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Teacher Training on Teaching Students with Dyslexia

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Teacher Training on Teaching Students with Dyslexia

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Submitted in Partial Fulfillment of the Requirements for the Degree

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School of Education

Dominican University of California

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Abstract

Dyslexia is a central educational issue that teachers are facing today; it is important that teachers receive specific training on how to meet the educational needs of students with dyslexia in their classrooms. The purpose of this study was to determine the amount of training that teachers have received, if there was a correlation between grade level and training, and if teachers have a desire for additional training. The main focus of the literature review includes an overview of dyslexia including the history and sign and symptoms. There was also an emphasis on the dyslexia in the classroom, including teacher misconceptions, how to teach students with dyslexia, and the need for teacher training. The study asked teachers in a specific district to respond to a survey revolving around the amount of training they had received on how to teach students with dyslexia. The results of the survey indicated that the majority of teachers have not received an adequate amount of training on how to meet the unique needs of students with dyslexia in their classrooms.

Introduction

Dyslexia is a central educational issue that schools are facing today, but because there are no physical manifestations, it can go undiagnosed or unaddressed. It is extremely important to the success of the child that educators be aware of the topic of dyslexia and how to address it in the classroom. This paper examined the amount of specific training teachers received on how to teach the students in their classes who have dyslexia.

This study also explored whether there is a difference between the amount of training elementary school teachers (kindergarten-fifth grade) and upper grade (sixth-twelfth grade) teachers have on how to teach students with dyslexia. The purpose of this study is to determine how well prepared teachers are in a particular district and to determine what, if any, additional training needs to take place.

Background and Need

According to the U.S. National Library of Medicine “developmental reading disorder, also called dyslexia, is a reading disability that occurs when the brain does not properly recognize and process certain symbols” (Goldenring, 2010. para. 1). Dyslexia occurs in the part of the brain that interprets language. Most students with dyslexia have at or above average intelligence but show a difficulty in reading and spelling. Dyslexia most commonly affects phonological awareness but there is also evidence which shows that it also has an impact on coordination and balance. It is believed that students with dyslexia have difficulty automatically learning new skills or putting new skills into long-term memory (Haslum and Miles, 2007). Without this level of automaticity, learning new skills can be very difficult. Dyslexia is not an inability to learn. The dyslexic brain simply learns in a different manner. Most students with

dyslexia will not be qualified or benefit from instruction in a special education program. Their specific needs may be met by the classroom teacher.

Dyslexia is a common learning disability that all teachers will encounter in their classrooms. Fifteen to twenty percent of the population exhibits some form of dyslexia (International, 2012). This means that on average elementary school teachers can have three to six students in their class that exhibit some form of dyslexia. This number only increases for middle and high school teachers. If the goal as educators to meet the needs of all their students, then they must find ways to assist students with dyslexia.

The key to helping a student with dyslexia is early detection. According to the International Dyslexia Association:

If children who are dyslexic get effective phonological training in Kindergarten and 1st grade, they will have significantly fewer problems in learning to read at grade level than do children who are not identified or helped until 3rd grade. Of those who are considered poor readers in 3rd grade, 74% remain poor readers in the 9th grade. Often they can't read well as adults either. (2012 p. 2)

Many of our schools do not test children for specific learning needs until they are two or more grade levels behind their peers, and when they are tested, dyslexia is not one of the major learning disabilities tested for. These two issues can have dramatic effects on students for the rest of their lives. Teachers have to be aware of the signs of dyslexia and make modifications in the classroom. If teachers have a firm understanding of dyslexia then they will be better equipped to meet the needs of their students. If they do not understand dyslexia then they will not be able to meet their students' needs.

Federal laws require that all students be given equal access to education. In order to ensure that this is possible, teachers need to be highly qualified and trained in how to work with

students with special needs. According to the Individuals with Disabilities Improvement Act of 2004:

GENERAL PROVISIONS... (c) FINDINGS: Congress finds the following: (1) Disability is a natural part of the human experience and in no way diminishes the right of individuals to participate in or contribute to society. Improving educational results for children with disabilities is an essential element of our national policy of ensuring equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities.... (5) Almost 30 years of research and experience has demonstrated that the education of children with disabilities can be made more effective by— (E) supporting high-quality, intensive preservice preparation and professional development for all personnel who work with children with disabilities in order to ensure that such personnel have the skills and knowledge necessary to improve the academic achievement and functional performance of children with disabilities, including the use of scientifically based instructional practices, to the maximum extent possible. (p. 2-3)

Teachers need to be properly trained in order to best meet the needs of their students. The question then becomes how many teachers are actually trained specifically to work with students with dyslexia. It cannot be implied that teachers have the innate ability to teach students with special needs. They need to be given special direct instruction on how to best meet the educational needs of their students with dyslexia.

Statement of Problem

In light of new understandings and awareness of dyslexia, it is important to examine the amount of training that teachers receive on how to teach students in their class who have dyslexia. In order to fully meet the needs of students with dyslexia, teachers must have a firm understanding on how dyslexia affects the brain and what can be done in the classroom to assist students. There is a basic assumption that teacher education programs and continuing teacher education are preparing teachers to meet the needs of all students. Those in the education field need to know if their teachers have been given specific instruction on how to teach students with

dyslexia. It is also important to understand the factors that affect the amount of training teachers have on the subject.

Purpose Statement

The purpose of this study was to determine what training teachers have on the specific subject of dyslexia. It also examined the relationship between the amount of training that teachers have and the grade level they teach.

Research Questions

This survey examined the following research questions:

1. How much training have teachers received on the topic of teaching students with dyslexia and what is their confidence level with this training? Where are teachers receiving their training?
2. Is there a relationship between grade level taught and the amount of training teachers have on teaching students with dyslexia?
3. Do teachers in the district of study want additional training on how to teach students with dyslexia?

Theoretical Rationale

This study assumed, based on previous studies cited in the literature review, that students with dyslexia will not learn the same way as their peers. It is not that they are not trying or that they are not paying attention. The dyslexic brain is unable to learn the same way as the non-dyslexic brain. The design of this study assumes that without appropriate direct instruction, students with dyslexia will not be able to fully access the material needed. They may be able to function without any help, but without assistance, they are not being given the opportunity to meet their full potential. It is important for teachers to be given proper training to fully meet the

needs of all their students. The modifications needed for a student with dyslexia are not complicated. They can be easily incorporated into everyday lessons. However, if teachers do not know what to look for or are not given any training they will lack the tools needed to meet the needs of their students.

Review of the Literature

This literature review focuses on the history of dyslexia in the scientific community as well as in the educational system. It also examines the many misconceptions that teachers have on the topic of dyslexia and the amount of training teachers receive on the topic. Though dyslexia is not fully understood, the purpose of this literature review was to examine the history of dyslexia.

Review of the Previous Research

The documented history of dyslexia dates back well over 100 years among experts. However, it has been a long and tenuous journey with limited consistency among experts. In 1877 German neurologist Adolph Kussmaul first used the term *alexia* meaning word blindness. The term word blindness would persist until the 1920s. Kussmaul examined a number of patients who experienced reading difficulties. This research was some of the first to show evidence that dyslexia, or word blindness, was separate from other neurological disorders such as strokes or intellectual disabilities. Because of his work, neurologists started to examine word blindness and reading disabilities under their own cannon (Developmental Dyslexia, 2007).

Signs and symptoms of dyslexia.

“Children and adults with dyslexia simply have a neurological disorder that causes their brains to process and interpret information differently” (“What is Dyslexia”, 2012. p. 2). Dyslexia is neurological; it is not a product of environment. Students with dyslexia cannot learn the same ways as their peers. The research reviewed here suggests that it is so important for educators to make a conscious effort to be aware of the signs and symptoms of dyslexia and know what can be done in the classroom to promote learning for these students.

Dyslexia comes in many forms and presents itself differently in different people. But there are still some telltale signs that teachers can look out for in the classroom:

Once your child is in school, dyslexia signs and symptoms may become more apparent, including: Reading at a level well below the expected level for the age of your child, problems processing and understanding what he or she hears, difficulty comprehending rapid instructions, trouble following more than one command at a time, problems remembering the sequence of things, difficulty seeing (and occasionally hearing) similarities and differences in letters and words, an inability to sound out the pronunciation of an unfamiliar word, seeing letters or words in reverse ("b" for "d" or "saw" for "was," for example) — this is common in young children, but may be more pronounced in children with dyslexia, difficulty spelling, and trouble learning a foreign language. (Dyslexia Basics, 2012. p. 2)

One of the most commonly discussed symptoms of dyslexia is the reversal of letters and words. While this occurs, it is very uncommon. Reversing letters is quite common among younger students. If that is the only issue that presents itself, then it most likely is not dyslexia but a misunderstanding in writing. The more prevalent signs include the inability to distinguish between the sounds of vowels and difficulty rhyming. It is also common to see students sounding out words phonetically when they should have an understanding of English rules. Students with dyslexia may also have a difficult time following more than one direction at a time or remembering abstract ideas (Lilienfeld, Lynn, Ruscio, & Beyerstein, 2010).

It is important for educators to understand that one of the determining factors in the diagnoses of dyslexia is a marked discrepancy in ability levels. Students with dyslexia may be two or more years behind their peers in reading but they may be at or above grade level in math.

“Many dyslexic children may have excellent speech, hearing, visual perception, IQ, memory and/or balance. DD [dyslexia disorder] affects children differently, and exists in different levels of severity and influences different aspects of cognitive functions and is not necessarily an impediment to success. Some very successful people have Dyslexia. They may be good with numbers, be creative,

motivated, have an active life, be in good health and/or they might simply have a high IQ. This indicates that, for many, the condition is more associated with the brain's coordinated function rather than its structures.” (Ewing & Parvez, 2012. P. 111)

One way to test for dyslexia is by looking at discrepancies between different areas of education.

A student may have difficulty reading but may display advanced critical thinking or problem solving skills. Dyslexia does not affect intelligence.

Social issues can also be an issue for students with dyslexia. “Dyslexics may also be susceptible to social and emotional problems, which are invariably due to the gross difficulty in learning to read, write and comprehend in some cases and are often related to their inability to meet expectations. Furthermore, the dyslexic child may experience anxiety, anger, lowered self-image and depression, which may affect the overall well-being and academic achievements of the child” (Wajuihian & Naidoo ,2012 p. 26). Students with dyslexia may act out in class as a coping mechanism or they might harbor negative feelings towards themselves. This is why it is so important to have students properly diagnosed as soon as possible.

History.

After Kussmaul first introduced the term word blindness in 1877 more researchers followed suit. British physician Pringle Morgan published one of the first documented case studies for word blindness in 1896. He examined the neurological symptoms associated with what he called word blindness in children and young adolescents. One of these case studies included a 14-year-old boy who could not read or write but was able to perform algebra (Habib, 2000). It was case studies like this that opened the door for future research on the subject.

Over the next forty years researchers would continue conducting case studies on word blindness. There were many theories that came out of this time period, most of which revolved around the idea that individuals who demonstrated these characteristics had some sort of defect

either with neurological functions or with visual skills. Real progress came in 1925 when Dr. Samuel T. Orton, a neuropathologist from the State University of Iowa, first published his findings on word blindness. “Orton suggested that children who failed to establish dominance in one hemisphere of the brain demonstrated the condition of strephosymbolia, or ‘twisted symbols,’ which interfered with the acquisition of reading skills” (Anderson & Meier-Hedde, 2001. p. 11). Orton also focused on a number of remedial methods to help students gain the necessary skills to acquire reading, including phonemic development. While subsequent research has indicated that hemispheric dominance is not a contributing factor to dyslexia, Orton was one of the first researchers to focus on strategies that would assist students with learning disabilities (Anderson & Meier-Hedde, 2001).

It was this new focus that would shape research to come. The majority of the focus shifted from the causes of dyslexia to teaching methods. “A major change occurred in 1935 when three teachers, Bessie Stillman, Anna Gillingham, and Beth Slingerland, met at Glacier National Park in British Columbia, Canada. Using Orton's findings, they developed programs for teaching individuals with specific language disability (SLD) and became advocates for the structured, multi-sensory approaches, known as Orton-Gillingham-based approaches, still being used today” (Rooney, 1995. para. 5). The Slingerland Method and other multisensory teaching geared towards students with dyslexia would come out of this approach and would be developed from this work. In 1969 the Children with Specific Learning Disabilities Act was passed and for the first time schools were required to meet the individual needs of students. With this passage, a number of teacher trainings on the topic became available. However, the majority of these trainings were relegated to larger cities and highly populated school districts (Timeline of Learning Disabilities, 2006).

The next stage in the history of dyslexia came in the 1980s and 1990s. Researchers were looking for ways to test for dyslexia in students and individuals. In theory this would allow students with dyslexia to receive proper assistance in school. However, this quickly became an area of contention. There were so many different definitions of dyslexia floating around that it became almost impossible to reconcile them all into one comprehensive assessment. The debate over the definition of dyslexia is still ongoing (Snowling, 1996).

There is now a push for neurologists to start re-examining the cause of dyslexia and how it affects the brain. There have been a number of new case studies examining neurological implications. While the scientific approach to dyslexia is gaining new ground, students in the classroom are being left behind. With the establishment of No Child Left Behind and an increase in standardized testing, more students with dyslexia are not being diagnosed. Schools are only allotted a limited number of testing modifications that can be offered to students without facing penalties. With the reduction to education funding, more programs assist students with dyslexia are fading away (No Child Left Behind, 2003).

Teacher misconceptions.

There are a number of misconceptions around discussions of dyslexia. Misconceptions that teachers have about dyslexia can have profound implications for their students. When teachers were asked to identify characteristics associated with dyslexia, some major misconceptions were revealed. The first major misconceptions that needed to be addressed are those regarding the cause of dyslexia. Though neurological causes are still under investigation and highly debatable, there are a few causes that can be easily eliminated. The second misconception is that dyslexia is a visual defect. It was believed for many years that altering print including the use of color overlays would assist students with dyslexia. However, over the

years these theories and techniques have demonstrated little effect for assisting students with dyslexia. Another causal misconception is that dyslexia is a verbal defect. While dyslexia is a language-based problem the issue is not with verbalization, it is with processing (Culbertson, 2011/2012).

A 2005 study indicated that teachers have some alarming misconceptions on the topic of dyslexia. The third and most prevalent misconception is that word reversal is the dominant indicator of dyslexia. While some individuals with dyslexia may occasionally reverse letters, it cannot be used as a diagnostic tool, and it is not universal. The fourth misconception is that all students with dyslexia have similar characteristics but to different degrees. Dyslexia comes in many shapes and forms and what is true for one student may not be for another. The fifth misconception is that if individuals with dyslexia can read a passage, then they will also be able to comprehend what they have read. Reading comprehension can be extremely difficult for individuals with dyslexia because they are focusing on reading the words and not understanding the text. The sixth major misconception is that dyslexia was not hereditary. Most students with dyslexia have at least one parent who also has dyslexia (Wadlington & Wadlington, 2005).

These misconceptions about dyslexia not only affect the way the teachers deliver instruction but they can also affect the teachers' attitudes. Students with dyslexia can experience high levels of anxiety if they are in a class where the teacher does not validate the effort that they are putting forth. However, if a student with dyslexia is not held to any expectations they become passive students. Students with dyslexia need to be given clear tangible goals and a way to accomplish them. Expectations do not need to be lowered, but the manner in which those expectations are achieved might need to be (Tsovili, 2004).

Teaching students with dyslexia.

In order to help students with dyslexia teachers must first be aware of the signs and symptoms that students with dyslexia display. Students who are diagnosed with dyslexia in kindergarten and first grade become better readers than those who are not diagnosed until third grade or later. This becomes a major issue when most districts do not test students until they are two or more years behind in reading. If teachers are aware of dyslexia then they can make modifications in their classrooms to meet the needs of their students (“Can individuals,” 2012).

Once teachers are aware that they have students with dyslexia in their class, there are many ways that they can assure that each student has access to grade level appropriate material. Instruction for students with dyslexia needs to be clear, focused, and direct. Students need to be given time to make meaningful connections and to fully process new information. The most important tool in teaching a student with dyslexia is time. Giving them the appropriate time to learn the new material, time to make meaningful connections, and time to produce high quality work. It seems like a simple accommodation, but, with all the material that needs to be covered in a day, there is a tendency to push through even if everyone is not ready (“Can individuals,” 2012).

An effective way to make these connections is through the use of multisensory learning. This practice is when teachers utilize visual, auditory, and kinesthetic modalities simultaneously to enhance learning and memory. Students with dyslexia have difficulty making connections in the brain between spoken and written word. By incorporating all three different levels of learning student are able to make stronger, more permanent connections (Henry, 2012). For early elementary grades this would include the teacher saying a letter or a letter digraph sound repeatedly while the student echoed the sound and looked at or held a model of the letter or digraph pair. Having the student draw the letter in the air or make a gesture to represent the

letter sound is another method. The teacher would introduce a series of words that all contained the same sound, and the students would listen until they could make the connection between the word and the sound. Students would then move to writing the letter and repeating the letter name or the sound with the assistance of the teacher. This would continue until the students were able to retain the new information and be able to pull it back up later. For older students, the teacher can incorporate activities that require students to talk through the learning process, not read about it, but actually talk about the steps and what they observe. The use of manipulatives within a lesson is also valuable. The more areas of the brain that are utilized, the more concrete the connections will be.

Another tool that helps in assisting students with dyslexia is the use of strategic intervention.

“Intervention is most effective when provided in a one-to-one or small-group setting; successful interventions heavily emphasize phonics instruction; and other important treatment elements include training in phonological awareness, supported reading of increasingly difficult connected text, writing exercises, and comprehension strategies.” (Peterson & Pennington, 2012)

No matter what age or grade level of student, these skills are vital in learning to read. If these basic skills are never mastered, then students will continue to struggle for a lifetime. This is not to say that students should not also be taught grade level materials in conjunction with reading instruction. Small group time allows the teacher to focus on the specific skills that students need to address. All of the methods to directly assist students with dyslexia are good teaching practices, most of which will benefit all the students in the class (Peterson & Pennington, 2012).

It is important to understand that dyslexia does not affect vision. There is always a tendency to make visual accommodations for students who have dyslexia but there is little evidence to prove those types of accommodations produce significant results. The use of

different color paper or tinted reading frames was commonly used for students with dyslexia but they had limited success. What does help is using a bookmark to help keep students on track and focusing on what they are reading and to not get distracted by the other writing on the page (Allen, 2010).

Teachers need to realize that a student with dyslexia will learn differently than a student without dyslexia. Teachers need to look at individual students and find what works best for them. Students with dyslexia should not be put in remedial groups with students with other special needs or those who learn at a slower pace. Dyslexia does not affect intelligence; when students struggle to read, it does not mean that they are unable to comprehend or function at a higher level (“About Dyslexia”, 2012). Being put in remedial groups can have a very devastating effect on a student with dyslexia. Most students with dyslexia are fully aware that they struggle with reading where their peers do not. It can be detrimental to hold students back when they understand the content but are having difficulty with the way the material is presented.

Simple accommodations can be made for students who have dyslexia so that they do not fall behind in other subjects because they struggle with reading and spelling. These accommodations may include reading tests to students and giving them more time to complete tests. Teachers can also give students the opportunity to get textbooks and other reading material on tape so that they can read for content. The Library of Congress has a program for the blind and dyslexic to provide free books on tape (“Talking books”, 2012). It is important that students with dyslexia do not fall behind in other subjects because they struggle with reading. Teachers also need to remember when they are assessing students with dyslexia that they needed to focus on the information that they looking for, not the students ability to read and write. If teachers want to test how much a student knows about American History they should not grade down for

misspelling or because they did not finish the test in the allotted amount of time. If possible they should give tests orally so students are not relying on their spelling skills to express complex thoughts (“Working with Dyslexia”, 2013). All of these are simple accommodations that can make a huge impact in the lives of students with dyslexia.

Teacher training.

The more that is known about dyslexia, the more prepared teachers will be in the classroom. As more research is being conducted, the more evident it becomes that there is a lack of specific teacher training on the subject of dyslexia. Regardless of years of service most teachers “are able to perform implicit skills-related tasks but are unable to demonstrate explicit knowledge” (Washburn, Joshi, & Binks-Cantrell, 2011, p. 180). This would indicate that teachers have a basic phonetic awareness and ability to teach phonics to their students but they are unable to dive deep in the material in order to assess students’ individual strengths and difficulties. Teaching basic phonics skills is not enough to fully help a student with dyslexia. It is important to understand where additional help is needed and to be able to break down that material in order to properly teach students.

Teachers need to have proper training to lessen the impact that dyslexia has on students. While most teachers are given basic instruction on reading acquisition skills there is still a need for teacher to dig deeper. “The IDA [International Dyslexic Association] standards emphasize the need for teachers to be trained more deeply in the structure of language, including the speech sound system, the writing system, the structure of sentences, the meaningful parts of words, meaning and relationships among words and their referents, and the organization of spoken and written discourse.” (“International” 2012) With a more comprehensive understanding of the

specific areas that most students with dyslexia struggle with, then teacher will be better prepared to modify lessons and instruction to meet individual needs.

One of the key factors to assisting students with dyslexia is early detection. Teachers' awareness of the signs and symptoms of dyslexia in children as early as kindergarten supports effective reading intervention and teaching strategies. Teachers cannot rely on the district's previous methods of detection to identify students with dyslexia. It has been common practice to start identifying students with dyslexia after there has already been some sort of academic or behavioral issue. Most districts do not have the resources or training to detect dyslexia early (Allen, 2010). These current finding suggest that not only do teachers need proper training in the identification of dyslexia, districts also need to be able to provide their teachers with the necessary resources.

Summary of Major Themes

Dyslexia is a significant issue in our public schools. With between 15-20% of individuals exhibiting some characteristics of dyslexia, most teachers will come face-to-face with dyslexia on a regular basis. The history of dyslexia dates back decades. Over the years researchers have tried to determine the causes of dyslexia and possible treatment options. While it was first believed that dyslexia was a visual processing disorder, there is now more evidence that proves that it is a processing issue that typically affects phonological awareness. While the causes and in some cases the definition of dyslexia are still up for debate, there has been a focus on strategies to assist dyslexic students in the classroom.

Even with all the new research, there are still many misconceptions that affect the way people think and assist students with dyslexia. These misconceptions are widespread and can have devastating consequences on students. The way to deal with these misconceptions and to

properly prepare teachers for their classroom is through specific training on the topic of dyslexia. Teacher training is essential yet there is relatively little information on whether or not teachers are actually receiving this training. What research that has been conducted indicates that most teachers have a general idea on how to teach phonological awareness but are not given training on how to tailor their teaching to meet the specific needs of their students with dyslexia.

How Present Study Will Extend Literature

This study will examine the amount of specific training teachers have on the topic of dyslexia. It will also examine some factors that may affect teacher training including the number of years teaching and whether or not training was generated by the individual teachers or by an institution. This study will help to determine whether or not teachers are receiving appropriate instruction to prepare them to fully assist students with dyslexia in their classrooms.

This study assessed teachers in a rural community that have not been previously incorporated into any other studies on teacher training for dyslexia. We know more about dyslexia than ever before and the goal of this study is to help us see if teachers are receiving the proper instruction to best meet the educational needs of their students with dyslexia.

Methodology

The purpose of this survey was threefold. The main focus is to determine the amount of training teachers have on how to teach students with dyslexia. The second focus was to determine if there is a relationship between the amount of years teachers have been in the field and the amount of training they have received in how to teach students with dyslexia. The third focus was to examine teacher confidence level and determine whether or not there is a desire by teachers in this district to receive more training. The researcher used a survey to determine the amount of training on teaching students with dyslexia teachers in the district of study had and to determine whether or not they would be interested in additional training.

Site and Participants

The participants for this study were chosen based on two different criteria. The first was that they all teach at a public school and that they all teach in the same district. This method was chosen so that the participants would have common traits. By utilizing public elementary school teachers, the researcher can be assured that all the teachers have met the same educational requirements to teach in the State of California. This means that all participants would have had access to comparable training content and opportunities.

All of the participants in this study are public school teachers in a rural Northern California district. The district consists of preschool, elementary, middle, high school, and adult school. It serves about 6,163 students. The district was selected because it is the district in which the researcher works. The teachers in this study range from kindergarten to 12th grade, in addition to special education and resource teachers. The average years of service is 13.6 years (California Department of Education, 2013). The targeted group includes all teachers in this district. The intent of this study was to include as many teachers as possible.

This district also has a focus on professional development. According to the district website “Our district is committed to on-going staff development carefully planned to meet the needs of our students. Teachers and para-professionals are offered district-supported classes in current learning theory and instructional practices. Classified staff are also kept current through workshops and conferences related to their field of expertise” (About ██████, 2012).

Access and Permissions

The researcher gained permission from the superintendent of the district to complete the study and was given permission to utilize district-wide email to contact participants. All teachers in the district were emailed an introductory letter and a link to follow to complete the survey. All documents utilized were given approval by the Dominican University’s Internal Review Board.

Data Gathering Strategies

For the purpose of this study, the researcher developed a survey to determine the level of training teachers had on the topic of teaching students with dyslexia. The survey also addressed teachers’ confidence level in this area as well as a willingness to obtain more training on the subject.

The SurveyMonkey website was used to create the survey (See survey text in appendix A). Participants received an introductory letter informing them that the survey was completely voluntary. An email address was provided for any additional concerns or questions from the participants. The introductory letter also included the link to the survey.

The introductory letter, including a survey link, was emailed to participants on Monday, May 27, 2013. A reminder email was sent out one week later. The researcher gave participants a total of two weeks to respond to the survey. Eighty-five completed surveys were collected.

The survey consisted of five questions. The first two questions were general information questions, including grade level and years taught. The following three questions utilized a five-point scale. The third question asked the participants to rate how confident they are in their ability to teach students in their class who have dyslexia. The four and fifth questions have teacher rate the leave of training they have received and their willing ness to learn more.

Data Analysis Approach

After all the surveys were collected, the data was analyzed to gain a better picture on the amount of training teachers in this district had on how to teach students with dyslexia. The researcher also examined teacher confidence level and willingness to learn more on the subject. The information was tallied and is presented in the findings section. The researcher reported the results for the amount of training have teachers received on the topic of teaching students with dyslexia and if teacher in this district are want to receive additional training on how to teach students with dyslexia. A t-test was conducted in order to measure if there was a significant correlation between the grade level taught and the amount of training teachers have on teaching students with dyslexia.

Ethical Standards

This study adheres to the Ethical Standards in Human Subjects Research of the American Psychological Association (Publication Manual of the American Psychological Association, 2009). Additionally, the project was reviewed and approved by the Dominican University of California Institutional Review Board.

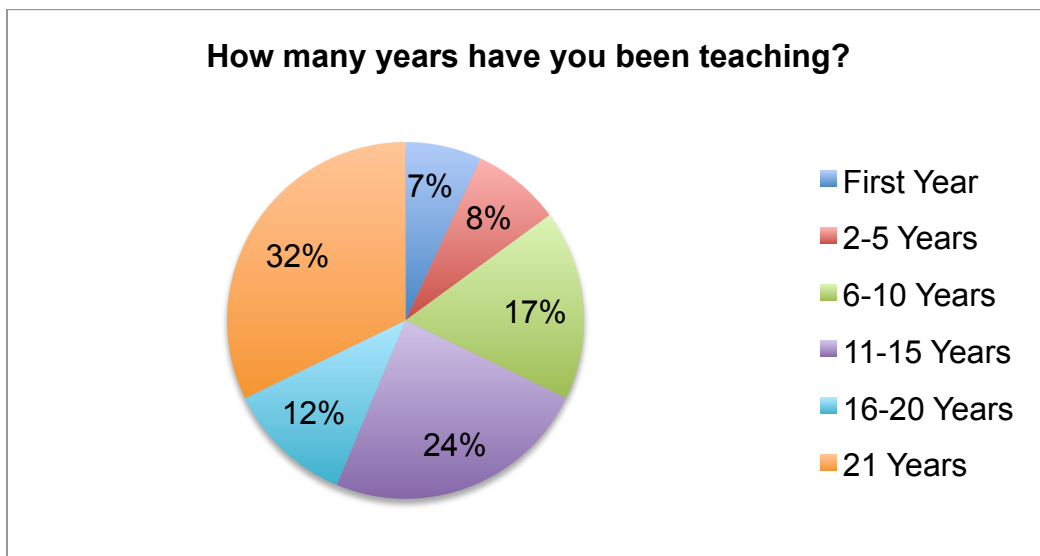
Findings

Description of Site, Individuals, Data

The survey was distributed to all 322 teachers throughout the district using district wide email. These teachers include special education and resource teachers, preschool teachers, and general education teachers from kindergarten through high school. Eighty-five teachers completed the survey. The data was collected using SurveyMonkey.

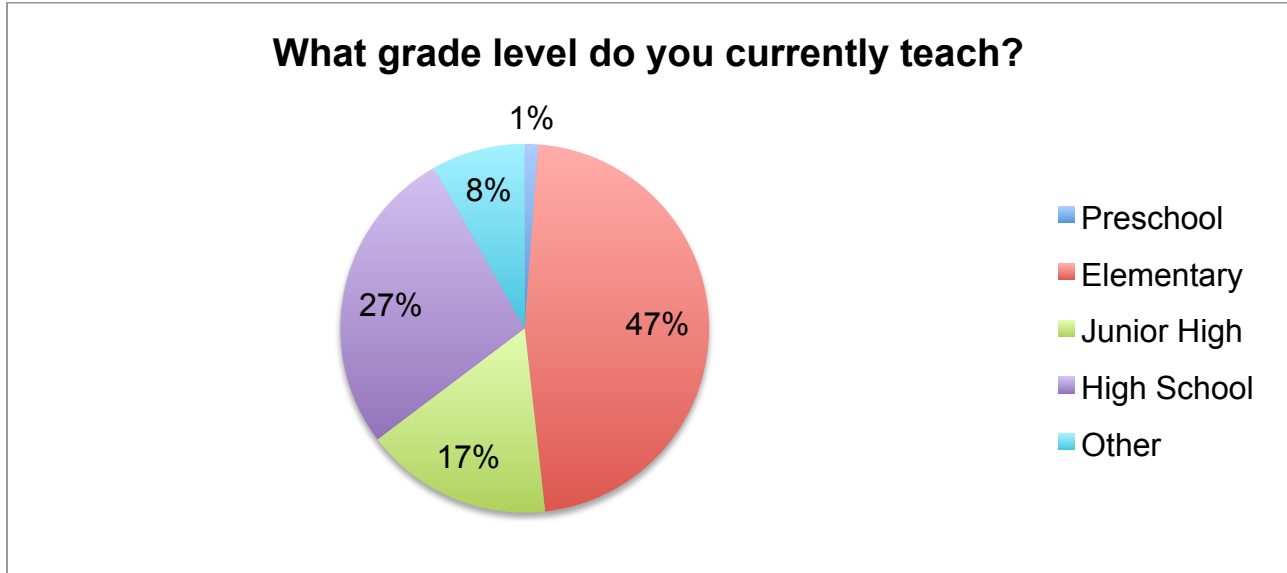
The survey (see Appendix A) consisted of five questions. The first two questions were general information questions. Question one asked participants “How many years have you been teaching?” The average amount of years teaching for the participants in this survey was 17 years. The participant responses were as follows:

Figure 1



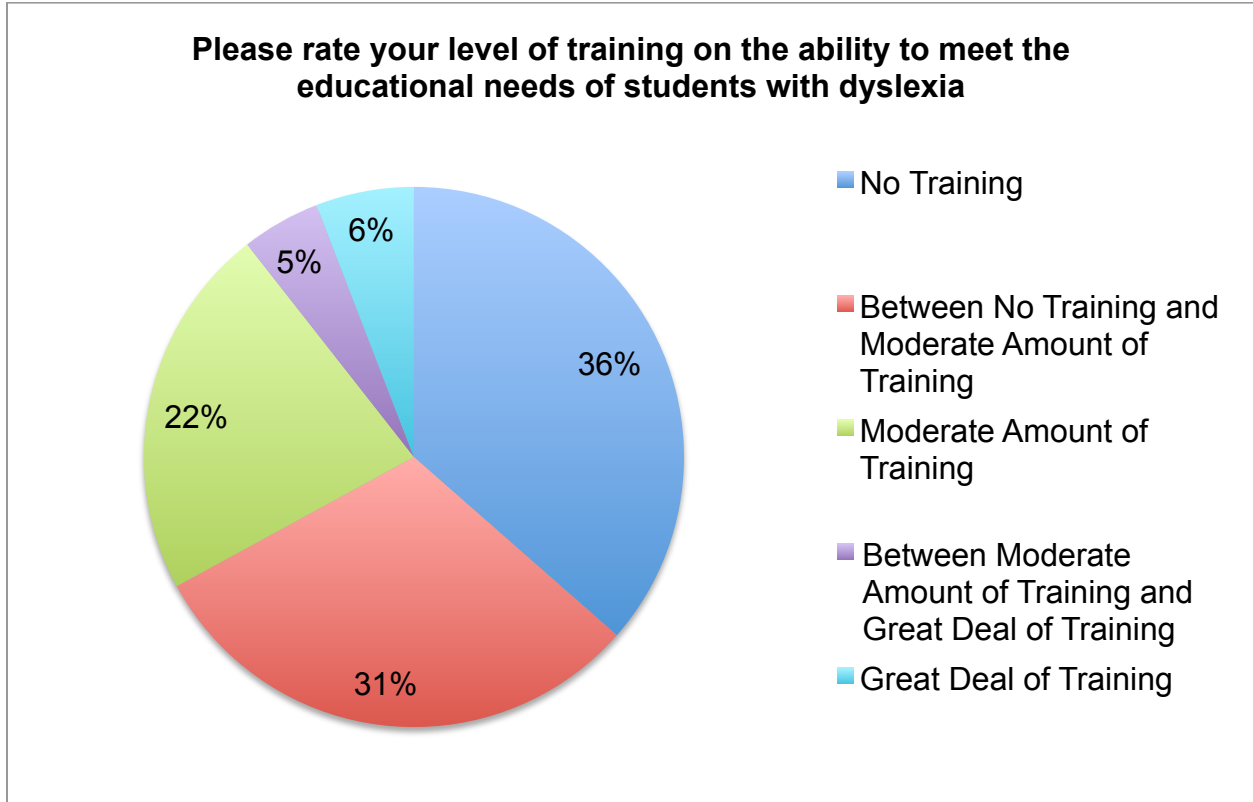
The second question asked, “What grade level do you currently teach?” The vast majority of the participants, 91%, taught in general education. One preschool teacher completed the survey, as well as seven special education or resource teachers. The grade level break-down is as follows:

Figure 2



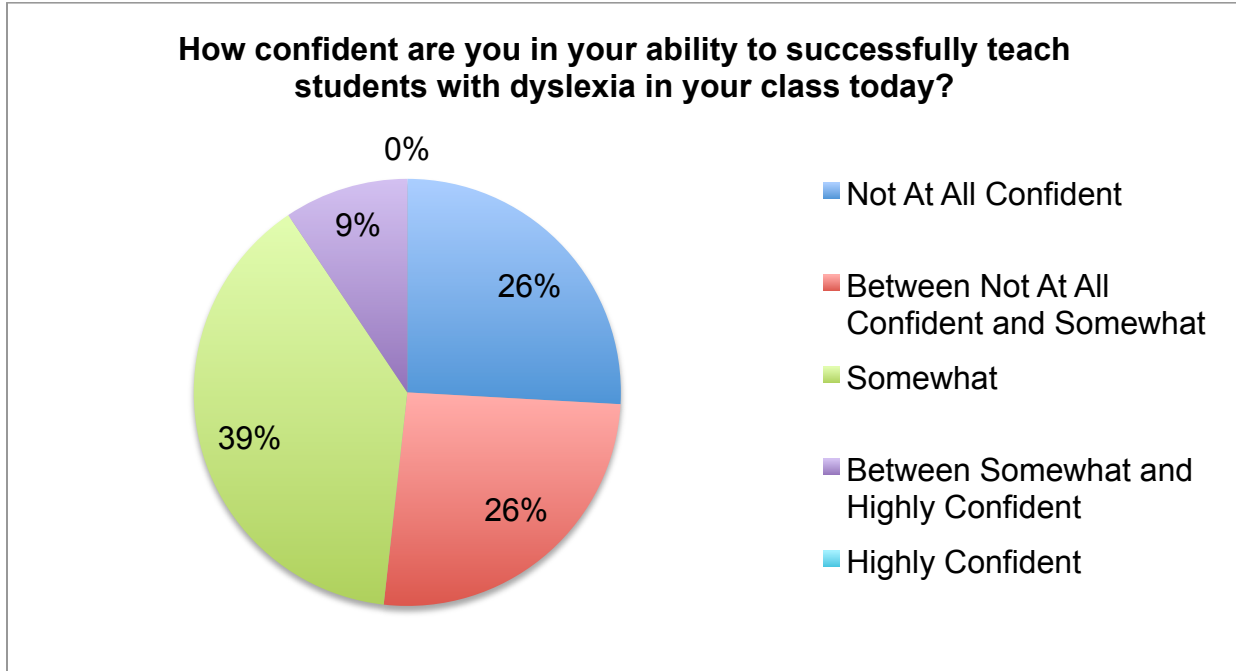
The third question addressed how much training each participant had received. The question read, “Please rate your level of training on the ability to meet the educational needs of students with dyslexia.” Participants were asked to indicate their level of training on a five-point continuum. The continuum was marked with “No Training” at the far left, “Moderate Amount of Training” in the middle and “Great deal of Training” to the far right. The largest response selected was 36% of teacher indicating that they have no training on how to teach students with dyslexia. The second largest at 31%, fell between “No Training” and “Moderate Amount of Training.” The third largest section was for a “Moderate Amount of Training” at 22%. The numbers drop for “Moderate Amount of Training” and “Great Deal of Training” to 5%, and to 6% for “Great Deal of Training.” Further examination of the data shows that 60% of those who said they had a “Great Deal of Training” on the topic worked in the area of special education and intervention. The responses are broken down by percentage below:

Figure 3



The fourth question asked participants “How confident are you in your ability to successfully teach students with dyslexia in your class today?” The highest response was “Somewhat” at 39%. Both “Not At All Confident”, and between “Not At All Confident” and “Somewhat” confident had 26% of the responses. Only 9% of the participants said they were between “Somewhat” and “Highly Confident”. No participants said they were “Highly Confident” in their ability to teach students with dyslexia in their classrooms. The responses are broken down by percentage below:

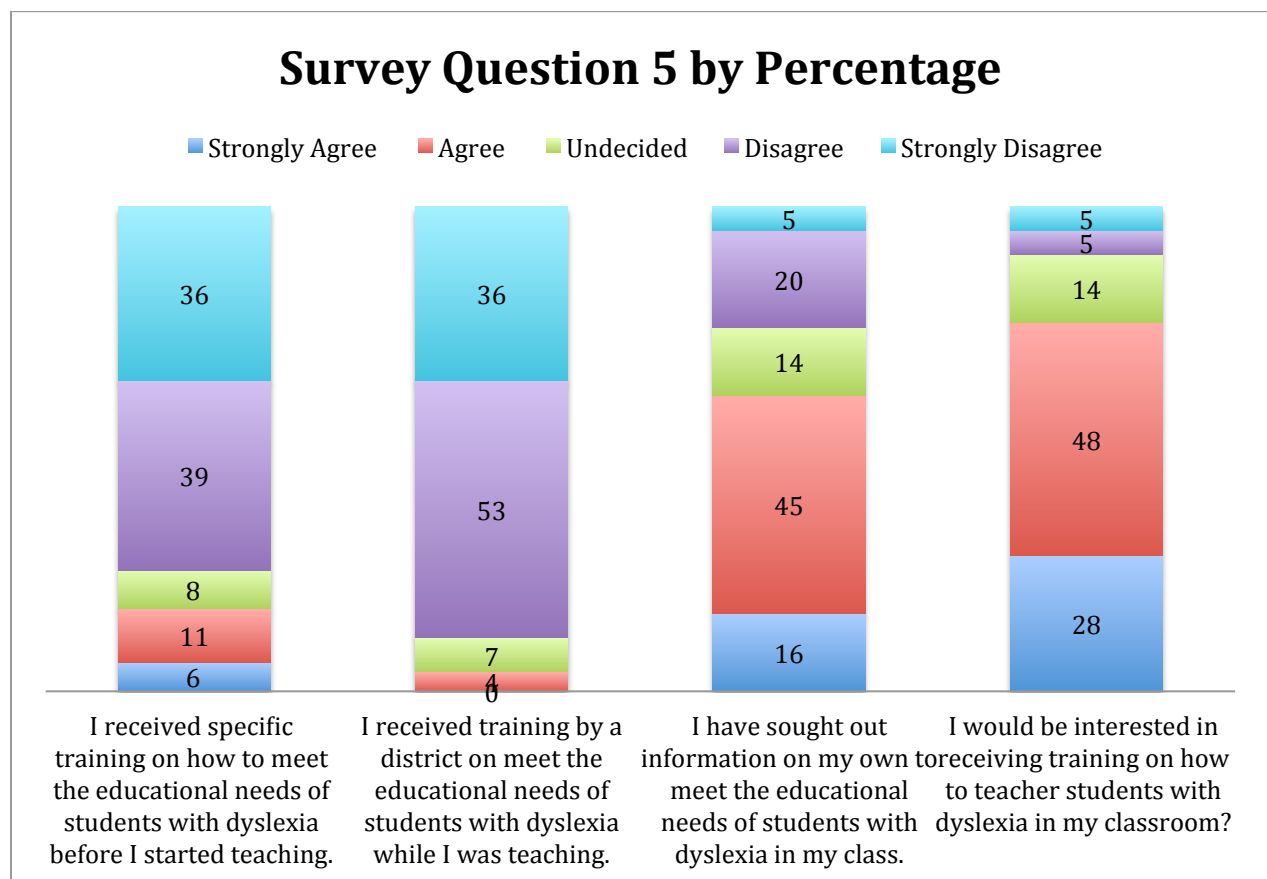
Figure 4



The fifth question was designed to determine where teachers had received training on how to teach students in their class with dyslexia. It also asked participants if they would be interested in receiving additional training. Participants were given four statements, for each statement they were asked if they “Strongly Agree”, “Agree”, “Undecided”, “Disagree”, “Strongly Disagree.” The first statement read “I received specific training on how to meet the educational needs of students with dyslexia before I started teaching.” The highest response was “Disagree” at 39%, closely followed by “Strongly Disagree” with 36%. The remaining 25% of responses were distributed between “Undecided” at 8%, “Agree” at 11%, and “Strongly Agree” at 8%. The second statement was “I received training by a district on meeting the educational needs of students with dyslexia while I was teaching.” The majority of participants at 53% chose “Disagree.” The second was “Strongly Disagree” with 31%. The remaining 11% were divided between the other responses with 7% “Undecided”, 4% “Agree” and 5% “Strongly Agree.” The third statement was “I have sought out information on my own to meet the educational needs of

students with dyslexia in my class.” The majority of responses were “Agree” (45%) followed in contrast by “Disagree” (20%). The other responses were “Strongly Agree” (16%), “Undecided” (14%), and “Strongly Disagree” (5%). The fourth statement was “I would be interested in receiving training on how to teacher students with dyslexia in my classroom.” The majority of responses were “Agree” at 48% followed by “Strongly Agree” at 28%, “Undecided” at 14%, “Disagree” at 5%, and “Strongly Disagree” at 5%. The responses are broken down below:

Figure 5



Analysis of Themes and/or Inferential Analysis

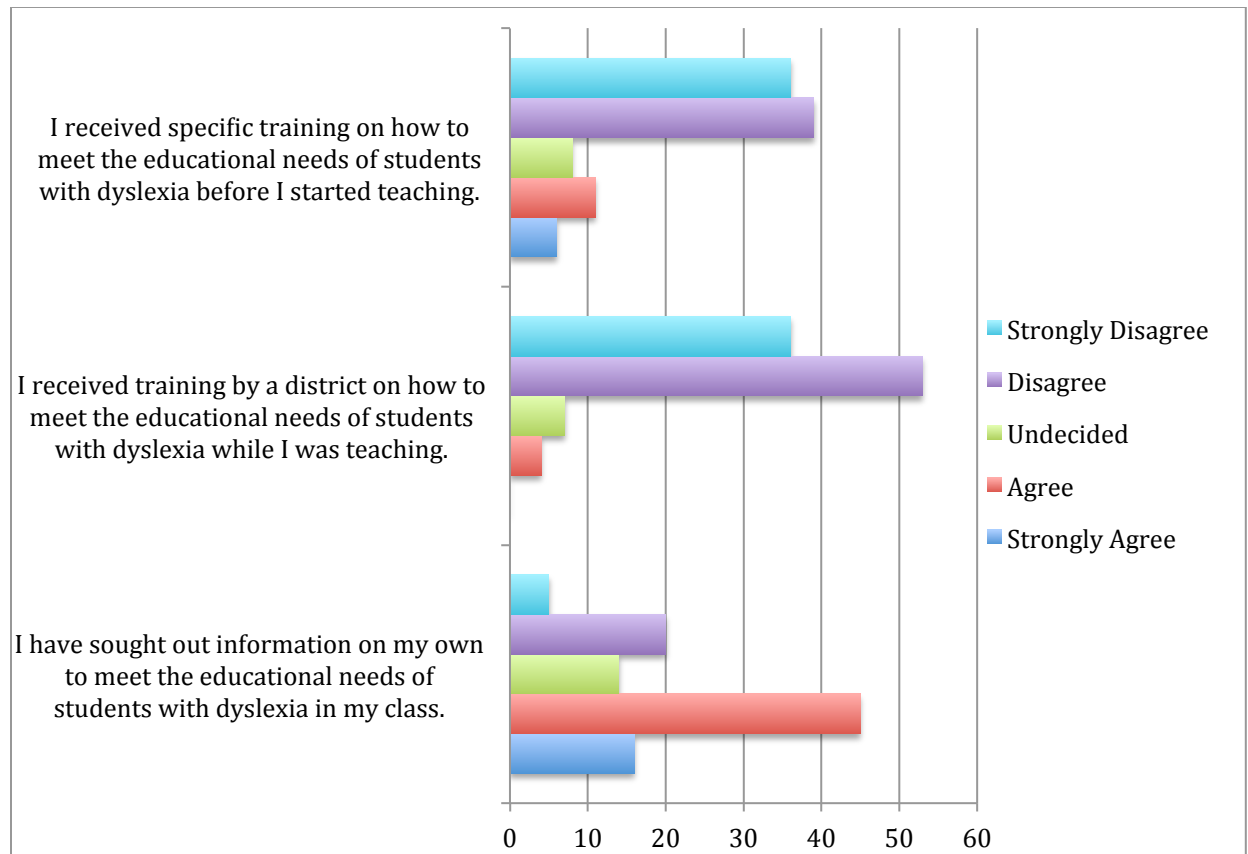
The purpose of this study was three fold. The first purpose was to examine the level of training teachers have on how to teach students with dyslexia in their class. Secondly, this study

examined the relationship between grade level and training, and third, it determined if teachers in this district were interested in receiving additional training.

The first research question is broken down into three parts. The first is the amount of training teachers have. Looking at the results we can see that the majority of participants, 67%, reported that they had less than a moderate amount of training on how to meet the educational needs of students with dyslexia in their classroom. Twenty-two percent of teachers reported that they had a moderate amount of training, while only 9% reported that they had above moderate training.

The second part of research question one was looking at where teachers received their training. Participants were given three statements and asked to rate on a five-point scale if the majority of their training came before they started teaching, the district, or personal research. By analyzing the data we can see that very few participants reported receiving training before they started teaching or from the district. More reported that the training they did have came from them seeking out information on their own. Sixty-one percent of participants reported that they “agree” or “strongly agree” with the statement “I have sought out information on my own to meet the educational needs of students with dyslexia in my class.” The information from this question would indicate that more teachers have sought out information on their own than was provided to them before they started teaching or by the district in subsequent years. It is worth noting that no respondents indicated they strongly agree. The breakdown of the answers is presented below:

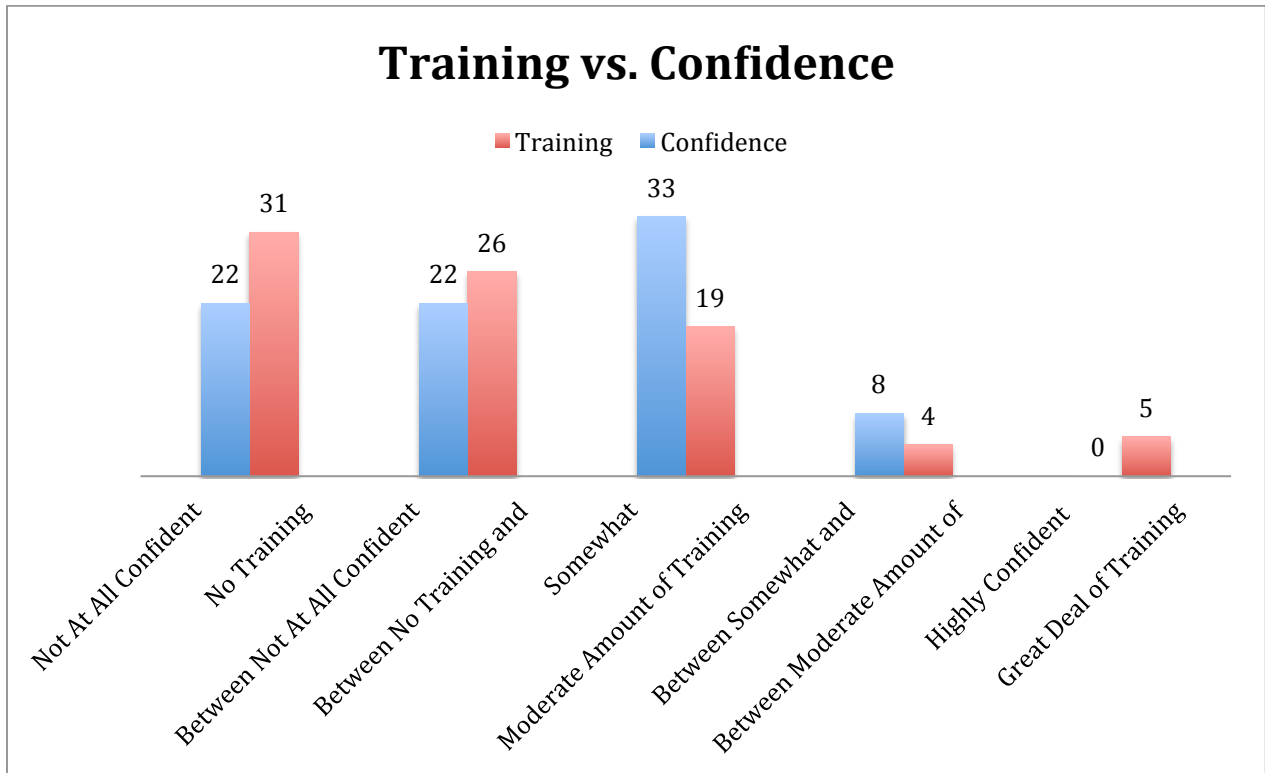
Figure 6



The third part of research question one examined teacher confidence on teaching students with dyslexia in their class. The majority of teachers at 52% felt less than somewhat confident in their ability, whereas 39% felt somewhat confident. Only 9% of participants fell Between Somewhat and Highly Confident. However, none of the 85 teachers that responded to the survey felt highly confident in their ability to teach students with dyslexia in their class. When examining the confidence interval in relation to the amount of training participants reported they had received, some interesting trends emerge. When looking at the results of the data as a whole a trend emerges that indicates that the amount of training teachers have is not always related to their level of confidence. For example 19 teachers said they had a moderate amount of training but 33 teachers are somewhat confident in their ability. It is also interesting to note that five teachers reported that they have a great deal of training on how to teach students with dyslexia

but no teachers feel highly confident in their ability. The results from this comparison are presented below:

Figure 7



The second research question looked at the relationship between the grade level taught and the amount of training teachers have on how to teach students with dyslexia in their classrooms. The purpose of this question was to see if there were any significant differences between elementary grade teachers (kindergarten-5th grade) and secondary (6th-12th grade) teachers. All participants who did not teach in general education K-12 were removed for the purpose of this test, leaving 77 participants. After running a t-test the results are as follows:

Data Summary:

	A	B	Total
n	40	37	77
ΣX	80	73	153
ΣX^2	204	177	381
SS	44	32.973	76.987
mean	2	1.973	1.987

Results:

Mean _a -Mean _b	t	df
0.027	+0.12	75
one-tailed	0.452402	
P two-tailed	0.904804	

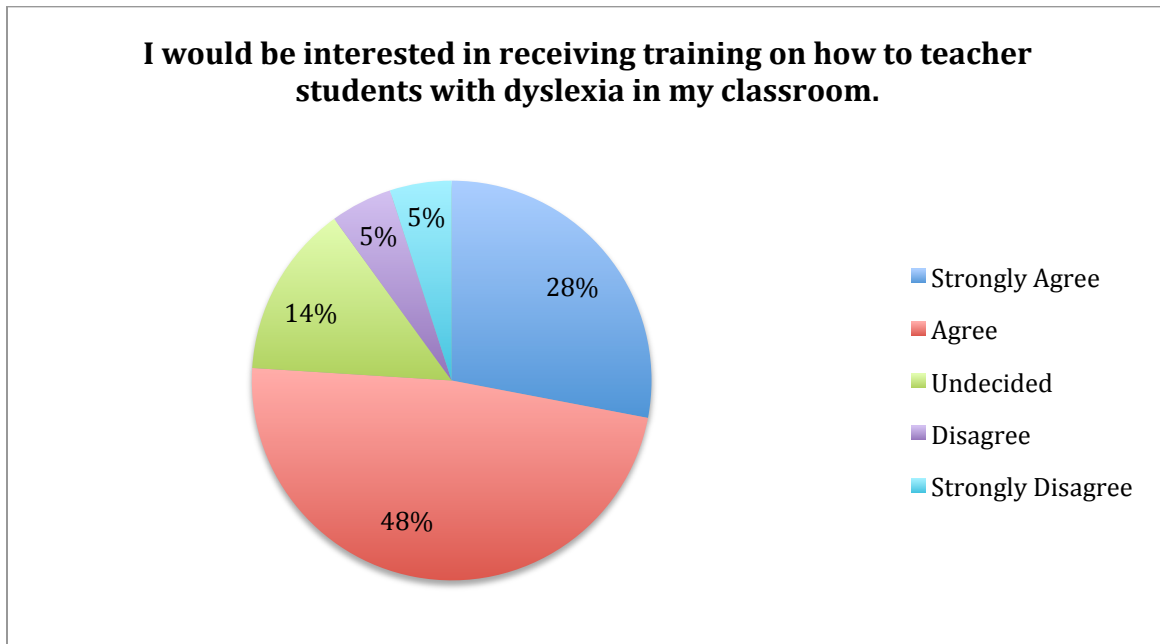
$$t(75) = +0.12, p=0.904804$$

Based on this data there is not a significant difference between elementary and secondary teachers when it comes to the amount of training they have on how to teach students with dyslexia in their classes.

The third, and final, research question asked if teachers in this district wanted more training on how to teach students with dyslexia in their classrooms. By investigating the results we can see that that most of the participating teachers, 76%, agree or strongly agree with the statement that they would like to receive additional training. Fourteen percent were undecided

and only 10% disagreed or strongly disagreed. It is also worth noting that of those who disagreed or strongly disagreed, 20% were special education teacher and 30% reported that they had no training on how to meet the educational needs of students with dyslexia in their class.

Figure 8



Discussion

Comparison of Findings with Existing Studies

There were no specific studies that address the amount of training that teachers have on how to teach students with dyslexia in their classroom. This study does support the study done by Allen Washburn, Joshi, and Binks-Cantrell. Their study indicated that there was a lack of necessary knowledge needed to effectively teach student with dyslexia (2011). The participants in both studies were teachers and in both cases the majority participants did not have the appropriate level of training.

The finding in this study also relates to those done by Allen. Allen's study was specifically looking at the lack of training on identifying students with dyslexia (2010). This was more general but also indicated that the district was not providing teacher with the tools they needed to meet the needs of students with dyslexia in their classes.

Limitations of the Study

There are several limitations to acknowledge about this study. The first is the sample population and sample size. This study was limited to very specific group of teachers. There is no way to know if this study is representative of teachers in other districts. The number of respondents to the survey was also limited. While there were a reasonable number of teachers in the district it was not exhaustive. They were also proportional for the district more elementary teachers then junior high and high school respondents.

Another limitation of this study that must be taken into account is the reliance on the participant's self-evaluation. While this study was methodically designed, it was still dependent on participants interpreting their level of training on a similar scale. It also made the assumption

that all teachers had some basic knowledge of what dyslexia is and how specific training would differ from teaching student with other learning needs or those who are academically behind.

Implications for Future Research

The information from this study can be used to further research in a number of ways. The first is to look at this study with a larger sample size that meets more demographics. It would be beneficial to see if the results of this study would be the same if the study were done with teachers in other districts and other areas. It would be interesting to see if other districts also see an overall lack of teacher training on how to teach students with dyslexia. This could help answer the question if this study was an isolated event or not.

An interesting question that arose when doing this study was the discrepancy between the levels of training that teacher reported and the reported confidence in teaching students with dyslexia. It seems intuitive that these levels would be comparable, but they were not. Future research could examine this paradox and examine the causes.

This study was also very general. Future studies could look more specifically at the skills needed to teach students with dyslexia. There are specific tools and knowledge that are needed to address the individual needs of students with dyslexia. It would be relevant to break down these skills and see what skills teachers actually have. This type of study would tell us more specific information about the participants and the relationship to training.

Overall Significance of the Study

The results of this study demonstrate the need to provide teachers in this district with additional training on how to meet the educational needs of students with dyslexia in their classrooms. In order for teachers to be able to best meet the needs of their students they need to be properly trained. Teacher education programs need to be aware that dyslexia is a major

educational issue and need to start preparing their students (Williams, & Lynch, 2010). The majority of the teachers that responded to this study indicated that they did not have an appropriate amount of training. This study can lead to a reexamination of how we prepare teachers to meet the needs of all students in their class.

Previous literature indicated that it takes a specific set of skills to effectively teach students with dyslexia. We do not ask students to perform complex tasks without instruction and guidance. Why would we then ask teachers to teach students with special needs without showing them how? Dyslexia is a complex issue that is still not fully understood. It takes deliberate and thoughtful study to be able to modify instruction in a meaningful way.

The overall goal of this study was to not only examine the amount of training teachers had, but to see if they had a desire to learn more. The teachers in this school district want to learn more and to be provided with additional training on how to meet the educational needs of their students with dyslexia.

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Appendices

Appendix A

Dyslexia Survey

***1. How many years have you been teaching?**

***2 What grade level do you currently teach?**

***3. Please rate your level of training on the ability to meet the educational needs of students with dyslexia.**

No Training		Moderate Amount of Training		Great Deal of Training
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***4. How confident are you in your ability to successfully teach students with dyslexia in your class today?**

Not at All Confident		Somewhat		Highly Confident
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***5. For each of the following statements please select whether you strongly agree, agree, are undecided, disagree, or strongly disagree. [Check the box next to your response]**

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
I received specific training on how to meet the educational needs of students with dyslexia before I started teaching.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I received training by a district on meet the educational needs of students with dyslexia while I was teaching.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have sought out information on my own to meet the educational needs of students with dyslexia in my class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I would be interested
in receiving training on
how to teacher
students with dyslexia
in my classroom?



Appendix B

Participant	Q1 Years	Q2 Grade Level	Q3 Level of Training	Q4 Confidence	Q5 Received Specific Training	Q5 Training by a District	Q5 Information on Own	Q5 Interested in Training
1	1	Elementary	1	2	2	1	3	5
2	1	Elementary	5	4	1	2	5	4
3	1	High School	2	1	1	2	4	3
4	17	High School	2	3	3	1	2	4
5	20	Elementary	2	1	2	3	4	5
6	32	High School	1	1	1	2	3	4
7	22	Elementary	1	1	2	1	3	4
8	6	Junior High	3	3	2	1	4	5
9	25	High School	2	1	2	3	4	5
10	1	Junior High	2	2	4	1	2	3
11	21	High School	1	1	1	2	3	4
12	10	High School	1	1	3	1	2	4
13	14	High School	3	3	1	2	4	5
14	8	Junior High	1	2	3	1	2	5
15	15	High School	2	2	1	2	3	4
16	4	Junior High	1	3	1	2	5	4
17	17	Intervention	2	2	1	2	4	5
18	35	Elementary	5	3	1	2	5	4
19	40	ELD	3	3	1	2	5	4
20	15	Elementary	1	2	2	1	4	5
21	15	K-6 Resource	5	3	5	2	3	4
22	8	Elementary	1	2	2	1	3	4
23	15	High School	2	3	1	2	4	5
24	8	Elementary	3	3	1	2	4	5

25	6	Elementary	3	3	4	2	1	5
26	14	High School	1	1	1	2	3	4
27	39	2-5 RST	5	3	5	2	4	1
28	4	High School	3	3	5	2	4	3
29	38	High School	3	4	2	1	4	3
30	7	Junior High	2	1	2	1	4	5
31	26	High School	1	2	2	1	3	4
32	19	High School	2	1	1	2	4	3
33	10	Elementary	3	3	2	1	3	4
34	7	Elementary	1	1	2	1	4	3
35	18	Elementary	2	2	1	2	4	5
36	22	Elementary	1	2	1	2	4	5
37	14	High School	4	4	4	2	5	3
38	14	Junior High	4	4	5	3	4	2
39	15	Elementary	2	2	2	2	5	5
40	14	Elementary	3	3	4	1	4	3
41	37	High School	2	3	4	2	3	3
42	31	High School	2	3	4	2	4	4
43	12	Elementary	1	1	2	1	2	4
44	18	Junior High	2	3	1	1	4	3
45	27	Elementary	1	3	2	1	4	4
46	18	Elementary	1	1	1	1	4	4
47	1	Junior High	2	2	2	2	2	4
48	18	K-6 Special ED	5	3	1	1	5	1
49	15	Elementary	3	3	2	3	4	4
50	7	Elementary	1	1	2	2	2	3
51	23	9-12 Severely Handicapped	3	3	4	1	3	4
52	4	Elementary	2	3	2	2	5	4
53	4	High School	4	3	4	2	4	5
54	27	Elementary	3	3	2	2	4	4
55	11	Elementary	3	3	3	2	5	4
56	13	Elementary	2	2	3	2	2	4
57	9	Junior High	1	3	2	2	5	4
58	33	Elementary	1	1	1	1	5	4
59	15	Preschool	4	4	2	2	5	5
60	9	Elementary	1	1	2	2	2	4
61	29	High School	1	2	1	1	1	2

62	13	Elementary	1	2	2	2	4	5
63	1	Elementary	2	1	1	1	2	5
64	14	Elementary	2	3	4	2	2	4
65	23	K-12 District	1	3	2	2	2	4
66	7	High School	3	4	2	4	2	4
67	15	High School	3	3	5	4	4	1
68	15	High School	1	2	1	1	5	5
70	30	Elementary	3	4	2	2	4	4
71	14	Junior High	2	3	2	2	4	4
72	26	Elementary	2	2	1	1	4	4
73	27	Junior High	1	3	2	2	2	5
74	31	Junior High	1	1	1	1	1	1
75	11	Junior High	1	1	2	2	4	5
76	16	Elementary	3	2	1	4	2	4
77	23	Elementary	1	1	1	1	5	4
78	20	Junior High	3	4	2	2	4	2
79	33	Elementary	2	2	1	1	4	4
80	5	Elementary	3	3	3	3	4	4
81	25	High School	1	1	1	1	1	2
82	10	Elementary	1	2	2	2	2	3
83	22	Elementary	2	3	2	2	4	5
84	25	Elementary	1	1	1	1	2	4
85	43	Elementary	2	2	1	2	4	5
86	7	Elementary	2	2	3	3	4	4