific areas of strengths or weaknesses to help any practitioner decide on the best course of action to support students.

Laws

Youman (2012) wrote, “Throughout the various states of the USA, the appropriate identification of dyslexia and the timely provision of interventions are characterized by

variability and inconsistency. Several states have recognized the existence of this disorder and the well-established need for services. These states have taken proactive steps to implement laws and regulations for both identification and treatment and the provision of equal access to students who are diagnosed with dyslexia” (p.133). This literature review describes California’s progress in developing legislation about dyslexia and the implementation of this legislation in schools. In 2015, Assembly Bill (AB) 1369 required the Superintendent of Public Instruction to develop program guidelines for dyslexia by the 2017-18 school year. These guidelines were published on time and the goal of these guidelines is to assist to identify, assess, plan, provide and improve educational services to pupils with dyslexia (DOE, 2017). However, the California Department of Education stated that the guidelines are guidance and are “not binding on local educational agencies or other entities” (DOE, 2017). Therefore, while California created guidelines, it left it up to the discretion of the schools and districts as to how much effort they will put in to developing plans for students with dyslexia. Interventions and Accommodations

Screening and assessing for dyslexia is only the first step. Sandman-Hurley (2016) asserted “The one thing a child with dyslexia absolutely does not need is the eclectic approach to teaching reading, which is a little bit of this and a little bit of that” (p.17). Parents and teachers need to provide these students with evidence-based practices. Not only is early intervention important, but also these interventions must be proven as well. California’s Guidelines for Dyslexia recommends that interventions “should be appropriate (e.g., explicit, systematic, cumulative, simultaneous, multisensory) and implemented with fidelity, be delivered within a comprehensive model of multi-tiered interventions and also include ongoing, documented progress monitoring” (Department of Education, 2017). This can come as a relief to those

wandering around the vast amount of resources about dyslexia, because the list of proven interventions is a short one: the Orton-Gillingham approach and Structured Word Inquiry.

The Orton-Gillingham (O-G) method is a systematic phonics program that incorporates visual, auditory and kinesthetic senses and is presented in a direct instruction method. Sheffield (1991) elaborated on the O-G methodology as being, “programs teach what is reliable about language so that the student gains a clear idea of what he can depend on and what he must simply learn. These programs all have some kind of drill that can build mastery for a dyslexic student who has difficulties in rote memory” (p.42). Therefore the O-G method meets the criteria laid out in California’s Dyslexia Guidelines. Since O-G was developed in the 1930s and used intermittently throughout the following decades there is a body of evidence that it is a viable intervention technique. In fact, Hughes (2014) conducted a research review of the O-G approach and concluded, “The Orton-Gillingham method is a powerful language intervention for children and adults with delayed or non-existent reading skills due to language-based processing disorders of disabilities such as dyslexia” (p.7).

Since there are several programs that stem from the Orton-Gillingham approach, this project highlights a few of the more popular programs. The International Dyslexia Association (2018) has created a Matrix of specific intervention programs and Lindamood Bell, Wilson Reading System, and Slingerland Reading Program are all listed. Krafnick et al (2011) conducted a study comparing brain images before and after using the Lindamood Bell program and found there to be an increase in grey matter. They suggested that the effect of interventions were showing actual changes in brain functions. Stebbins et al (2012) investigated the Wilson Reading program and were pleased to find that overall students with disabilities showed average

growth using the program. All of these programs deliver phonics instruction in a multi-sensory, explicit, and structured way.

Dyslexic individuals are entitled to accommodations under the Individuals with Disabilities Education Act (IDEA) and the Americans with Disabilities Act (ADA). Foss (2016), creator of the Intel Reader, a device that will take a photo of a text and read it aloud, explained that there are three types of reading: eye reading, ear reading, and finger reading. He further explained that eye reading is a social choice, not a natural one, since our brains developed before reading was invented. Sandman-Hurley (2016) echoed this idea, “Our brains were not built for reading, we had to fit it into our brains” (p.22). Foss (2016) argued that devices such as text to speech or speech to text make ideas and learning accessible to students with dyslexia.

Technology may make it easier to function with dyslexia, but Sandman-Hurley (2016) warned against the use of computer-based programs for interventions. She stated, “A computer program may be able to adjust to a student’s level and understanding, but it cannot provide the direct instruction that a student with dyslexia needs” (p. 21). Therefore, this professional development described in this project focuses on the interventions that require interaction between a student and a trained teacher.

Conclusion

Dyslexia is not a disease so it cannot be cured; however, individuals with dyslexia can now take comfort in the fact that science, through the use of brain imaging, has gotten closer to understanding what causes dyslexia. This has confirmed earlier theories that dyslexia is a neurological issue, not visual. These brain images all suggest that there are three subtypes: dysphonetic, dyseidetic, and mixed. When assessed for these subtypes, educators are more likely to provide interventions, in the a multi-tiered support model, earlier to students. Students with

dyslexia cannot afford to wait for the discrepancy model to qualify them for extra support. They need the right intervention as early as possible. The Orton-Gillingham Approach is one method that is supported by the International Dyslexia Association and the California's Dyslexia Guidelines. Fieffer (2017) presented the Wilson Reading Program, which is based in O-G methods, as a proven intervention for students with all three subtypes of dyslexia.

This review of literature creates a sense of urgency, yet it also presents a practical twist on this often daunting issue for educators. While educators now know that dyslexia is a neurological difference, they also know how to watch for signs, screen and deliver proven interventions in the classroom. The hope is that individuals with dyslexia will be no longer seen as bright but lazy, and will instead be given systematic instruction that helps them rewire their brains.

Chapter 3 Methodology

Introduction

The purpose of this project was to create a concise and usable professional development for educators and parents about California's new dyslexia legislation, how to screen for dyslexia and what classroom interventions are considered best practice. At the same time, teachers will realize some of the myths and misconceptions that have percolated through education and be inspired to take the issue of dyslexia seriously and take action within their classrooms. Shaywitz (2004) concluded from her longitudinal study concerning the issues with identification after third grade, "The key to success and to avoiding much of this frustration is to recognize dyslexia as early as possible" (p.119). If teachers are not equipped with correct information about dyslexia, they might not suspect it or know what to do even if they do suspect a child has dyslexia. Therefore this project presents teachers with current information about brain research and dyslexia, the clues teachers should be on the lookout for during the primary and elementary years, how to screen for dyslexia and what interventions are considered best practice if the child is found to be at-risk for dyslexia. As mentioned in the literature review, there is no "cure" for dyslexia, but if caught early and systematic interventions are used, a child with dyslexia can have a positive experience in school and live up to their full potential.

Design

In order to create a meaningful resource for teachers, the large amount of available information on dyslexia needs to be condensed into a usable format. This presentation contains three sections: dyslexia and brain research, how to screen for the condition, and criteria for identifying effective interventions. The brain research section stems from a combination of

information found Spafford's book, *Dyslexia and Reading Difficulties*, as well as Shaywitz's book, *Overcoming Dyslexia*. The goal of this section is to help teachers shift their thinking towards classifying dyslexia as a neurological difference. This section also includes a list of early and later clues to dyslexia as outlined in Shaywitz's work (2004). The screening section explains the rationale behind the Feifer Assessment of Reading and models how to give the assessment and score the assessment. Finally California's Guidelines for Dyslexia suggest effective approaches for providing interventions for students suspected of having dyslexia. A historical perspective of the Orton-Gillingham method is outlined. In addition a comparison of the several dyslexia intervention programs that stem from this method are described. Several multi-sensory activities are modeled for the group to illustrate how to combine visual, kinesthetic and auditory elements in a lesson.

Audience and Setting

Teachers, administrators, and parents who wish to understand current research about dyslexia and how to move forward with assessment and interventions would benefit from this professional development. Educators and parents who suspect that they have students with dyslexia are often eager to begin creating a plan of action. This professional development will serve those who are in the beginning stages of making a plan for an individual child, classroom or whole school.

Instruments

A Google Form was created to first assess the background knowledge of dyslexia amongst parents and teachers. The questions examined the extent to which participants prescribed to common myths about dyslexia and if the level of understanding of assessing for dyslexia and proven interventions. The survey was distributed to teachers through three different

methods to maximize participation: email, grade level newsletters and whole school newsletters. The school community, including staff and parents, was distributed through these newsletters as well.

Google Slides was used to create the presentation. The sections of the slide show include illustrations of an individual with dyslexia's brain, lists of early clues to dyslexia, and an example of a complete intervention plan from Shaywitz' book *Overcoming Dyslexia* (2003). Two assessments are presented: the Feifer Assessment of Reading (2017) and a Phonological Awareness assessment (Zgonc, 2010). A sequence for presenting phonemes was taken from *Recipe for Reading* (Bloom & Traub, 2005). An interactive session with examples of activities will accompany the slide show. Examples of intervention activities for tier 1, 2 and 3 students were found from four sources; Phonological Awareness (Zgonc, 2010), *Overcoming Dyslexia* (Shaywitz, 2005), *Recipe for Reading* (Bloom & Traub, 2005) and Comprehensive Orton-Gillingham Training (IMSE, 2018). Then at the end of this training a second survey was created on Google Slides to assess perceptions of understanding about dyslexia, how to assess it and what interventions are considered best practice will be given to the participants.

Procedures

A week before the presentation the Google Form survey was digitally sent to participants. Table 1 shows the list of questions. All questions were answered with multiple choice or true or false, with the exception of the last question that asks participants to give a short answer.

*Table 1*Pre-presentation Survey

Dyslexia is rare.

More boys have dyslexia than girls.

Is letter reversal a sign that an individual has dyslexia?

Who can diagnose dyslexia?

Is dyslexia due to neurological differences, visual problems or another cause?

Dyslexia can be cured.

During my teacher training program I learned about dyslexia, how to assess for it and how to implement proven interventions (teachers only).

I would know how to get help for my child if I suspected he/she had dyslexia. (Parents only)

Students that are found to have dyslexia should get interventions in or out of the classroom?

What is one proven strategy for teaching individuals with dyslexia to read? If you do not know one please, write "I don't know."

The presentation included the results of the survey to remind the participants of the guiding questions and also show the varying thoughts about dyslexia among the community.

The presentation will be given orally with the created slideshow as a guide. The contents of Figure 2 show the headings of each slides. The progression goes from general knowledge about dyslexia to assessment and then finally interventions.

*Figure 2**Table of Contents for Dyslexia Presentation*

General Information about Dyslexia

Slide 1 History of Dyslexia Research
 Slide 2 California’s Legislation for Dyslexia
 Slide 3 International Dyslexia Association’s Definition of Dyslexia
 Slide 4 Brain Research
 Slide 5 Subtypes of Dyslexia
 Slide 6 Myths and Misconceptions about Dyslexia

Assessment for Dyslexia

Slide 7 Early Signs
 Slide 8 How to Deliver the FAR Screening
 Slide 9 How to Deliver the Phonological Awareness Assessment

Interventions

Slide 10 California’s Guidelines for Dyslexia
 Slide 11 Systematic Phonics Instruction
 Slide 12 Multi-sensory Education
 Slide 13 Orton-Gillingham Approach and Related Programs
 Slide 14 Examples of Tier 1,2 and 3 supports

The presentation will conclude with a short written evaluation asking the three questions shown in table 3 to assess if participants gained new information about dyslexia and feel more ready to serve students with dyslexia. The Likert-Type scale of 1. Disagree 2. Somewhat Disagree 3. Neither Agree nor Disagree 4. Somewhat Agree 5. Agree

Table 4
 Post-presentation evaluation

I understand what dyslexia is.
 I know how to screen for dyslexia and who ultimately give a formal diagnosis.
 I feel comfortable delivering suggested interventions.

Summary

The flow of this project begins with overarching knowledge about dyslexia and then gradually narrows to the more specific. This is intentional because without a foundational

understanding of dyslexia it would be difficult for teachers and parents to implement a plan to serve those students with dyslexia. Moreover, there is much to unlearn about dyslexia because the topic is rife with misconceptions and assumptions. The project ends with the suggestion of a clear plan for school-wide screening and monitoring, which will fulfill the ultimate goal of this project to inform teachers and parents about dyslexia and give those tools to find and appropriately serve those with dyslexia.

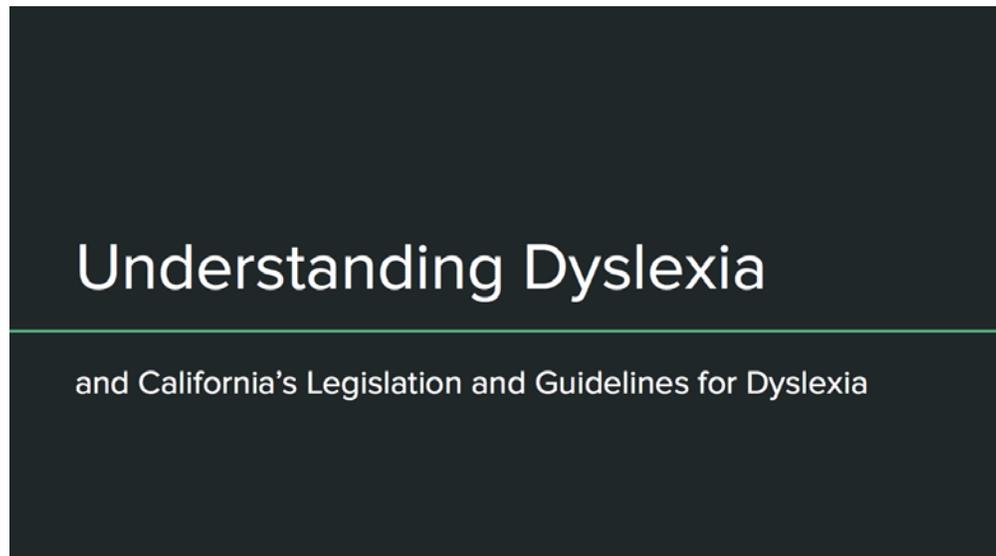
Chapter 4 Professional Development

The purpose of this project was to create a concise and usable professional development for educators and parents about California's new dyslexia legislation, how to screen for dyslexia and what classroom interventions are considered best practice. After general information and a historical perspective of research surrounding dyslexia was presented, an overview of legislation, assessment and possible interventions was given.

Before the following presentation was delivered, this survey was given to assess prior knowledge. Then during the presentation the results of this survey were tied into the presentation. [Link to Survey](#)

The direct purpose for slides in each section of the presentation and key points to add during the presentation were given under the screenshots of the slides, but the slideshow can be found in it entirety here: [Link to complete slideshow](#)

Title Page and Professional Development Agenda



Professional Development Agenda

Section 1 Historical Perspective of Dyslexia Research

Section 2 Current Brain Research

Section 3 Definition of Dyslexia

Section 4 Myths and Misconceptions about Dyslexia

Section 5 Dyslexia Legislation in the US and California

Section 6 Discovering Dyslexia and Assessment

Section 7 Examples of Intervention Strategies Supported by California's Guidelines for Dyslexia

Section 1: Historical Perspective of Dyslexia Research

The purpose of this section is to show how dyslexia has been an interest for researchers for over a century. Despite early researchers naming it “word blindness,” much of the early research is still prevalent today. The first slide describes a child whose only difficulty was reading. This idea will be later connected to the International Dyslexia Association’s definition for dyslexia when it explains that the deficit is unexpected because there were no other cognitive delays (IDA, 2002). The second quote, while harsh language, begins the discussion of how some students are dismissed because they cannot read. The second slide shows a continuum of reading difficulties and highlights the fact that dyslexia is still often overlooked today. This sets the stage for later slides where there is a call for earlier identification and interventions. The discrepancy model, where evaluations by a special education team find a student to be two years behind grade level benchmarks, creates a system where students need to be two years behind to qualify for extra supports. This means that students, if identified at all, will not be until 3rd grade. They have then missed important years for intervention.

History of Dyslexia Research

- 1887 German physician, Roudolf Berlin: described “word-blindness”
- 1896 Dr. Pringle described a 14 year old boy: “He has always been a bright and intelligent boy, quick at games and in no way inferior to others his age. His great difficulty has been- and is now- his ability to read.”
- 1905 Dr. Collins described these symptoms of word-blindness: “were frequently overlooked and put down to mere stupidity.”

History of Dyslexia Research

- 1983, Shaywitz began longitudinal study began with 445 elementary students in Connecticut. This later became the foundation for Yale’s Center for Dyslexia and Creativity

This study found that there is no definite line between good readers and dyslexic readers, but instead a continuum.

This is a problem, because of the discrepancy model.

“By not recognizing shades of gray represented by struggling children who haven’t yet failed enough to meet a particular criterion, schools may be under-identifying many children who will go on to experience significant reading problems”.

Shaywitz, S. (2003). *Overcoming dyslexia*. Alfred A. Knopf: New York.

Section 2: Brain Research

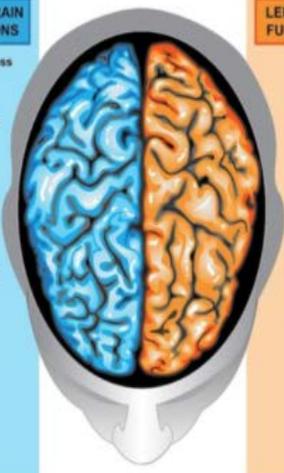
The purpose of this section is to show the more current research about dyslexia and how MRI scans are revealing much information about dyslexia. The first slide set the purpose for learning about how dyslexia research has changed. The second slide provided a review of what each hemisphere in the brain controls. This is important because the subsequent slides shows a dyslexic brain compared to a typical reader’s brain. The third slide shows the section of the right hemisphere that a typical reader uses for reading. It is important to note the size of the areas in

the frontal area and that the back of the brain is used while reading. The next two slides compare a typical reader's brain with an individual with dyslexia. These individuals compensate when reading by using their right frontal hemisphere. This is important because it is showing that they take a more difficult path to reading. These slides are based on Shaywitz's (2004) work already mentioned in the history of dyslexia research. The last slide shows how brain research continues to explore the appearance of dyslexia in the brain. The overlay between a typical reader's brain and a dyslexic reader's brain from Leonard and Eckert (2008) highlights the contrast between the two. This shows that the dyslexic reader has a more difficult and less direct pathway towards reading development. While researchers continue to use MRIs to investigate the brain pathways of dyslexic readers compared to typical readers during reading, Leonard and Eckert (2008), ask us to use caution when making generalizations about dyslexia based on brain imaging. They maintain that individual differences must be taken into account, since the brains are too unique and complicated to make definitive evaluations based on brain imaging. The final slide shows how brain research helps individuals with dyslexia understand why they are different and move forward. This section has two purposes: to show how brain research is being conducted to learn more about dyslexia, yet at the same time show how complicated and varied the brain is.

Significance of Brain Research

“At long last, thanks to functional imaging, dyslexic readers have the proof they have been seeking.” (Shaywitz, 2004).

Brain Research

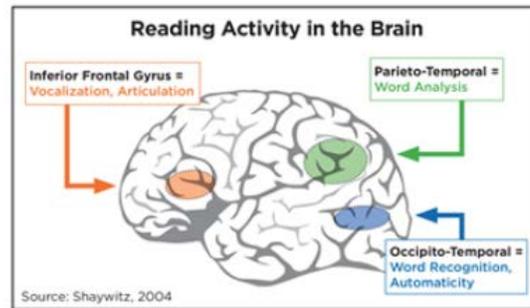


The diagram shows a top-down view of the human brain, split vertically into two hemispheres. The left hemisphere is colored blue and is associated with a list of functions. The right hemisphere is colored orange and is associated with a list of functions. The brain is shown within a white skull outline.

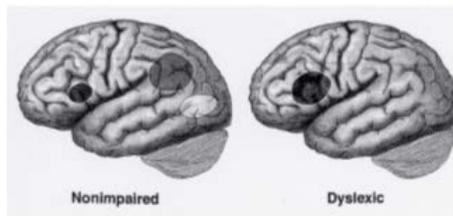
RIGHT-BRAIN FUNCTIONS	LEFT-BRAIN FUNCTIONS
Art awareness	Analytic thought
Creativity	Logic
Imagination	Language
Intuition	Reasoning
Insight	Science and math
Holistic thought	Written
Music awareness	Numbers skills
3-D forms	Rigby-hand control
Left-hand control	

<http://brainmadesimple.com/left-and-right-hemispheres.html>

Brain of a typical reader

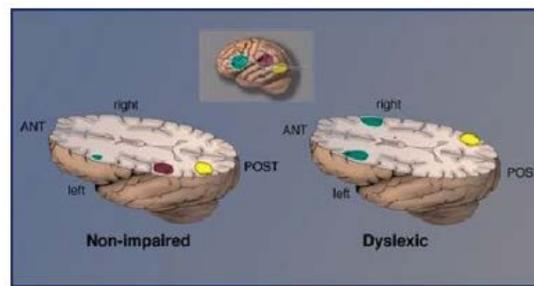


Underactivation of Neural Systems in the Back of Brain



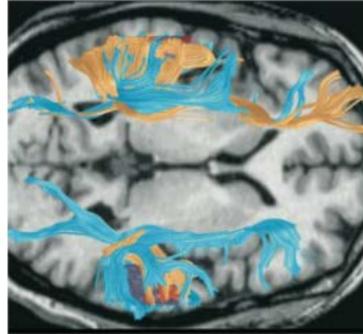
Shaywitz (2004), "This pattern of underactivation in the back of the brain provides a neural signature for the phonological difficulties characterizing dyslexia. This signature seems to be universal; it is true of dyslexic students in all languages and of all ages.

How dyslexic readers compensate over time



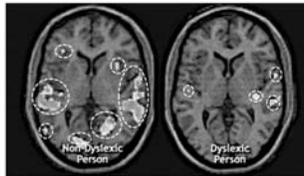
Shaywitz (2004) explained that dyslexic readers not only show an overactive Broca's area, but use areas on the right side of the brain. Thus, dyslexic readers "rely on a manual rather than automatic system for reading."

Overlay of a typical reader (yellow) and dyslexic reader (blue)



Leonard, C. M., & Eckert, M. A. (2008). Asymmetry and Dyslexia. *Developmental Neuropsychology*, 33(6), 663-681.

Using Brain Images to Empower Individuals Dyslexia



"I wish I could have seen and understood these elements of the brain when I was young and struggling to fit in, because the brain images clearly show what I found out to be true: that no matter how hard you try, you can't change who you are"

Foss, B. (2016). *The dyslexia empowerment plan: A blueprint for renewing your child's confidence and love of learning*. New York:

Ballantine Books

Section 3: Definition of Dyslexia

The purpose of this section is to introduce teachers to the International Dyslexia Association as a resource for teachers and families and present their definition of dyslexia.

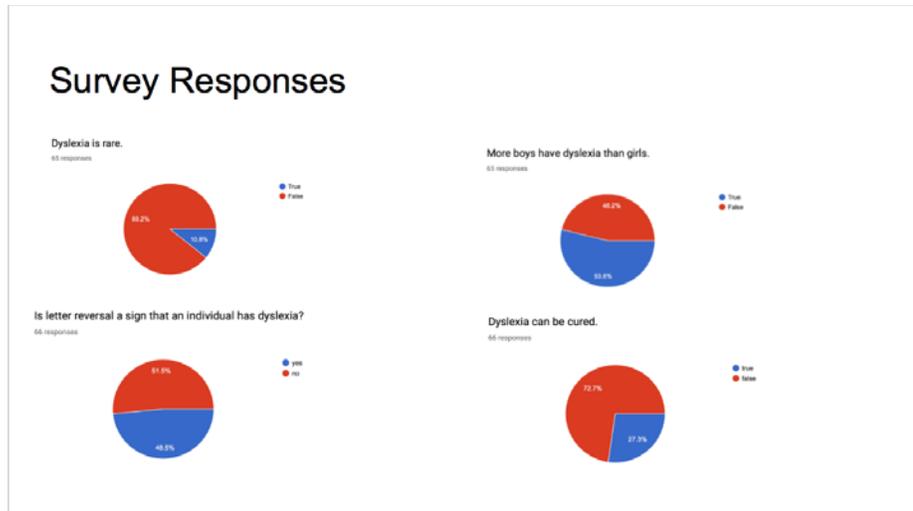
Key Points of International Dyslexia Association Definition of Dyslexia

- *Dyslexia is a specific learning disability that is neurobiological in origin.*
- *Difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities.*
- *Deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities.*

(IDA, 2002).

Section 4: Myths and Misconceptions**Example of Survey Connection**

This section connects to some of the questions in the survey given before the training. The following is an example so results of the survey will vary. The survey serves as an anticipation guide to the presentation, clueing participants in to key points. In this instance it also makes the point that there are not consistent beliefs about dyslexia among educators and parents.



The next two slides list some of the myths about dyslexia, with the presenter identifying the underlying truths after each bullet point. This section is important because it aims to prevent quick diagnosis of dyslexia based on these myths.

Spafford (2005) lists the following as truths about common dyslexia myths:

- Dyslexia is not a disease so it cannot be cured.
- There is no greater occurrence of dyslexia in males than females.
- Reversals and mirror writing happen with the same frequency in typical readers as dyslexic readers.
- Dyslexia has a genetic component, but it can also be acquired later in life through brain injury.
- Many gifted individuals are thought to have dyslexia. Some famous examples are Tom Cruise, Albert Einstein, Agatha Christie, Whoopi Goldberg and Leonardo Di Vinci.
- People with dyslexia can learn to read and write well, but take a different path to doing so and many do well in college.
- Being clumsy is not connected to dyslexia.

Sandman-Hurley(2016) expanded on this list to bring attention to the myths surrounding assessment and interventions by explaining the following:

- Our brains were wired to recognize things no matter how we see them. For example, we know a cow is a cow no matter which direction it is facing, so when young children are introduced to p,q,b and d they have to unlearn what their brains naturally do.
- It is not that the child with dyslexia needs to work harder, since they actually work harder than typical readers.
- Dyslexia is not due to lack of educational opportunities.
- It is not a medical condition, so it is not diagnosed by a doctor nor is there medication to ease the symptoms.
- Dyslexia is for life. Interventions can help an individual read and write better, but dyslexia will always be present.

Myths and Misconceptions about Individuals with Dyslexia

- It is a disease
- Most are Males
- Mirror Write
- Reverse letters all the time
- Always born with language/reading difficulties
- Gifted individuals are not dyslexic
- Won't do well in college
- Never learn to read or write well
- Are clumsy

Spafford, C. A., & Grosser, G. S. (2005). *Dyslexia and reading difficulties: research and resource guide for working with all struggling readers*. Boston: Pearson/Allyn and Bacon.

Myths and Misconceptions about Diagnosis and Interventions

- Interventions that target the visual system is misguided
- If students work harder they will improve
- Dyslexia is caused by poor teaching and lack of educational opportunities
- Dyslexia is a medical condition
- Dyslexia can be outgrow

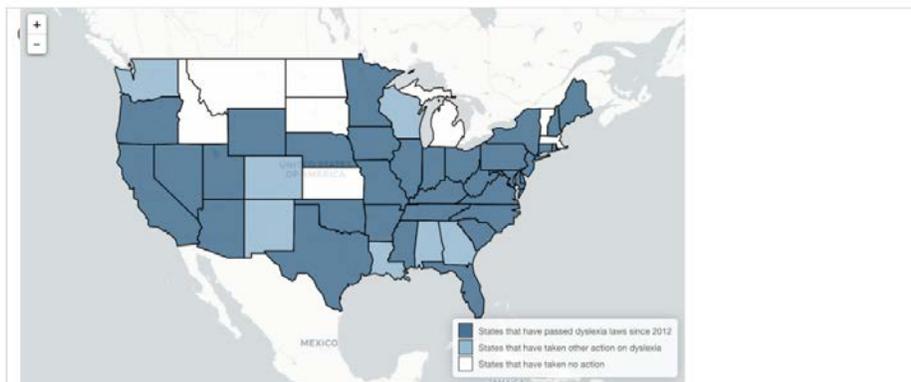
Sandman-Hurley, K. (2016). *Dyslexia advocate!: How to advocate for a child with dyslexia within the public education system*. London: Jessica Kingsley.

Section 5: Dyslexia Legislation in the US and California

This section shows how there is an upward trend for dyslexia legislation in the United States and within the past decade. Some key points to include are that 8 states have not passed legislation yet, that there has been an increase in legislation in the past 3 years, and that California passed Assembly bill 1369 to require the superintendent of education to write guidelines for educators about dyslexia to include evidence based, multi-sensory, explicit and structured literacy. The guidelines must also include suggestions for remediation and assessment. These guidelines were published by the 2017-18 school year.

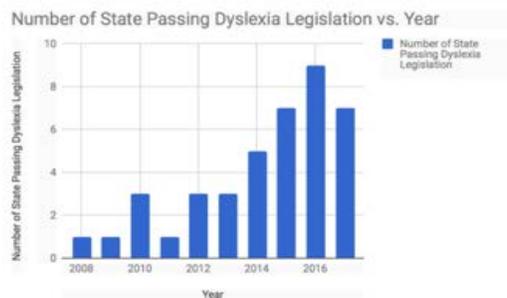
[Link to Full California Guidelines for Dyslexia](#)

Dyslexia Legislation in the US



Reports, A. (n.d.). States' laws to support dyslexic children mostly lack funding, accountability, training mandates.

Years States Passed New Dyslexia Legislation



Dyslexia Laws 2017. (n.d.). Retrieved March 26, 2018, from <https://www.dyslexicadvantage.org/dyslexia-laws-2017/>

California's Legislation for Dyslexia: Assembly Bill 1369

Educational Code 56335.

(a) The Superintendent shall develop **program guidelines for dyslexia** to be used to assist regular education teachers, special education teachers, and parents to identify and assess pupils with dyslexia, and to plan, provide, evaluate, and improve educational services to pupils with dyslexia. For purposes of this section, "educational services" means an **evidence-based, multisensory, direct, explicit, structured, and sequential approach** to instructing pupils who have dyslexia.

(b) The program guidelines shall include, but shall not be limited to, characteristics typical of pupils with dyslexia and **strategies for their remediation**, as well as information to assist educators in **distinguishing between characteristics of dyslexia and characteristics of normal growth and development**.

(c) In developing program guidelines pursuant to subdivision (a), the Superintendent shall consult with teachers, school administrators, other educational professionals, medical professionals, parents, and other professionals involved in the identification and education of pupils with dyslexia.

(d) The Superintendent shall complete the program guidelines in time for use no later than the beginning of the **2017-18** academic year.

(e) The Superintendent shall disseminate the program guidelines through the department's Internet Web site and provide technical assistance regarding their use and implementation to parents, teachers, school administrators, and faculty members in teacher training programs of institutions of higher education.

Section 6: Discovering Dyslexia and Assessment

The purpose of this section is to create a bridge between research about dyslexia to how legislators are using that information to implement and improve school programs for dyslexia in California's education system. The first slide highlights how the guidelines are not legally binding, but do call on educators to identify struggling readers. Spafford (2004) shares early signs of dyslexia, which educators and parents can use to monitor students and suggest further screenings and evaluations. The third slide provides information from Shaywitz's Longitudinal Study that concluded that 1 in 5 children are struggling with reading, that dyslexic children are not usually identified, if at all, until 3rd grade, and she also notes the Matthew Effect, the poor get poorer and the rich get richer, meaning the gap between struggling readers and typical readers widens over time (Stanovich, 1986). Finally, the Feifer Assessment of Reading (FAR) is described as an example of a dyslexia screening and assessment tool. This assessment also assesses for different subtypes of dyslexia. These subtypes become important for determining the best interventions for individual learners.

Supports for students depending on the results of the FAR screening are developed during a Student Study Team meeting. Zgonc's (2010), *Phonological Awareness; Assessment Tools & Strategies*, is presented as an example of a resource that can help plan targeted interventions, since its activities are based on specific skills that can be assessed and the Response to Intervention Model. After the team decides on strategies, the teacher should document their effectiveness. The team can also recommend the full FAR screening, which could lead to a 504 plan or Instructional Education Plan. Dyslexia falls under the category of Specific Learning Disability, but it depends on the full battery of assessments to determine

eligibility for these services.

[Link to FAR Publishing Information](#)

California's Guidelines- Purpose Statement

Although the information provided in these guidelines is not legally binding on local educational agencies, the goal in publishing *California Dyslexia Guidelines* is to create a document that provides practical resources for identifying and educating students who are struggling academically because they cannot read.

Department of Education. (2017). California Guidelines for Dyslexia. Retrieved from

<https://www.cde.ca.gov/sp/se/ac/documents/cadyslexiaguidelines.pdf>

Signs of Dyslexia

pre-school	Difficulty learning nursery rhymes, creating rhymes, naming things quickly, reciting the alphabet in order and pronouncing familiar words
K- 1st	Difficulty creating rhymes for one syllable words, separating compound words, separating words into individual sounds and remembering sight words.
2nd- 3rd	Omission of grammatical endings (s, ed, ing), difficulty segmenting multi-syllabic words, confusion over words that look familiar (what/want) difficulty remembering names, phone numbers and dates, consistent reading and spelling errors.
4th-8th	History of reading difficulties, lack of fluency, lack of attention to punctuation, low comprehension because reading speed is labored, transposing letters in familiar words (from, form), difficulty with math word problems and better performance on oral activities than written or timed activities.

Assessment Concerns

- 1 in 5 children are reading below benchmark standards
- Dyslexic children, if identified, are typically diagnosed after 3rd grade.
- Schools diagnose more boys than girls, but the Connecticut study shows that the incidences between boys and girls is more even.
- Matthew Effect

Shaywitz, S. (2003). *Overcoming dyslexia*. Alfred A. Knopf: New York.

Assessment

The Feifer Assessment of Reading

- Comprehensive assessment of the multiple processes involved in reading
- Subtype of reading impairment
- Use to design skill-specific interventions in a RTI model.

Feifer, S. G., & Nader, R. G. (2015). *FAR: Feifer Assessment of Reading*. Lutz, FL: PAR.

Subtypes of Dyslexia

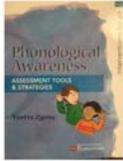
Subtype	Characteristics	Evidence
Dysphonetic	Poor phonological awareness	-nonsense words cannot be decoded -cannot segment or blend phonemes
Dyseidetic	Difficulty recognizing sight words	-can read nonsense words -can segment and blend -irregular words are misspelled -reading accuracy improves when font is larger
Dysphonetic-Dyseidetic	Both poor phonological awareness and difficulty recognizing sight words	All of the above

Spafford, C. A., & Grosser, G. S. (2005). *Dyslexia and reading difficulties: research and resource guide for working with all struggling readers*. Boston: Pearson/Allyn and Bacon.

Multi-Tiered Level of Support



- After students are screened using an Assessment like the FAR, students are placed in a multi-tier level of support system.
- Example of resource for interventions for phonological awareness based on Multi-Tiered Level of Supports



- Student Service Team meeting (SST) to create plans for inclass supports
- Assessment can lead to 504 plan or IEP supports

Zgonc, Y. (2000). *Sounds in action: Phonological awareness activities and assessment*. Peterborough, NH: Crystal Springs Books.

MTSS/RTI. (n.d.). Retrieved March 27, 2018, from <http://www.fastbridge.org/assessments/mtssrti>

Section 7: Interventions

This section provides a link between the California Dyslexia Guidelines and practical examples of interventions with links to programs that follow the suggested criteria. It also aims to provide a historical perspective of the development of these programs to understand their similarities and differences. The first slide presents the suggested California Guidelines for interventions, while the next slide defines structured literacy. Here the key point is that many programs fall under this umbrella, but they should include a systematic structure, be evidence based, and have a multisensory approach. Bloom and Traub's, *Recipe for Reading* (2005), sequence for introducing sounds and phonemes is presented to show an example of how phonics instruction can be structured. The Guidelines also suggest explicitly teaching vowel patterns. An example of lessons for teaching open and closed syllables and the silent-e will be shown. This is to relate back to the systematic and explicit instruction that the Dyslexia Guidelines suggest educators use.

Next a historical perspective of multi-sensory education will be given by explaining that Dr. Orton developed this theory, inspired by Helen Keller, in the 1920s. Then later Anne

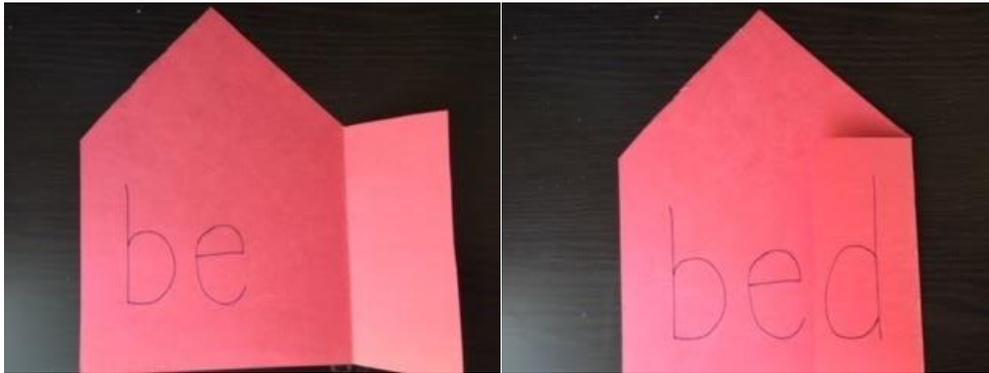
Gillingham developed a reading program in 1936 based on his theories. This became known as the Orton-Gillingham approach. Many programs have been created from this approach, but they all include kinesthetic, visual and auditory input simultaneously. Examples of multi-sensory lessons and links to popular programs will be included in this section. The presenter will use an Elmo to model the hands-on activities while the participants try them at their tables. The final slide highlights Foss' (2016) argument that there are three types of reading; eye, ear, and finger reading. He asserted that if a child best receives information from an auditory method an appropriate accommodation would be one of the many text to speech devices available. Furthermore, speech to text devices help students with dyslexia express their ideas

What Does California's Guidelines for Dyslexia Say About Interventions

- California *Education Code* Section 56335(a) educational services for students with dyslexia as follows: " 'educational services' means an evidence-based, multisensory, direct, explicit, structured, and sequential approach to instructing pupils who have dyslexia.
- Although there are many approaches with different names that fall under the "Structured Literacy" umbrella—for example, Orton-Gillingham, Simultaneous Multisensory, Explicit Phonics—all have common content (*what is taught*) and principles of instruction (*how it is taught*).

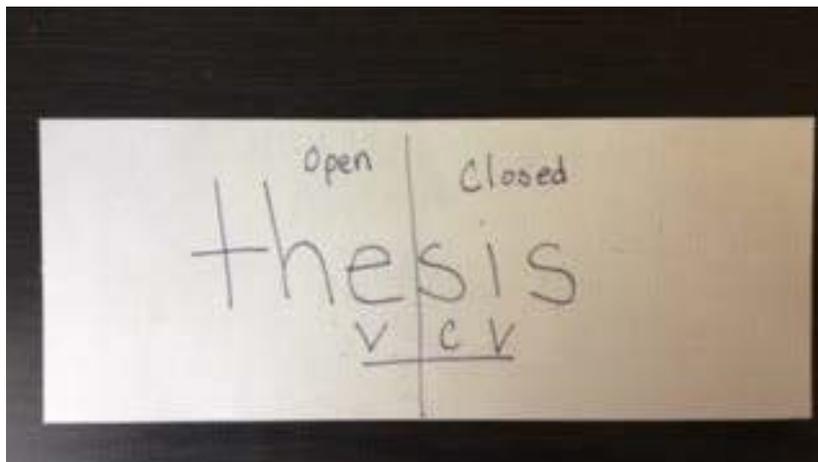
Department of Education. (2017). California Guidelines for Dyslexia.

Figure 1: Example of Lesson to Teach Open and Closed Syllables



Note: The teacher shows the open door of the house and says “be” and explains in an open syllable the vowel has the long sound. Then the teacher closed the door and says, “bed” and explains that when the vowel is between two letters it is the short sound.

Figure 3: Example of Decoding a Word Using Vowel Patterns



Note: Here the teacher and student write the word. First they find the two vowels and make a bridge between them. Next they label the consonant between them and use the vowel syllable chart to determine the pattern. Finally they label the open and closed syllables to decode. Figure 2: Example of Lesson to Teach Silent-e Using a Blending Board





Note: First the students say the sounds and blend the CVC word “bit” and then the teacher adds the silent e and the end to change the vowel pattern to CVCe.

Multi-sensory Instruction

VAKT: Visual, Auditory, Kinesthetic and Tactile

The phrase “Orton-Gillingham approach” refers to the structured, sequential, multisensory techniques established by Dr. Orton, Ms. Gillingham, and their colleagues. Many programs today incorporate methods and principles first described in this foundational work, as well as other practices supported by research.



International Dyslexia Association – ...until everyone can read! (n.d.). Retrieved February 18, 2018, from <https://dyslexiaida.org/>

Examples of Multisensory Activities

- 1) Sounds in the Sand

 - 2) Sight Words

 - 3) Handwriting
-

Figure 3: Setup for Presentation Examples for Multisensory Activities

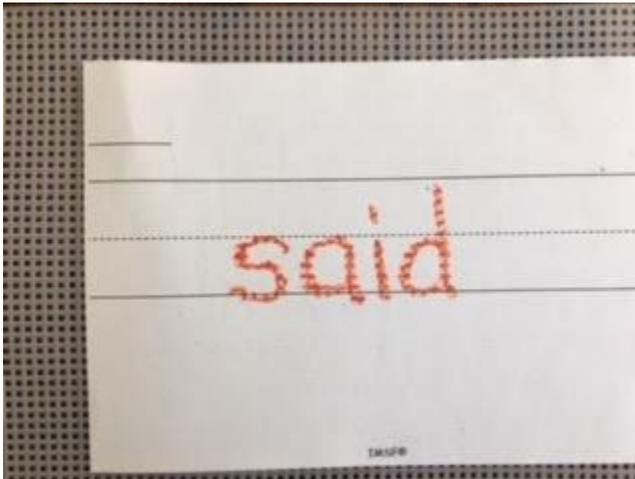


Figure 4: Sounds in the Sand



Note: Teacher says, sound is /c/. Student writes the letter c and says, "C says /c/.

Figure 5: Plastic Grid to Create Bumps on Paper for Sight Word Practice



Note: Plastic needlepoint sheets are placed under the paper and the teacher models the writing of the word and says the word. The student then copies it on his paper with red crayon. Next the child traces his finger over the word spelling and saying the word.

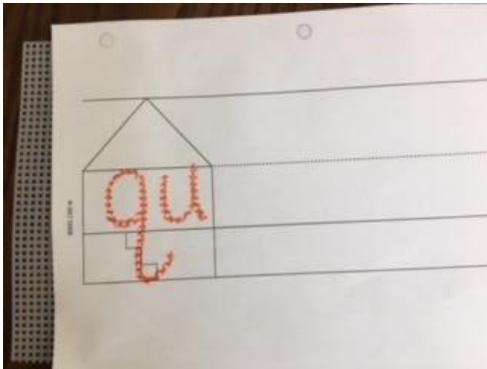
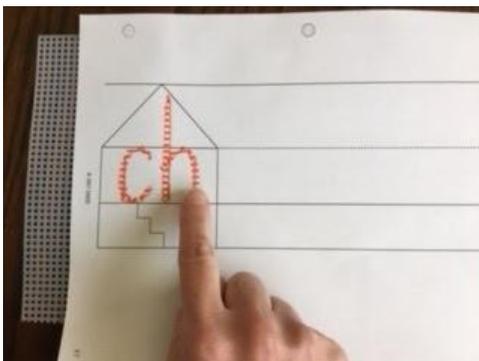


Figure 6: Handwriting House



Comparison of Programs that Stem from the Orton-Gillingham Approach

Program Name	Description
Linda-Mood Bell	Hear and feel the sounds, students also use mirror to see mouth formation when making sounds
Wilson Reading	Has four levels of intervention from preventative whole class instruction to intensive one:one tutoring.
Slingerland	Systematic, multisensory approach that was adapted for the whole classroom.

International Dyslexia Association – ...until everyone can read! (n.d.). Retrieved February 18, 2018, from <https://dyslexiaida.org/>

[Link to Lindamood-Bell Resources](#)

[Link to Wilson Reading Resources](#)

[Link to Slingerland Resources](#)

Accommodations

Different Types of Reading

- Eye Reading- text
- Ear Reading- audiobooks
- Finger Reading- braille



Foss, B. (2016). *The dyslexia empowerment plan: A blueprint for renewing your child's confidence and love of learning*. New York:

Ballantine Books

Chapter 5 Discussion

Introduction

In the documentary *Embracing Dyslexia*, Kelli Sandman-Hurley, director of the Dyslexia Training Institute, reported that teachers often end her dyslexia training program wondering why they had not learned how to properly find and provide supports for students with dyslexia (Macias, 2013). Symptoms of dyslexia have been observed and noted for over a century, but for the most part teachers remain unsure about how to assess its presence and implement interventions for students with dyslexia. Washburn (2011) wondered if preservice teachers were learning to teach phonics well enough to serve students with dyslexia and found that they were not. It is estimated that 5-17% of students fall somewhere on the dyslexia continuum so it is reasonable to assume that every teacher will encounter students with dyslexia (Habib, 2013). Without sufficient training and knowledge about dyslexia, how can these teachers identify which of their students with dyslexia and provide them with evidence based interventions? The purpose of this project was to develop a professional development opportunity that supports teachers in identifying and providing appropriate classroom supports to students with dyslexia.

Lessons Learned

The survey conducted during this project asked participants in the professional development if they had learned about dyslexia in their credentialing program, and 15% of the 66 participants said they had, 10% could name a proven program, and 0% had been trained in one of these methods. This echoes the idea that teachers believe they do not know how to identify and provide interventions for students with dyslexia and that they have not received sufficient training. Teachers typically want to help students in their classes succeed, but the lack of

training in the area of dyslexia means students with dyslexia do not have access to proven interventions. Here lies a stalemate: First, Shaywitz's (2005) research claims that 1 in 5 students have some level of dyslexia. Second Shaywitz (2005) explained that many are not identified until after 3rd grade, and Sandman-Hurley (2018) stated that it is often not until middle or high school that they are identified. Third, teacher certification programs do not typically instruct preservice teachers on how to screen for dyslexia and provide early interventions and appropriate accommodations. Therefore before identification occurs, countless students are without early intervention, since general education teachers are not adequately trained in this area of dyslexia.

The flow of this professional development moves from a broad view of dyslexia by looking at it from a historical perspective as well as current brain research to a more gradually specific lens of state legislation and finally assessment and intervention. This was intentionally done to use the research to develop a basis of understanding of dyslexia, dispel common myths, and highlight some of the research that has influenced thinking about dyslexia before getting into the specifics about suggestions for assessment and interventions presented in the California Dyslexia Guidelines.

The first implementation of this professional development experience revealed that teachers were eager to learn about more specific interventions they could employ in their work with their students. This was reflected in the post survey questionnaire, where all participants agreed or somewhat agreed that they understood dyslexia better and how to seek screening, but 36% neither agreed nor disagreed that they felt comfortable delivering interventions.

Torgesen (1998) stated, "To the extent that we allow children to fall seriously behind at any point during early elementary school, we are moving to a "remedial" rather than a preventative model of intervention" (p.32). In another article, Torgesen (1998) argued that the obstacles to

making sure all children can read are increase of academic diversity in classrooms and poor teacher training and literacy programs that attempt to appeal to everyone instead of an evidence based approach. This spurred a reform in education, namely Response to Intervention or RTI, where students were screened and put in to groups or assigned 1:1 instruction based on their level of need to prevent later need for an Individual Education Plan or IEP (Gilbert, 2013). The point here is that if children are screened early and provided interventions based on the RTI model, there would be fewer students two years behind. Enwefa (2005) reiterated this idea,

The consequences of a slow start in reading become monumental as they accumulate exponentially over time. One of the best solutions to the problem of reading failure is to allocate resources for early identification, assessment, prevention, and intervention. It is a tragedy of the first order that while we know clearly the costs of waiting too long, few school districts have in place a mechanism to identify and help children before failure takes hold.”

Therefore, it is the intention of this project to motivate educators to learn about dyslexia, and focus their attention to key points for creating a structured literacy program. The question of who should initiate this program comes into question.

Recommendations for Implementations

The survey will be given a week before the presentation to give the presenter time to review the responses and understand the background knowledge of the attendees. The survey also acts as an anticipation guide for participants as it previews several key points that will be addressed. Before the presentation the presenter will need to gather materials for the multi-sensory activities such as two toned sand, red crayons, handwriting paper, and needle point

sheets. The presentation is suitable for educators and parents. The presentation takes an hour and a half but could take longer if participants need time for questions and clarifications.

Limitations

The overarching goal of this project was to raise the participant's level of understanding about dyslexia and help them begin their search for assessments and interventions that best suit their students; however, the topic of dyslexia is immense and there are many layers to the issue. The presentation created in this project can only hope to inspire teachers to seek out more training and begin to develop a plan within their classroom and school to screen for dyslexia and use evidence-based methods to provide multi-tiered levels of supports. It aims to show the movement of dyslexia legislation in California; however, this legislation only requires the superintendent to create guidelines for dyslexia assessment and interventions, but there is no mandate that they be followed. Therefore, it is up to the district, administrators, and schools to evaluate programs to decide if they are in-line with the guidelines suggestions for early detection and programs that explicitly and sequentially teach phonics and use a multi-sensory approach.

This professional development project presents assessments and programs that follow the guidelines, yet there are many more. Teachers can give the FAR screening, but this professional development does not specifically train them to administer it. Instead, teachers would need to attend a separate training to learn how to administer this screening. Furthermore, the time constraints of this professional development are not sufficient enough to fully train teachers in any one of the intervention programs. Examples of multi-sensory activities are given to illustrate how an activity simultaneously employs visual, kinesthetic and auditory elements; however, these do not replace a complete program training. The hope is that educators attending the professional development will be able to evaluate their current reading program for any missing

elements of a structured literacy program. Then these educators will be inspired to seek a program that fills these gaps and attend the necessary training to implement that program with fidelity. After all, a key component of structured literacy is that it is evidence-based and therefore must be implemented exactly how it was tested.

Conclusion

The solution to future problems are unknown, and in many ways society is counting on the next generation to solve them. In a way, the shift from an education system based in memorization and procedures to current focus on higher level thinking and problem solving, testifies to society's recognition that the future depends on innovative and original thinkers. As brain research about dyslexia continues with MRI scans, new levels of understanding emerges about how unique a dyslexic brain truly is. "Present results show that NI (non-impaired) readers have stronger left lateralization for language than DYS (dyslexic) readers, who rely on bilateral systems. This extends previous findings, indicating that right-hemisphere homologs are not only more active in dyslexia but also more strongly connected to the rest of the brain" (Finn, 2014). These types of findings show that a dyslexic brain activates the right hemisphere which is responsible for creativity, imagination and artistic expression. This connection between dyslexia and creativity has been researched. Cancer (2016) found, "Our results suggested that people with developmental dyslexia use creative thinking especially when the situation requires to establish relationships between different or opposite elements, and finding alternative solutions." In the end, educators are in the business of preparing students for the future. So, schools owe it to our "outside of the box" thinkers, an appropriate education for their style of learning. California's Guidelines for dyslexia is a start, but it will take teachers and administrators to commit to making assessment and interventions for dyslexia a reality within schools.

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