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Teacher Knowledge and Implementation of Evidence Based Interventions Prior to Referral for Special Education

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TEACHER KNOWLEDGE AND IMPLEMENTATION OF EVIDENCE BASED INTERVENTIONS PRIOR TO REFERRAL FOR SPECIAL EDUCATION

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Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Psychology
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DEPARTMENT OF PSYCHOLOGY

Dissertation Approval

This is to certify that the thesis presented to us by Kathryn Hottenstein on the
16th day of May, 2016, in partial fulfillment of the requirements for the degree of
Doctor of Psychology, has been examined and is acceptable in both scholarship and
literary quality.

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This dissertation is dedicated to my son, Henry, who is my inspiration and reason for everything. I love you.
Abstract

The purpose of this study is not only to understand teachers’ knowledge of evidence based intervention strategies but also how they implement these in the classroom. This information will provide insight into current teacher behaviors regarding the intervention process. The study also explores how long teachers utilize such techniques before referring a student for a psychoeducational evaluation, as well as how often students are referred for a comprehensive evaluation. The study was designed to address four research questions related to teacher knowledge of evidence based interventions and their utilization of the prereferral process. A total of 117 classroom teacher in grades K-8 responded to a survey in its entirety. The study identified several factors that initially indicate to teachers that a student is struggling academically. Additionally, the study found that teachers had attempted using several basic interventions, but that the majority of participants had not attempted any of the listed Tier 1 interventions in math or writing or any Tier 2 interventions. Teacher reported that they attempt prereferral interventions for 3-4 weeks and decide if they are effective, in a number of ways. There was no majority opinion on the factors that influence the decision to refer for a psychoeducational evaluation; however, many participants indicated that they view the prereferral process as a way to access an evaluation for special education.
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Chapter 1: Introduction

There is a substantial amount of pressure placed on today’s teachers to meet curriculum standards, and it is clear that teacher performance is becoming more and more closely linked to student outcomes (Gill, Bruch, & Booker, 2013). With the pressure for higher student achievement increasing, teachers are searching for ways to support the children in their classrooms. Determining the appropriate course of instruction can be a challenging task. Although a struggling student may be a candidate for special education, it is important to ensure that high quality, evidence-based interventions are attempted prior to referral for an evaluation.

The Individuals with Disabilities Education Act (IDEA, U.S. Public Law 101-476) mandates that educational services of some kind must be provided to a student before referral for special education. This service can take many forms; often, it takes the form of prereferral intervention teams. Prereferral intervention teams meet with the purpose of developing instructional strategies that may help the child in the classroom. Truscott, Cohen, Palmeri, Sams, Sanborn, and Frank (2005) found that “85% of 200 elementary schools surveyed had a prereferral team and that 43 of 50 (86%) mandated or recommended prereferral teams as part of their special education regulation”. However, this process can often be viewed as a way to access referral for special education. This was evident in Eidle, Truscott, Meyers, and Boyd’s 1998 study, in which they found that several of the prereferral intervention team members identified special education placement as their end goal and the suggestions made by the teams rarely required any significant classroom modifications. Another study by Truscott, et al, using a phone survey, found that the goals identified by members of prereferral intervention teams
typically were not centered on decreasing referral for special education, with only 15% of
the schools identifying this as a goal. Moreover, interventions designed by such teams
rarely included substantial instructional change. Such findings indicate that school staff
members often engage in such prereferral meetings to fulfill the IDEA regulation,
without thoroughly attempting instructional modifications that may support the student,
eliminating the need for referral for special education.

The Response to Intervention (RTI), also known as Response to Intervention and
Instruction (RTII), framework provides a multi-tiered system to address student needs at
three increasingly intensive levels. The primary level is universal instruction, addressing
the needs of all students. The secondary tier is small-group, more intensive interventions
for students at-risk for or showing early signs of academic failure. The third and most
intensive tier is for students who are not responding to instruction at the Tier 1 or the Tier
2 level. Tiers 2 and 3 can often be differentiated on a number of factors, including:
intensity of instruction, frequency in delivery of instruction, and the level of progress
monitoring that is used. Students at the Tier 3 level are often considered to be at high risk
for failure and can be considered for special education needs if not responsive (Shapiro,
2014).

One myth regarding RTI is that the third (and most intensive) tier is only special
education. When a student does not respond to intensive interventions, he or she may
then qualify for special education. However, the RTI conceptual model defines Tier 3 as
intensive instruction, which may or may not include special education. The students who
are not responsive to the intensive level of instruction at Tier 3 may qualify for special
education services. It should be demonstrated initially that either the intensity or type of
intervention necessary to improve student performance either exceeds the resources in
general education or is not available in the general education setting (c.f. NASDSE,
2006).

**Statement of the Problem**

Not all students who experience difficulty in the classroom require a
psychoeducational evaluation. However, not all teachers are sure how to proceed. Many
schools have building based problem solving teams to assist with students who are not
experiencing success in the classroom. There is often confusion and inconsistency in how
those teams work. This can result in unnecessary requests for an evaluation for special
education prior to attempts that are sufficient to accommodate the student in the
classroom.

**Purpose of the Study**

The purpose of this study is to understand teachers’ knowledge of evidence based
intervention strategies and how they implement these in the classroom. This information
will provide insight into current teacher behaviors regarding the prereferral intervention
process. The study also explores how long teachers utilize such techniques before
referring a student for an evaluation for special education, as well as how often students
are referred for evaluations.

It is the hope of the author that the results of the study will provide new
information on teacher knowledge and use of interventions, and also that the study can be
used to develop ways to better support teachers in their implementation of prereferral interventions.

The following research questions will be addressed in the study:

1) What do elementary and middle school teachers perceive as characteristics of struggling students?

2) How do teachers describe their knowledge of evidence based interventions?

3) How do teachers learn about evidence based interventions and what type of assistance do they typically receive to implement in the classroom?

4) What evidence do teachers use to determine that a child should be referred for a comprehensive evaluation?
Chapter 2: Review of the Literature

Introduction

It is not uncommon for children to experience academic difficulty during their education. Some children’s academic difficulties reach the level of learning disability, which can necessitate special education. The National Center for Learning Disabilities (www.nclld.org) describes learning disabilities as “a group of varying disorders that have a negative impact on learning. They may affect one’s ability to speak, listen, think, read, write, spell or compute”; it has been reported that 2.4 million students are currently diagnosed with learning disabilities, representing 41% of the students receiving special education services (IDEA, 2010). However, not all students who experience academic difficulty have learning disabilities. Many struggling students can be accommodated through intervention within the regular education classroom. This often occurs through the prereferral process.

Prior to referral for special education, educators are typically required to follow a prereferral process that includes addressing student learning difficulties. When a student demonstrates difficulty with academic content or skill attainment in the regular education classroom, best practices advise applying differentiated instruction techniques and basic intervention strategies in an attempt to meet the student’s needs (Anderson, 2007). This is a vital part of education and ensures that all students have a chance to access instruction.

As with any practice, teachers demonstrate varied levels of knowledge and understanding of the prereferral process. Variability is also evident among teachers in their knowledge and use of empirically based, differentiated instruction techniques, including basic, Tier 1 interventions (Jones, Yssel, & Grant, 2012). Despite this
variability, it is important that teachers attempt to engage and grow in their understanding and use of the prereferral process. When teachers are able to use the prereferral process successfully, resources can be targeted more effectively and money is saved.

**Current Political Conversation**

In recent years, there has been a shift in focus in education from procedural accountability (assessing whether or not schools are following the rules) to accountability for student outcomes (assessing whether or not students are learning). This shift has placed an emphasis on regular, systematic assessment of student performance (Hunley & McNamara, 2010). The No Child Left Behind Act of 2002, (originally called the Elementary and Secondary Education Act in 2001), which mandated that all children attain satisfactory levels of academic skills, brought with it a sense of urgency for improving instruction and intervention for those students who were underperforming.

Another change that is occurring is the transformation from using diagnostic evaluations to place students in special education in order to receive interventions. This is often referred to as “test-and-place” practices. Such practices have recently been criticized due to their process of using assessment measures to identify deficits in individual aptitudes (typically from a single intelligence test), resulting in recommendations for interventions to remediate those identified areas of deficit (Hunley & McNamara, 2010). As mentioned by Hunley & McNamara (2010), there is limited research in support of this type of approach and attempts to link these practices with significant effective interventions have been mostly unsuccessful (Reschly & Ysseldyke, 2002).
There is a substantial amount of pressure placed on today’s teachers to meet curriculum standards, especially with the enactment of the new evaluation system for teacher effectiveness in Pennsylvania. This procedure, called the Pennsylvania Value Added Assessment System (PVAAS), involves a statistical analysis of Pennsylvania state assessment data. The data provide information on student achievement and growth. The purpose of this system is to ensure that all students are on an academic path to proficiency and beyond (PDE website). This student growth as measured by PVAAS will be included as one of the several measures in teacher summative ratings (PSEA.org). Because so much emphasis is being placed on student achievement and the link between such achievement and teacher performance, prereferral interventions can be of significant benefit to teachers.

**Tiered Service Delivery**

The RTI model is an ongoing assessment and intervention process that is used for monitoring student progress. It involves decision making relative to the need for modifications to instruction and the need for progressively intensified services and intervention based on data from progress monitoring. As noted in the RTI manual (2006), the fundamental of RTI is “Under what conditions will a student successfully demonstrate a response to the curriculum?” In order to address this question, interventions are chosen and subsequently implemented in order to determine what works for a particular student. The RTI model was enacted as an alternative method to the previously mentioned “test and place” model for identifying specific learning disabilities (Mellard, Fuchs, & McKnight, 2006).
One method for accessing interventions and resources in order to address struggling learners is the behavioral consultation model. The behavioral consultation model, brought about in the mid-1970s, introduced a method for defining problems in student performance. This method helped to identify factors that were contributing to the problem, as well as to develop interventions targeting those factors and to measure the success of attempted interventions. The behavioral consultation model includes four basic stages: problem identification, problem analysis, plan implementation, and problem evaluation (Kratochwill & Bergan, 1990). This model continues to be used as a way to access interventions prior to referral for special education. The behavioral consultation model places emphasis on the collection of data in order to assess student performance and to evaluate results of interventions. This model provides technical support for RTI, given its emphasis on the importance assessment and intervention (Hunley & McNamara, 2010).

The Three Tiers of Instruction

The RTI model has gained increasing popularity among schools as they work to create an environment where students have access to high quality instruction. As noted by Mellard, McKnight, and Jordan (2010), RTI is loosely based on a public health prevention model (Caplan, 1964). In terms of public health, prevention models evaluate the population’s risk as a whole and begin actions to protect against some type of disease or medical condition. This type of prevention model refers to level of risk and response in terms of primary, secondary, and tertiary levels.
RTI supports the use of tiered instructional approaches. Typically this consists of three Tiers, although some models include a fourth Tier and other models subdivide the Tiers into smaller units (Shapiro, 2014). For purposes of this research, consideration will be given to only three Tiers. Tier 1 is considered core programming and is provided for all students in a classroom. The expectation is that if Tier 1 programming is implemented appropriately, by highly trained and highly competent teachers, then approximately 75-80% of children could theoretically be expected to attain academic skill proficiency through Tier 1 instruction. It is expected that not all children will respond sufficiently to Tier 1 instruction, and those are the children who may need intervention either at the Tier 2 level or the Tier 3 level. The RTI model calls for some kind of universal (school-wide) screening to determine student achievement and to identify struggling learners. This helps to identify the students who are at risk for learning difficulties and who may need intervention at the Tier 2 level or Tier 3 level (National Research Center on Learning Disabilities, 2006).

Tier 2 instruction is designated for those students who fall below expected levels of achievement and demonstrate a risk for academic failure. However, these students are still above levels that are thought to indicate a high risk of failure. The progress monitoring assessment process is typically used in order to determine the needs of such students. Therefore, instructional programs that focus on the student’s specific areas of need can be implemented.

Instruction at Tier 2 is delivered in groups that are smaller than those in Tier 1, typically about 5-8 children. Interventions at Tier 2 are designed for a level of skill development that is more advanced than that which is seen at the Tier 3 level. Tier 2
encompasses approximately 15% of all students. Tier 2 interventions typically include small-group instruction addressing the targeted area of weakness. The progress made by students at Tier 2 is often monitored once a week or every other week. The student’s response to intervention at the Tier 2 level is monitored and one of the following three decisions are then made: the student is determined to be at a level of performance that is similar to same-grade peers and the student is returned to Tier 1; the student’s performance is determined to continue to be below same grade peers but he or she is making enough progress to remain in the Tier 2 intervention, or the student is not responding to the intervention at Tier 2 and is moved to Tier 3 for intervention that is more intensive and more individualized (Mellard & Johnson, 2008).

Students in Tier 3 are considered to be at a high risk for failure and are considered contenders for special education services if they do not respond. Tier 3 can vary, depending on the RTI model used. In some models, Tier 3 is considered special education. In other models it is viewed as inclusive of children who are not identified as requiring special education, but who have needs at the intensive level (Shapiro, 2014). Tier 3 is thought to include approximately 5% of all students. Tier 3 is considered the most intensive intervention. Students at Tier 2 typically receive progress monitoring less often than students in Tier 3. At Tier 3, the interventions are no longer considered for prevention; rather, they are interventions to address an identified area of need. Tier 3 is often much more individually focused, rather than the group focus seen in Tier 1 and Tier 2. These interventions are considered to be the most powerful available. This is seen in terms of the severity of the disability, the quality of the instructor, and the demonstrated
effectiveness of the intervention (Mellard & Johnson, 2008). Differentiated instruction techniques occur at all three tiers of instruction.

Although many schools have not officially adopted the RTI model, the idea of levels of interventions is often used. Providing students with interventions at the class-wide level is imperative in order to reach students with various skill levels who do not require specially designed instruction through special education services. Going forward, for the purposes of this dissertation, schools without an RTI model would consider regular education instruction as Tier 1.

**Differentiated Instruction**

The term “differentiated instruction” is often used when discussing basic classroom interventions. The idea of differentiated instruction comes out of beliefs about learning differences among students, about the way they learn, about differences in preferences, and about individual interests. Differentiated instruction is an integration of constructivist learning theory, learning styles, and brain development (Anderson, 2007). Differentiation of instruction occurs within the general education classroom.

Teacher differentiation of instructional methods in order to meet student needs is not a new concept. Teachers who use differentiation believe that each child is unique and has his/her own learning preferences. These teachers may differentiate, based on student readiness through varying the level of difficulty of the material that is presented in class. Teachers also may choose to differentiate skills and materials by aligning them with certain students’ affinities and the topics that interest them. In addition, teachers may differentiate based on their knowledge of student learning preferences which allows
students to have a choice in the way they complete their work; that is, how they complete
the work (independently, in partners, or in a group), and in terms of the space where they
complete the work (quiet work spaces, tables instead of desks, etc). It is critically
important to teachers who use differentiated instruction to provide the environment and
opportunities that include all children (Anderson, 2007).

At the core of differentiated instruction is flexibility in content, process, and
product based on individual student strengths, needs, and learning styles. Content can be
described as what is taught. Each child is provided with the same curriculum but the
content can be different, both quantitatively and qualitatively. Differentiated instruction
permits variation in content without loss of curriculum. Activities should allow for
student learning that addresses varying student abilities, styles, and interests. Finally, the
product is the way students demonstrate what they have learned (Levy, 2008).

Critical elements of differentiated instruction techniques include choice,
flexibility, continued assessment, and creativity. At the onset of planning for a new lesson
or unit, teachers determine what each student should be able to do at the conclusion of the
lesson. There are various ways that teachers can differentiate for students. One way is
differentiating the content of a lesson. This occurs when teachers adapt what is planned
for the students to learn or how they will obtain the desired material and skill set. This
does not have to happen through lowering expectations for students; instead this can
occur through using reading materials at varying levels and grouping students to work
toward attaining the same objectives and standards (Anderson, 2007). When teachers
differentiate within a lesson, they are altering the way students come to understand and
integrate facts, concepts, or academic skills. Traditional educational practices involve
guided and independent practice with a lesson. Such activities do not address varying abilities, learning styles, and prior knowledge of individual students. Another way to differentiate is differentiating the performance measure or product of a lesson. This allows students to have varying methods of demonstrating what they have learned. Students can be given a choice of assignment, for example, with the use of a choice board or by being given a list of potential products from which to choose. By differentiating the product, students have an opportunity to demonstrate what they have learned at all levels of capability. This also allows students to take responsibility for their learning and allows teachers to provide opportunities to create products that encompass the student’s individual learning preferences, interests, and strengths (Anderson, 2007).

Another key aspect to differentiated instruction is assessment. Several types of assessment should be used in order to collect data on student achievement, including preassessment, formative assessment, and summative assessment. In order to have an idea of what students already know and what they have the skills to do, preassessment is essential. This type of assessment can be basic, such as a KWL (What I already know, what I want to know, and what I learned) chart to more complex types, such as a test created by the teacher. In order to address student needs, it is important initially to understand their starting points (Anderson, 2007).

Formative assessment refers to ways in which teachers check in with students. This can be done in various ways and helps provide teachers with direction for future instruction. A final type of assessment is summative assessment, which provides an understanding of what the student has successfully learned. Such summative assessment
includes standardized testing, classroom tests, quizzes, projects, and other performance assessments created by the teacher (Levy, 2008).

Teachers who effectively differentiate instruction have several commonalities among their practices. These teachers consistently assess student progress in multiple ways; they are very knowledgeable about effective pedagogy and how students learn, and they are highly reflective. It is important that teachers be ready and able to adapt their instruction while it is occurring. Teachers who differentiate are able to adapt instruction thoughtfully in order to meet the diverse needs of their students (Parsons, Dodman, & Burrowbridge, 2013).

It is important to note the distinction between the terms adaptation, accommodation, and modification. Curriculum adaptations are changes within the educational environment which allow a student an equal opportunity to attain an adequate level of achievement and include both accommodations and modifications. Accommodations are changes to a course/standard/test which do not fundamentally alter or lower standards or expectations. Modifications are also changes to the course/standard/test; however, these are changes that do fundamentally alter or lower standard or expectations (Wright, 2003).

Examples of Tier 1 Evidence Based Interventions

In order for effective instructional practices to work, it is important to have a strong foundation at the Tier 1 level. This includes implementing basic differentiated instruction techniques, such as Tier 1 interventions, when students are not responding to the general curriculum. There are many examples of basic, Tier 1 interventions for
reading, writing and math. When selecting Tier 1 interventions, it is important to consider only those that are evidence-based. In order to illustrate Tier 1 interventions, several will be discussed in the areas of reading, writing, and math.

In terms of Tier 1 reading interventions, one such intervention is the use of repeated readings. Fluency, which has been identified as one area of importance by the National Reading Panel, is defined as the ability to read fluently. The What Works Clearinghouse, an initiative of the U.S. Department of Education to provide informed education decision making, describes repeated reading as an academic practice that intends to increase oral reading fluency. During repeated reading, a student sits in a quiet location, accompanied by a teacher, and reads a passage aloud a minimum of three times. The teacher usually chooses a passage that is between 50 to 200 words in length. If the student misreads a word or hesitates on a word for more than 5 seconds, the teacher reads the word aloud for him or her. The student then repeats the word correctly. The teacher also reads the word aloud or provides the definition if the student requests help with a word. The student rereads the passage until achieving a satisfactory fluency level. The What Works Clearinghouse has found evidence in support of repeated readings for students with learning disabilities; however, research by Jones, Yssel, & Grant (2012) support the use of repeated readings at Tier 1. They suggest a systematic approach to repeated reading which can be differentiated at Tier 1. The authors took research findings regarding repeated readings and made suggestions for application into the classroom. These suggestions include grouping the students by their benchmark skill levels and providing them with varying opportunities to engage in repeated readings each day of the week.
Another example of a Tier 1 classroom intervention for reading is Error Word Drill. This is a method used to build reading vocabulary. The procedure for Error Word Drill comprises four steps. The process begins when the student misreads a word; the word is written down and the date entered in an “Error Word Log”. The first step is to write out all of the error words from the session onto index cards, with 20 words total (pulling words from past sessions if the student missed fewer than 20 words). The second step is to review the index cards with the student. When the student reads the word correctly, remove it from the stack. The third step is to pronounce the word for the student if he or she misreads it. Then the student repeats the word correctly twice. Finally, the fourth step is to continue with all error words until each one has been read correctly. The words are then gathered and presented again.

A last example of a basic reading intervention is for reading comprehension. This intervention is called Question-Answer Relationships (QAR). Through QAR, students are taught to identify question and answer relationships. They are taught to match the corresponding strategy to comprehension questions based on whether the question is based on fact, requires inferential thinking, or draws upon the readers experiences. Students are instructed that answers to “right there” questions are based in fact and can be found in an individual sentence, often along with clue words that appear in the question. They learn that they can find answers to “think and search” questions within the text but may need to put together answers by scanning and making connections with other parts of the material. Students also learn that “author and you” questions require the student to take information or opinions from the text and integrate them with their own experiences or opinions in order to answer the question. Finally, students are taught that to answer
“on my own” questions, they need to use their own experiences instead of information from the text to answer (Raphael, 1982; Raphael, 1986).

In terms of writing, an example of a Tier 1 intervention for spelling is cover-copy-compare. This is an intervention to promote acquisition of spelling words, during which the student is provided with a spelling sheet with target words correctly spelled. The student initially looks at each correctly spelled word, and then covers it briefly while writing the word from memory. Then the student compares the word with the original correctly spelled model. This is a basic intervention that requires only a cover-copy-compare worksheet and a spelling log to keep track of mastered words (Skinner, McLaughlin & Logan, 1997).

A second example of a Tier 1 writing intervention is the SCOPE method of proofreading. SCOPE is a memory strategy taught to students in order to proofread their work independently. The SCOPE method can be put on a poster and hung in the classroom. The proofreading elements include: Spelling, Capitalization, Order, Punctuation, and Expression. The class and or student can be taught the strategy by examining a piece of writing; they use the process by having students utilize their own writing samples, and then implement the SCOPE method (Bos & Vaughn, 2002).

A final example of a writing intervention is the use of self-monitoring and graphing in order to increase writing fluency. Students can gain motivation to write by using daily monitoring and charting of their personal and class-wide rates of writing fluency. Several times each week, students can be assigned timed periods for free writing. During this time, they can write in journals. At the end of each writing session, students are asked to count the number of words that were written and record their writing fluency
score in the journal. In addition, students can chart the results in graph form for visual feedback. The class can chart the collective total of words and compare the class as whole from week to week (Rathvon, 1999).

When looking at math interventions at Tier 1, Say-Ask-Check is a useful tool for word problems. Say-Ask-Check is a method of using metacognitive prompts tied to a word problem. The strategy uses seven steps, with potential say, ask, and check metacognitive prompt examples provided. The seven steps include: read the problem, paraphrase the problem, ‘draw’ the problem, create a plan to solve the problem, predict/estimate the answer, compute the answer, and check the answer (Montague, 1992).

A second example of math intervention at Tier 1 includes Strategic Number Count Instruction. This intervention is used to teach the student explicit number counting strategies for basic addition and subtraction. In order to implement the intervention, the teacher needs a number-line, math fact flash cards for basic addition and subtraction facts, and the strategic number counting instruction score sheet. Prior to implementing the intervention steps, the teacher instructs the student on two count strategies for addition and subtraction. There are then five steps to the intervention; these include: creating flashcards, reviewing count-up strategies, completing flashcard warm-up, repeating flashcard review, and providing performance feedback (Fuchs et al., 2009).

Finally, a last example of basic math intervention is the use of ‘error-less learning’ worksheets. This strategy can build motivation in reluctant students by providing worksheets with an answer key on the page. In this method, they can be instructed to complete as many facts as quickly as possible. When the student comes to a
problem that he/she cannot solve, the student is instructed to locate the problem and the answer in the key and write the answer. This helps to build computation fluency and promote student visualization.

**Examples of Tier 2 Evidence Based Interventions**

One example of a reading intervention that can be used at the Tier 2 level is the Read Naturally program. Read Naturally works to build fluency at the appropriate readability levels. The intervention combines three research based strategies including teacher modeling, repeated reading, and progress monitoring. The teacher modeling involves a proficient reader who models correct reading while the student reads along with him or her. Repeated reading occurs because the student is asked to read the story multiple times in order to help master difficult words, increase accuracy, and improve expression. Finally, the student is asked to graph his or her own performance in order to monitor the progress of the intervention (Readnaturally.com).

One Tier 2 intervention in math is the focusMATH intensive intervention program. This program can be used in grades kindergarten to sixth grade. It is designed to address the needs of students who are at risk for academic failure. The program focuses on areas of math including computation, concepts, word problems, and fractions. Included in the program are specific lessons built on instruction in foundational skills. Students are taught to verbalize their understanding through the use of the instructional model. A progress monitoring component helps teachers to make lessons more individualized (intensiveintervention.org).
The Prereferral Process

The prereferral process is the procedure used by schools prior to referring a student for an evaluation for special education. The expectation involved in having a prereferral process is that it will reduce the number of unnecessary requests for special education evaluations while also increasing student success in the regular education classroom. The ultimate goal of the prereferral process is to provide general education teachers with strategies and assistance with strategy implementation for students who are experiencing difficulty in the general education setting. Because there is not one standardized method for what must be done within the prereferral process, this process often takes many different forms. Many schools take a team approach, with typical names such as Instructional Support Team (IST), Child Study Teams, Student Study Team (SST), and many more. There is no requirement, in terms of certification or teaching position, to be a part of the prereferral team. These teams may include teachers, principals, counselors, psychologists, and related service personnel, such as speech and language pathologists. Parents can also be involved in the prereferral team and can provide important information about the child’s background and areas of strength and weakness.

Children are referred for the prereferral process when showing signs of academic or behavioral difficulty. The team will review the student’s strengths and areas of weakness. Previous intervention strategies and their rates of success are discussed. The team then typically brainstorms for interventions that can be used by the classroom teacher in order to address the student’s area of need. After a plan has been made for
carrying out these interventions, the team decides on a time to meet again in order to discuss their effectiveness. The amount of time that an intervention is attempted varies greatly and is dependent on the teacher and the school. The team meets again to discuss the effectiveness of the intervention and decides how to proceed. There is no minimum or maximum number of intervention strategies attempted prior to referral for special education.

In a meta-analysis of existing research on preferral teams, Burns and Symington (2002) found that such teams are effective in reducing the number of referrals for special education. Although there is strong support for the prerereferral team process, the evidence is not clear about whether or not such teams are functioning as they are intended to. Consequently, there is evidence that prerereferral teams frequently fall short of the goals noted in the literature. One study conducted by Eidle, Truscott, Meyers, and Boyd (1998) found that several team members identified the ultimate goal as placement in special education.

One main problem with the prerereferral process is that treatment integrity data, such as evidence that the intervention was implemented with fidelity, is often not collected. Therefore, teams are relying on anecdotal evidence from the teacher on the implementation and success of the intervention strategy. According to Lane, Mahdavi, & Borthwick-Duffy (2003), a number of studies indicate relatively low levels of implementation of interventions that were suggested by prerereferral intervention teams. The authors indicate that Wilson, Gutkin, Hagen, and Oats (1998) found that 71% of teachers were unable to describe, explicitly, the interventions that were recommended by the prerereferral team. It stands to reason that if teachers are unable to describe the
interventions, they will likely experience difficulty implementing them. Overall, the authors indicate that the indirect approach to intervention used by the prereferral team does not allow for the required knowledge, skill, or support needed to ensure that the interventions are being implemented as proposed (Lane, Mahdavi, & Borthwick-Duffy, 2003). As noted by Slonski-Fowler & Trusco (2004), there is very little research that describes the teacher’s critical role in the prereferral process, such as implementing recommendations generated by the team and controlling the instructional environment. Subsequently, there is not a strong understanding of the teacher’s role or a clear model that describes teacher engagement in prereferral intervention.

**IDEA**

The prereferral process gained distinction through the 1997 Individuals with Disabilities Education Act (IDEA). IDEA was most recently updated in 2004 and includes information on prereferral intervention, although it continues to be quite vague. In its guide for parents, IDEA defines prereferral interventions as “Interventions delivered in the student’s regular classroom that attempt to improve learning prior to a referral for formal special education evaluation.” Therefore, IDEA mandates that educational interventions be provided to a student prior to referral for special education. However, it does not provide guidelines for implementation of the prereferral process nor does it state how long prereferral interventions must be tried before moving to an evaluation for special education. Most of the more specific guidelines regarding the prereferral process have occurred at the state level and vary, depending on guidelines developed by the state.
In Pennsylvania, there is a “Child Find” policy, which requires school districts to demonstrate that they have a system in place for locating and identifying students who are thought to be eligible for special education. Again, this is not a specific guideline for prereferral and referral for special education; it is only a policy that states that a system of some kind must be in place. Within the Child Find process, there must be public notice describing special education programs and how parents can request an evaluation of their child. In addition, written information must be published in the school district’s handbook and on the website, for public access. Parents should be made aware of the location of printed materials regarding screening procedures or of the model that is in place.

Prior to 1997, Pennsylvania school districts were mandated to use the Instructional Support Team (IST) process. The IST mandate was rescinded in 1997 and individual school districts were then permitted to choose which process would be implemented in their elementary schools in order to fulfill the screening requirement of Chapter 14 of the PA Department of Education regulations. School districts could then decide to continue with the IST model or to create their own screening method with the following requirements: a collection of curriculum-based or performance-based assessments for students exhibiting academic difficulty must be used; a complete systematic observation of students with problem behaviors must be completed, and data-based interventions to address skill deficits that were discovered by the assessment process must be used (Laverty, 2007).
Teacher Perceptions of the prereferral process

Lane, Mahdavi, & Borthwick-Duffy (2003) conducted a preliminary investigation of teachers’ perceptions regarding the assistance they received in implementing interventions that were generated by the prereferral intervention team. One objective of the study was to better understand teacher expectations of the type of assistance they were going to receive. The findings suggest that the majority of teachers expected to gain classroom interventions, receive professional support, and in addition, inform parents of a concern. Another objective of the study was to examine teacher desire for support in implementation of interventions. They found that over half of the teachers were in favor of having an in-class demonstration of intervention implementation. Teachers were also found to be in favor of follow-up support. The last objective of the study was to determine the degree to which the teacher characteristics, student characteristics, and initial expectations of the referral could predict desire for implementation assistance. It was found that when teachers perceived the student to have a more significant problem, the teacher was less inclined to favor support with implementation. Additionally, teachers who initially sought out interventions were likely to welcome support with implementation.

A second study on teacher perceptions of the prereferral process conducted by Slonski-Fowler and Truscott (2004), found three themes regarding teacher perspectives of the prereferral intervention team process. The teachers felt that teacher input was devalued or ignored by the teams; intervention strategies were limited and lacked clarity, and the teams demonstrated little accountability for implementation or outcomes. With
such results, it would not be surprising that teachers do not value or invest time in interventions generated by the prereferral intervention teams.

Other research in the area of teacher perception of the prereferral process includes findings indicating that teachers often view the prereferral process as a way to access an evaluation for special education. Eidle, Truscott, Meyers, and Boyd (1998) found that the end goal for some prereferral team members was ultimately special education placement. If seen in this light, it is plausible that teachers will not implement interventions with fidelity or attempt interventions for very long if the ultimate goal is access to special education.

**Teacher use of Evidence Based Preferral Interventions**

Despite a significant research base in support of the value of interventions that have been found to have positive outcomes for students, those interventions are not broadly used in typical classroom instruction (Denton, Vaughn, & Fletcher, 2003). Two reasons for this occurrence were proposed by the authors. The first proposed reason is “lack of information about effective instruction practices and how to implement them”. The second proposed reason is “disbelief by some educators that research-based practices are associated with improved outcomes for their students” (Denton, Vaughn, & Fletcher, 2003). In addition, as mentioned by Burns et al (2008), the academic interventions that are developed in the prereferral team process are typically not related to specific assessment data (Conca, Schechter, & Castler, 2004). Thus they are not linking assessment with intervention.
According to Burns, the most highly researched factor contributing to adequate implementation of interventions in education is the provision of performance feedback. Many studies have found support for performance feedback in improving and sustaining implementation of interventions (Burns, et al., 2008). Several other factors have been noted as important defining factors in educational research in order to best assist with decision making and instructional practices. Those factors as mentioned by Carnine (1997) include trustworthiness: research must meet a high standard and provide potential users with confidence regarding the findings; another is usability: research must be able to be used by educators and should be written with a clear understanding of the implications for decision making, and finally, accessibility: research should be written and available so that it is readily used by consumers (Denton, Vaughn, & Fletcher, 2003).

Conclusion

The prereferral process is an important part of education at the Tier 1, general education classroom, level of instruction. In order for the students to be successful, teachers are required to implement differentiated instruction techniques, including basic interventions, in order to target areas of struggle. This information is important because all too often students are referred for special education evaluations prior to implementation of differentiated instruction and Tier 1 level interventions. In addition, research on teacher perceptions of the prereferral process indicates that teachers hold views that are not entirely supportive of the prereferral process, or they are not entirely comfortable with implementing prereferral interventions.
Chapter 3: Method

Overview

The current survey study intended to gain insight into teacher knowledge and implementation of interventions prior to referral for a psychoeducational evaluation. Teachers were asked questions regarding their own perceptions of their decisions during the prereferral process. Questions were developed in order to answer the following four research questions:

1) What do elementary and middle school teachers perceive as characteristics of struggling students?
2) How do teachers describe their knowledge of evidence based interventions?
3) How do teachers learn about evidence based interventions and what type of assistance do they typically receive to implement interventions in the classroom?
4) What evidence do teachers use to determine that a child should be referred for a comprehensive evaluation?

Participants

The participants of the study were current elementary school (K-8) teachers in Southeastern Pennsylvania. Teachers employed in a variety of settings, including private and public schools were asked to participate. The survey was sent both to male and to female teachers and to teachers of all experience levels. Over the course of a month, 117 participants completed the survey in its entirety. However, data were collected and analyzed on partially completed surveys, making a total of 165 participants including
those who did not respond to all questions. Several participants’ data were removed because the participant indicated, in the survey, that he/she was not currently a classroom teacher in a K-8 setting. The data collected through the survey were used to answer the study’s four research questions. The survey was delivered electronically to current classroom teachers in the southeastern region of Pennsylvania. The majority of participants were female. Approximately half of the participants described their current school settings as suburban parochial/private schools. More specific demographic characteristics of the participation sample are reported in Table 1.

Table 1

Demographic characteristics of sample

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>101</td>
<td>86.3</td>
</tr>
<tr>
<td>Male</td>
<td>16</td>
<td>13.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Range</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-30</td>
<td>20</td>
<td>17.1</td>
</tr>
<tr>
<td>31-40</td>
<td>28</td>
<td>23.9</td>
</tr>
<tr>
<td>41-50</td>
<td>30</td>
<td>25.6</td>
</tr>
<tr>
<td>51-60</td>
<td>33</td>
<td>28.2</td>
</tr>
<tr>
<td>60+</td>
<td>6</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Years of Teaching
Inclusion/Exclusion Criteria

Teachers were included in this study if they were presently employed in an elementary school setting in the designated geographic region at the time the electronic survey was distributed. Teachers were excluded if they were not currently working as a classroom teacher and/or if they were not currently working as a classroom teacher in a K-8 environment.
Recruitment

The online survey (Appendix B) was sent electronically via email to teachers currently employed in southeastern Pennsylvania. Participation was on a voluntary basis; at the summation of the survey, the participant was given the opportunity to be entered for a chance to win one of five $10 Starbucks gift cards. Data were collected anonymously, with no individual identifiers.

Procedures

Contact information for elementary school teachers and principals in southeastern Pennsylvania was collected through their schools’ websites. An email was sent to the principals requesting their approval for teacher participation in the research study. Several districts requested approval from the school board via the superintendent. The request for approval was rejected by multiple individuals; some cited specific reasons, such as the school does not have the time for it, and others indicated only that they would not participate. The large majority of contacts did not respond to the email and it is unknown how many forwarded the information on to their staffs. The email included an electronic cover letter (Appendix A) as well as a link to an electronic copy of the survey via SurveyMonkey. Teachers were given 4 weeks to complete the survey. Data were collected and downloaded from SurveyMonkey for analysis.

Survey Instrument

The survey was developed by the study’s author and is composed of 46 questions regarding teachers’ roles in preferral intervention and use of evidence-based interventions
in their classrooms. The questions are designed to address the study’s four research questions. A cluster of questions will be used to answer each of the following research questions:

1) What do elementary and middle school teachers perceive as characteristics of struggling students?

2) How do teachers describe their knowledge of evidence based interventions?

3) How do teachers learn about evidence based interventions and what type of assistance do they typically receive to implement in the classroom?

4) What evidence do teachers use to determine that a child should be referred for a comprehensive evaluation?

**Survey Research**

Questions were presented in the form of an internet survey. Participants were asked to respond to 46 questions regarding their perceptions of their own behavior. Survey studies have become widely used in most developed countries. They have wide-ranging appeal because they are perceived as a reflection of attitudes, preferences, and opinions. As a research tool in the fields of social science, survey research has established credibility from its widespread acceptance and use in academic institutions (Rea & Parker, 2005).

There are several limitations to survey research. According to Schonlau, Fricker, & Elliott (2002), the most widely recognized shortcoming of internet based surveys is coverage error. Coverage error occurs when there is a discrepancy between the sampling frame and the target population. Research on response rates indicate that email surveys
range from 6-68%. (Schonlau, Fricker, & Elliott, 2002). In addition, the survey sample was a sample of convenience as well as a self-selected sample.

This study was conducted using an internet survey, which has been identified as being preferable to mail or telephone surveys with a number of circumstances. Some of the circumstances that hold true for the present study include the facts that the survey could be conducted with a convenience sample, a list of email addresses for the target population was available, and the target population represents a small part of the total population (Schonlau, Fricker, & Elliott, 2002).
Chapter 4

Results

Results of the survey responses examining teacher knowledge and use of educational interventions are presented. The data were analyzed to address the study’s four research questions. The data collected are in terms of frequencies and the statistical analyses used include frequencies and Chi-Square Tests.

Research Question 1: What do elementary and middle school teachers perceive as characteristics of struggling students?

The first research question sought to identify trends in how teachers recognize that a student in his or her classroom is having academic difficulty. The second question of the survey was designed to address this research question. This question asked, “What student behaviors indicate to you that a student is struggling academically?” Participants were allowed to select as many of the options as he/she desired. The most frequently selected option was poor test grades, with 86.1% of responders selecting this item. The options selected least included: requires frequent individual support, not meeting academic expectations, disengaged from class/others and uncertainty/confusion/anxiety. It should be noted that half of all respondents chose six of the options, and less than 10% of respondents chose the remaining five options. The full results are found in Table 2.
In terms of research question 1, the majority of participants identified six behaviors as indicators that a student is struggling. These include: poor test grades, acting out in class, parent expressed concerns, problems with homework, off task, and forgetfulness/incomplete assignments. Over half of all participants identified these selections.

Table 2

*What student behaviors indicate to you that a student is struggling academically?*

<table>
<thead>
<tr>
<th>Behavior</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor Test Grades</td>
<td>142</td>
<td>86.1</td>
</tr>
<tr>
<td>Acting Out in Class</td>
<td>123</td>
<td>74.5</td>
</tr>
<tr>
<td>Parent Expressed Concerns</td>
<td>114</td>
<td>69.1</td>
</tr>
<tr>
<td>Problems with Homework</td>
<td>108</td>
<td>65.5</td>
</tr>
<tr>
<td>Off Task</td>
<td>130</td>
<td>78.8</td>
</tr>
<tr>
<td>Forgetfulness/Incomplete Assignments</td>
<td>86</td>
<td>52.1</td>
</tr>
<tr>
<td>Disengaged from class/others</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Requires Frequent Individual Support</td>
<td>3</td>
<td>1.8</td>
</tr>
<tr>
<td>Uncertainty/Confusion/Anxiety</td>
<td>6</td>
<td>3.6</td>
</tr>
<tr>
<td>Not Meeting Academic Expectations</td>
<td>3</td>
<td>1.8</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>4.8</td>
</tr>
</tbody>
</table>
Research Question 2: How do teachers describe their knowledge of evidence based interventions?

The second research question was designed to explore teacher knowledge and experience using Tier 1 and Tier 2 academic interventions. Five survey questions were designed to address this research question, including questions 10, 11, 12, 13, and 14. Question 10 of the survey asked, “What sources do you use to learn about research-based educational interventions?” The most frequently endorsed items include support staff (79%) and other teachers (76%). The least likely sources for interventions were books (39%) and the individual’s supervisor (36%). Additionally, over half of those who responded indicated that they learn about interventions via continuing education workshops and internet resources. A list of the full results can be found in Table 3.

<table>
<thead>
<tr>
<th>Source</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td>65</td>
<td>39.4</td>
</tr>
<tr>
<td>Internet Resources</td>
<td>107</td>
<td>64.8</td>
</tr>
<tr>
<td>Continuing Education Workshops</td>
<td>109</td>
<td>66.1</td>
</tr>
<tr>
<td>Other Teachers</td>
<td>126</td>
<td>76.4</td>
</tr>
<tr>
<td>Supervisor</td>
<td>59</td>
<td>35.8</td>
</tr>
<tr>
<td>Support Staff</td>
<td>131</td>
<td>79.4</td>
</tr>
</tbody>
</table>
Question 11 was also designed to address the second research question. This question asked, “Which of the following interventions have you tried as part of the prereferral process?” This question sought to gain insight into teacher use of basic interventions by asking about the interventions which they have previously utilized. The most commonly selected intervention was ‘changing the method of presentation’ for the student, with 73% of responders selecting this intervention. The least commonly selected interventions included: strategies for organizing, hands on manipulatives, and other supports. The selection of ‘other supports’ encompassed additional practice with various methods (peer support, RTI support, reading center support, etc.). All results to this question can be found in Table 4.

Table 4

<table>
<thead>
<tr>
<th>Intervention</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changing Method of Presentation</td>
<td>121</td>
<td>73.3</td>
</tr>
<tr>
<td>Repeated Readings</td>
<td>70</td>
<td>42.4</td>
</tr>
<tr>
<td>Provided Student with Extra Time</td>
<td>112</td>
<td>67.9</td>
</tr>
<tr>
<td>Provided Student with Visual Aids</td>
<td>111</td>
<td>67.3</td>
</tr>
<tr>
<td>Hands on Materials/Manipulatives</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td>Strategies for Organizing</td>
<td>3</td>
<td>1.8</td>
</tr>
<tr>
<td>Other Supports</td>
<td>8</td>
<td>4.8</td>
</tr>
</tbody>
</table>
Additionally, survey questions 12, 13, and 14 addressed the second research question. These questions asked, “Which of the following Tier 1 interventions in reading have you tried?”, “Which of the following Tier 1 interventions in math have you tried?”, and “Which of the following Tier 1 interventions in writing have you tried?” For these questions, the participant could select as many of options that applied. Approximately half of the respondents indicated that they had tried Repeated Readings as a reading intervention at some point (53.9%). The next most commonly selected intervention was Question-Answer relationships, with 35.2% of participants identifying this intervention as one that they had attempted. In terms of Tier 1 math and writing interventions, the most commonly selected option indicated that they had not tried any of the listed interventions (41.2% and 38% respectively). All results for attempted Tier 1 interventions in reading, math, and writing can be found in Table 5.

Table 5

*Which of the following Tier 1 interventions have you tried?*

<table>
<thead>
<tr>
<th>Intervention</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeated Reading</td>
<td>89</td>
<td>53.9</td>
</tr>
<tr>
<td>Error Word Drill</td>
<td>14</td>
<td>8.5</td>
</tr>
<tr>
<td>Question-Answer Relationships</td>
<td>58</td>
<td>35.2</td>
</tr>
<tr>
<td>Learning Strategies</td>
<td>8</td>
<td>4.8</td>
</tr>
<tr>
<td>None of the Above</td>
<td>21</td>
<td>12.7</td>
</tr>
</tbody>
</table>
Survey questions designed to answer research question 2 included questions regarding teacher knowledge and implementation of interventions. In terms of places where they sourced interventions, participants indicated that they were most likely to find research based interventions from support staff, other teachers, continuing education workshops, and internet resources. When asked about interventions that have been attempted as part of the prereferral process, over half of all teachers surveyed had attempted the following interventions: changing method of presentation, providing student with extra time, and providing student with visual aids. Additionally, participants were asked about Tier 1 interventions that they had attempted in reading, writing, and math. In terms of reading, approximately half of the participants reported having used repeated readings as a reading intervention. The most commonly selected option when
asked about writing and math interventions indicated that participants had not used any of the Tier 1 interventions that were listed.

**Research Question 3: How do teachers learn about evidence based interventions and what type of assistance do they typically receive to implement in the classroom?**

The third research question sought to gain information regarding the ways in which teachers access classroom interventions and who typically provides assistance when implementing an intervention. The following survey questions were used as data to address the third research question: 10, 15, 17, 18, 19, and 21. Question 10 of the survey asked, “What sources do you use to learn about research-based educational interventions (check all that apply)?” The results of this question were discussed previously and suggest that teachers are most likely to access interventions through advice from other people, such as fellow teachers or support staff, as well as from continuing education workshops, and from internet resources. Full results can be found in Table 3.

Survey question 15 asked, “Whom do you consult with when you have concerns about a student’s academic progress (check all that apply)?” Participants most commonly selected responses indicating that they consult with other teachers (63%). In addition, approximately half of all respondents indicated that they consult with the reading specialist (47.3%) and the school principal (47.3%). Forty-three percent of participants reported consulting with the school psychologist. Responders were least likely to consult with the learning support teacher (1.2%), students’ parents (3%), and others (3.6%). The full results can be found in Table 6.
Table 6

Who do you consult with when you have concerns about a student’s academic progress?

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Teachers</td>
<td>104</td>
<td>63</td>
</tr>
<tr>
<td>School Psychologist</td>
<td>71</td>
<td>43</td>
</tr>
<tr>
<td>School Counselor</td>
<td>60</td>
<td>36.4</td>
</tr>
<tr>
<td>Reading Specialist</td>
<td>78</td>
<td>47.3</td>
</tr>
<tr>
<td>School Principal</td>
<td>78</td>
<td>47.3</td>
</tr>
<tr>
<td>Student’s Parents</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Learning Support Teacher</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Question 17 asked participants, “What kinds of resources are available to you for support (check all that apply)?” The four most commonly endorsed options include: reading specialist (60.6%), school psychologist (59.4%), school counselor (58.2%), and school administrators (58.2%). Far fewer respondents indicated that they have a math specialist (20%) and learning consultant (6.7%) available for support. Results for this survey question are reported in Table 7.
Table 7

What kinds of resources are available to you for support?

<table>
<thead>
<tr>
<th>Resource</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Specialist</td>
<td>100</td>
<td>60.6</td>
</tr>
<tr>
<td>Continuing Ed Trainings</td>
<td>56</td>
<td>33.9</td>
</tr>
<tr>
<td>School Psychologist</td>
<td>98</td>
<td>59.4</td>
</tr>
<tr>
<td>School Counselor</td>
<td>96</td>
<td>58.2</td>
</tr>
<tr>
<td>Math Specialist</td>
<td>33</td>
<td>20</td>
</tr>
<tr>
<td>Learning Consultant</td>
<td>11</td>
<td>6.7</td>
</tr>
<tr>
<td>School Administrators</td>
<td>96</td>
<td>58.2</td>
</tr>
</tbody>
</table>

In order to gain an understanding of program resources at participants' schools, question 18 asked, “What kinds of program resources does your school have?”

Approximately half of participants reported that they have Title 1 reading available to them. 34.5% reported that they have a Paraprofessional working with small groups and 28.5% of respondents reported that they have Title 1 math. Results for this question can be found in their entirety in Table 8.
Table 8

*What kinds of program resources does your school have?*

<table>
<thead>
<tr>
<th>Program Resource</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title 1 Reading</td>
<td>83</td>
<td>50.3</td>
</tr>
<tr>
<td>Title 1 Math</td>
<td>47</td>
<td>28.5</td>
</tr>
<tr>
<td>Paraprofessional Working with Small Groups</td>
<td>57</td>
<td>34.5</td>
</tr>
</tbody>
</table>

In addition to program resources, question 19 looked at available technology resources by asking, “What technology resources does your school have to offer? (Check all that apply).” The majority of participants reported having internet access in every classroom and Smartboards available at their schools. Slightly less than half of participants reported having individual laptops/IPads and access to educational applications and software. The least endorsed option was allowing the use of a personal smartphone, with only 7.3% of respondents indicating this is available at their schools. The full results can be found in Table 9.
Table 9

*What technology resources does your school have to offer?*

<table>
<thead>
<tr>
<th>Resource</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Access in Every Classroom</td>
<td>121</td>
<td>73.3</td>
</tr>
<tr>
<td>Smartboard</td>
<td>113</td>
<td>68.5</td>
</tr>
<tr>
<td>Individual Laptops/IPads</td>
<td>74</td>
<td>44.8</td>
</tr>
<tr>
<td>Allowing Use of Personal Smartphone</td>
<td>12</td>
<td>7.3</td>
</tr>
<tr>
<td>Access to Educational Applications and Software</td>
<td>72</td>
<td>43.6</td>
</tr>
</tbody>
</table>

In order to gain an understanding of how teachers ensure fidelity of interventions, they were asked about who monitors the interventions that are implemented. Survey question 21 asked, “Who helps to monitor the fact that an intervention is implemented as planned?” Although none of the responses was made by a majority of participants, the most commonly indicated option was that the principal (27.7%) helps to monitor the fact that an intervention is implemented as planned. The next most commonly selected option was ‘other’, with 23.8% of participants selecting this option. The entire results are found in Table 10.
Table 10

Who helps to monitor that an intervention is implemented as planned?

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Psychologist</td>
<td>11</td>
<td>8.5</td>
</tr>
<tr>
<td>Reading Specialist</td>
<td>20</td>
<td>15.4</td>
</tr>
<tr>
<td>Counselor</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Principal</td>
<td>36</td>
<td>27.7</td>
</tr>
<tr>
<td>No one</td>
<td>19</td>
<td>14.6</td>
</tr>
<tr>
<td>Other</td>
<td>31</td>
<td>23.8</td>
</tr>
</tbody>
</table>

In terms of survey questions that addressed research question 3, as previously mentioned, participants were likely to access interventions from other people, such as fellow teachers or support staff, from continuing education workshops, and from internet resources. In terms of consultation, more than half of participants reported consulting with other teachers. When asked about available resources, over half of respondents indicated that they have a reading specialist, school psychologists, school counselors, and school administrators as available resource persons. In terms of program resources, approximately half of the teachers reported having Title 1 reading support available at their schools. The participants were also asked about technology resources and the majority of participants reported that they have internet access in every classroom and Smartboards available at their school. Finally, when asked about who assists with intervention implementation, there was not a majority selection.
Research Question 4: What evidence do teachers use to determine that a child should be referred for a comprehensive evaluation?

The final research question was designed to gain further insight into what circumstances influence teachers’ decisions to make a referral for an evaluation for special education. Information was gathered regarding how teachers decide that an intervention is effective, typical duration of interventions, and other factors that influence the referral for a full evaluation. Survey questions 23, 24, 25, and 28 were used to address the final research question. Survey question 23 asked, “What factors indicate to you that an attempted intervention is working (check all that apply)?” The majority of responders (72.1%) selected improvement in performance on classroom assignments. In addition, 64.2% selected on-task behavior and 61.8% indicated that improvement in tests was a factor. The least identified factor was improvement in standardized testing (19.4%). The full results for this survey question can be found in Table 11.
Table 11

*What factors indicate to you that an attempted intervention is working? (Check all that apply)*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement in Performance on Classroom Assignments</td>
<td>119</td>
<td>72.1</td>
</tr>
<tr>
<td>Improvement on Tests</td>
<td>102</td>
<td>61.8</td>
</tr>
<tr>
<td>Data Collected on Identified Goal</td>
<td>86</td>
<td>52.1</td>
</tr>
<tr>
<td>Parent Satisfaction</td>
<td>43</td>
<td>26.1</td>
</tr>
<tr>
<td>Student On-Task</td>
<td>106</td>
<td>64.2</td>
</tr>
<tr>
<td>Improvement in Standardized Testing</td>
<td>32</td>
<td>19.4</td>
</tr>
<tr>
<td>Improved Homework Completion</td>
<td>71</td>
<td>43</td>
</tr>
</tbody>
</table>

Question 24 asked, “How long do you typically utilize an intervention before changing the intervention or starting a new intervention?” Approximately half of all participants indicated that they typically implement an intervention for 3-4 weeks. The least common response was 1-2 weeks, with only 6.7% of respondents selecting this option. The entire data set for this question is displayed in Table 12.
Table 12

*How long do you typically utilize an intervention before changing the intervention or starting a new intervention?*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 Weeks</td>
<td>8</td>
<td>6.7</td>
</tr>
<tr>
<td>3-4 Weeks</td>
<td>62</td>
<td>52.1</td>
</tr>
<tr>
<td>5-6 Weeks</td>
<td>31</td>
<td>26.1</td>
</tr>
<tr>
<td>More Than 6 Weeks</td>
<td>18</td>
<td>15.1</td>
</tr>
</tbody>
</table>

The 25th question of the survey asked, “How do you decide if there is value in continuing an intervention?” For this question, participants could select multiple options. Over half of participants indicated that they continue an intervention if there is noticeable progress in the student’s academic performance and approximately half of participants reported that they continue the intervention if student engagement has increased. Full results for this survey question can be found in Table 13.
Table 13

How do you decide if there is value in continuing an intervention?

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is Noticeable Progress in the Student’s Academic Performance</td>
<td>107</td>
<td>64.8</td>
</tr>
<tr>
<td>Test Grades have Improved</td>
<td>69</td>
<td>41.8</td>
</tr>
<tr>
<td>Student Engagement has Increased</td>
<td>89</td>
<td>53.9</td>
</tr>
<tr>
<td>Data Collection on Identified Goal Shows Improvement</td>
<td>76</td>
<td>46.1</td>
</tr>
</tbody>
</table>

Finally, question 28 asked participants, “What factors influence your decision to refer a student for a psychoeducational evaluation?” Participants were again allowed to select multiple options. Of these participants, 31.5% identified ‘the student continues to struggle after multiple instructional strategies have been used’ as a factor in their decision to refer for a psychoeducational evaluation. The rest of the options were each selected by fewer than 20% of respondents. The entire results are found in Table 14.
Table 14

What factors influence your decision to refer a student for a psychoeducational evaluation?

<table>
<thead>
<tr>
<th>Factor</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Student Continues to Struggle after Multiple Strategies attempted</td>
<td>52</td>
<td>31.5</td>
</tr>
<tr>
<td>Pace of the Student’s Progress</td>
<td>4</td>
<td>2.4</td>
</tr>
<tr>
<td>Size of the gap between the Student and the Class Average</td>
<td>11</td>
<td>6.7</td>
</tr>
<tr>
<td>Increasing signs of Frustration, Anxiety, and/or Stress in the Student</td>
<td>29</td>
<td>17.6</td>
</tr>
<tr>
<td>Length of Time using Interventions with Limited or Slow Progress</td>
<td>17</td>
<td>10.3</td>
</tr>
<tr>
<td>Pressure from the Student’s Parents</td>
<td>3</td>
<td>1.8</td>
</tr>
<tr>
<td>All of the Above</td>
<td>8</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Survey questions that addressed the final research question sought to gain information regarding the circumstances that influence the decision to refer for a psychoeducational evaluation. When looking at how teachers determine that prereferral intervention is effective, one half, or more, of all participants identified the following options- improvement in performance on classroom assignments, on-task behavior, improvement on tests, and data collected on the identified goal demonstrated improvement. In terms of typical intervention duration, half of participants reported the usual length of implementation as 3-4 weeks. When deciding whether or not to continue an intervention, half, or more, of participants identified the fact that noticeable increase in academic performance and increased student engagement are considered indicators that
an intervention is effective and should be continued. Finally, when foregoing the preferral process and considering a psychoeducational evaluation, there was not a majority opinion on the factors that influence this decision.

Additional Findings

In addition to providing information to address the four research questions, several survey questions offer information regarding teacher approaches to working with students who are struggling. Six survey questions were used to provide insight into this area, including questions 3, 4, 5, 6, 26, and 27. Survey question 3 asked, “What is the first strategy that you use when a student appears to struggle academically?”

Approximately half of responders indicated that they break the concept into smaller parts (53.2%). The next most commonly selected option was to re-explain the lesson (31.6%). The rest of the options were selected by fewer than 10% of participants. Full results for this survey question can be found in Table 15.
Table 15

What is the first strategy that you use when a student appears to struggle academically?

<table>
<thead>
<tr>
<th>Strategy</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-explain the Lesson</td>
<td>50</td>
<td>31.6</td>
</tr>
<tr>
<td>Pair with Another Student</td>
<td>4</td>
<td>2.5</td>
</tr>
<tr>
<td>Break the Concept into Smaller Parts</td>
<td>84</td>
<td>53.2</td>
</tr>
<tr>
<td>Work with the Student Individually/in a Smaller Group</td>
<td>12</td>
<td>7.6</td>
</tr>
<tr>
<td>Talk to the Student about Strategies</td>
<td>4</td>
<td>2.5</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Another question regarding the approach that teachers take with struggling students is survey question 4. This question asked participants, “How long do you continue with regular instruction to determine if a student is struggling before initiating your school’s prereferral process?” Approximately half of all participants indicated continuing with regular instruction for 4-6 weeks. Teachers were least likely to report continuing with regular instruction for more than 4 months. Results for this question are located in Table 16.
Table 16

*How long do you continue with regular instruction to determine if a student is struggling before initiating your school’s prereferral process?*

<table>
<thead>
<tr>
<th>Duration</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer than 4 weeks</td>
<td>38</td>
<td>27.3</td>
</tr>
<tr>
<td>4-6 weeks</td>
<td>72</td>
<td>51.8</td>
</tr>
<tr>
<td>3-4 months</td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td>More than 4 months</td>
<td>4</td>
<td>2.9</td>
</tr>
</tbody>
</table>

In order to inquire about the frequency with which teachers are referring students to the prereferral process, survey question 5 asked, “During the last school year, how many students in your classroom required the prereferral process?” Approximately half of participants had 1-2 students who required the prereferral process. Full results can be found in Table 17.
Table 17

*During the last school year, how many students in your classroom required the prereferral process?*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero</td>
<td>27</td>
<td>18.6</td>
</tr>
<tr>
<td>1-2</td>
<td>72</td>
<td>49.7</td>
</tr>
<tr>
<td>3-4</td>
<td>35</td>
<td>24.1</td>
</tr>
<tr>
<td>5+</td>
<td>11</td>
<td>7.6</td>
</tr>
</tbody>
</table>

In order to understand how often students who go through the prereferral process are ultimately evaluated for special education, teachers were asked, “Of those students in your classroom who went through the prereferral process, how many went on to be evaluated for special education services?” Almost half of all participants indicated that 1-2 students who went through the prereferral process went on to be evaluated for special education. Very few participants indicated that 3-4 or 5+ students went on to be evaluated for special education. Complete results for this item are found in Table 18.
Table 18

*Of those students in your classroom who went through the prereferral process, how many went on to be evaluated for special education services?*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero</td>
<td>44</td>
<td>26.7</td>
</tr>
<tr>
<td>1-2</td>
<td>77</td>
<td>46.7</td>
</tr>
<tr>
<td>3-4</td>
<td>10</td>
<td>6.1</td>
</tr>
<tr>
<td>5+</td>
<td>6</td>
<td>3.6</td>
</tr>
</tbody>
</table>

In terms of the number of interventions teachers use on one student, question 26 asked participants, “How many interventions do you typically attempt prior to referral for special education?” Nearly all respondents indicated attempting more than one intervention. There was a similarity in the number of teachers who reported attempting two, three, and more than three interventions: approximately 27%, 32%, and 35%, respectively. The complete results of question 26 can be found in Table 19.
Table 19

*How many interventions do you typically attempt prior to referral for special education?*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>7</td>
<td>6.4</td>
</tr>
<tr>
<td>Two</td>
<td>30</td>
<td>27.3</td>
</tr>
<tr>
<td>Three</td>
<td>35</td>
<td>31.8</td>
</tr>
<tr>
<td>More than 3</td>
<td>38</td>
<td>34.5</td>
</tr>
</tbody>
</table>

Question 27 addressed the duration of interventions. It asked, “How long do you continue classroom based interventions before requesting a referral for special education?” Approximately half of all who were surveyed reported continuing classroom based interventions for 1-2 months. Only several participants indicated attempting interventions for less than a month before requesting a referral for special education. The total results can be found in Table 20.
Table 20

*How long do you continue classroom based interventions before requesting a referral for special education?*

<table>
<thead>
<tr>
<th>Duration</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 month</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>1-2 months</td>
<td>55</td>
<td>48.7</td>
</tr>
<tr>
<td>2-3 months</td>
<td>25</td>
<td>22.1</td>
</tr>
<tr>
<td>More than 3 months</td>
<td>25</td>
<td>22.1</td>
</tr>
</tbody>
</table>

Survey questions were also used to examine teacher familiarity with the use of RTI(I) procedures. These questions asked participants about whether or not their schools use an RTI(I) model, their experience levels with RTI(I), and if they have used any Tier 2 interventions. Question 39 of the survey asked, “What is your experience level with RTI(I)?” The most frequently selected response was “I’ve heard of it but I’ve never received formal training”, with 33.9% of participants selecting this option. Of these participants, 20.6% indicated that they have been involved in using RTI with students in class. Only 3.6% of participants reported that they have never heard of it and 2.4% indicated that they were a member of the RTI team at their schools. Results for this question can be found in their entirety in Table 21. Question 39 was also found to have a significant difference between public and private school teacher responses. In order to analyze the responses, they were separated into “no direct experience” and “some experience”. The public school teachers were significantly more likely to report having
had some experience with RTI(I) but the private school teachers reported, at a higher rate, having had no direct experience.

Table 21

What is your experience level with RTI(I)?

<table>
<thead>
<tr>
<th>Experience Level</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’ve Never Heard of it</td>
<td>6</td>
<td>3.6</td>
</tr>
<tr>
<td>I’ve Heard of it but I’ve never Received Formal Training</td>
<td>56</td>
<td>33.9</td>
</tr>
<tr>
<td>I’ve had Training but no Opportunity to use it</td>
<td>17</td>
<td>10.3</td>
</tr>
<tr>
<td>I’ve been Involved in using RTI with Students in Class</td>
<td>34</td>
<td>20.6</td>
</tr>
<tr>
<td>I’m a Member of the RTI Team at My School</td>
<td>4</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Survey question 40 asked participants, “Does your school use an RTI(I) model?” The same number of participants indicated that their schools do use an RTI(I) model, but as many participants indicated that they did not know, with 34.2% of responders selecting each option. Among the participants, 31.6% reported that their school is not currently using an RTI(I) model. Several individuals commented that their schools are currently looking into or starting RTI in the future. The results can be found in Table 22. Question 40 also had a statistically significant difference between public and private school
respondents. Public school teachers indicated their school uses an RTI(I) model at a significantly higher rate than private school teachers.

Table 22

*Does your school use an RTI(I) model?*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>40</td>
<td>34.2</td>
</tr>
<tr>
<td>No</td>
<td>37</td>
<td>31.6</td>
</tr>
<tr>
<td>I don’t know</td>
<td>40</td>
<td>34.2</td>
</tr>
</tbody>
</table>

Finally, question 16 of the survey asked, “Have you implemented any Tier 2 interventions yourself? If so, please include those interventions in the comment field (ex: Read Naturally, focusMATH, etc.)” The majority of participants indicated that they have not implemented any Tier 2 interventions. The results of question 16 can be found in table 23.
Table 23

*Have you implemented any Tier 2 interventions yourself? If so, please include those interventions in the comment field (ex: Read Naturally, focusMATH, etc.)*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>39</td>
<td>30.7</td>
</tr>
<tr>
<td>No</td>
<td>88</td>
<td>69.3</td>
</tr>
</tbody>
</table>

In addition to the addressing the research questions, several survey questions were used to gain insight into the approach that teachers take after identifying a student who is struggling in the classroom. In terms of the first strategy that teachers utilize after identifying a struggling student, approximately half of participants reported that they break the concept into smaller parts. Additionally, half of respondents reported that they typically maintain regular instruction for 4-6 weeks before initiating their schools’ prerereferral process. When asked about how many students in their classrooms required the prerereferral process, approximately half of participants had 1-2 students who required the prerereferral process during the last school year. Half of the participants reported having 1-2 students who went on to be evaluated for special education. Regarding the number of interventions that teachers attempt before initiating a referral for special education, participants were almost evenly divided between selecting two, three, and more than three interventions. In terms of the length of time that teachers usually wait before referring for special education, approximately half of the participants indicated implementing interventions for 1-2 months before referring for an evaluation for special
education. Additional questions addressed familiarity and use of RTI(I). Although there was no majority, the most commonly selected option when asked about experience with RTI(I) indicated that participants had heard of it but had not received formal training. When asked if the teachers ‘current schools use an RTI(I) model, responses were nearly evenly divided between the fact that their schools do use an RTI(I) model, do not use an RTI(I) model, and they did not know. Finally, the majority of participants reported that they have not implemented any Tier 2 interventions.

**Differences between Participant Groups**

In order to examine the data in terms of differences between groups of participants, two demographic variables were used to determine if there was a pattern of responses based on two variables: years of experience and public vs. private school setting. In terms of years of experience, participants were separated by those who had been teaching up to 10 years and those who had been teaching more than 10 years. There were no statistically significant differences between the response patterns of teachers who have been teaching up to 10 years and those who have been teaching more than 10 years. However, there were five survey questions with statistically significant differences in the response pattern of participants working in private schools and those working in public schools. Several of these items were discussed previously. This included the finding that public school teachers reported more directed experiences with RTI(I) and also indicated their schools use an RTI(I) model at a significantly higher rate than the model is used in private schools. Full results can be found in tables 24 and 25 respectively.
Table 24

*Crosstabulation of setting and experience with RTI(I)*

<table>
<thead>
<tr>
<th>Setting</th>
<th>Experience with RTI(I) model</th>
<th>( X^2 )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>No Direct Experience 15</td>
<td>Some Experience 30</td>
<td>28.421</td>
</tr>
<tr>
<td>Private</td>
<td>57</td>
<td>12</td>
<td>( p &lt; .05 )</td>
</tr>
</tbody>
</table>

Table 25

*Crosstabulation of setting and use of RTI(I) model in current school*

<table>
<thead>
<tr>
<th>Setting</th>
<th>Use of RTI(I) model in current school</th>
<th>( X^2 )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>Yes 33</td>
<td>No 6</td>
<td>37.463</td>
</tr>
<tr>
<td>Private</td>
<td>5</td>
<td>31</td>
<td>( p &lt; .05 )</td>
</tr>
</tbody>
</table>

One question not previously discussed but one with a significant difference in responses was survey question 5. This question asked, “During the last school year, how many students in your classroom required the prereferral process?” Public school
teachers indicated a significantly higher rate of utilizing the prereferral process with students in their classroom than private school teachers.

Table 26

_Crosstabulation of setting and number of students who required the prereferral process_

<table>
<thead>
<tr>
<th>Setting</th>
<th>Number of students who required prereferral process</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-2 students</td>
<td>3 or more students</td>
</tr>
<tr>
<td>Public</td>
<td>23</td>
<td>19</td>
</tr>
<tr>
<td>Private</td>
<td>46</td>
<td>16</td>
</tr>
</tbody>
</table>

*p<.05

Another survey question with a significant difference between public and private school teachers was question number 26. This question asked, “How many interventions do you typically attempt prior to referral for special education?” The public school teachers reported doing more interventions at a significantly higher rate than the private school teachers. Results can be found in Table 27.
Table 27

*Crosstabulation of setting and number of interventions*

<table>
<thead>
<tr>
<th>Setting</th>
<th>0-2 interventions</th>
<th>3 or more interventions</th>
<th>$X^2$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>7</td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>27</td>
<td>33</td>
<td>7.254</td>
<td>.006</td>
</tr>
</tbody>
</table>

$p<.05$

A final survey question with a significant difference between private and public teacher responses was survey question 30, which asked about the respondents’ opinions regarding the prereferral process at his/her school. This question asked, “I find my schools prereferral process effective.” The teachers in the private school setting were more likely to agree with this statement than the teachers in the public school setting. Full results can be found in Table 28.
Table 28

*Crosstabulation of setting and effective prereferral process*

<table>
<thead>
<tr>
<th>Setting</th>
<th>Prereferral process effective</th>
<th>( X^2 )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>agree</td>
<td>disagree</td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>30</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>57</td>
<td>12</td>
<td>3.830</td>
</tr>
</tbody>
</table>

\( p < .05 \)
Chapter 5
Discussion

Summary of the Findings

The survey was designed to address the study’s four research questions. The first research question addressed those characteristics indicating to K-8 teachers that a student is struggling academically. The results of the survey suggest that teachers are most likely to recognize that a student is struggling if the student has poor test grades, starts acting out in class, exhibits off task behavior, has problems with homework, exhibits forgetfulness or has incomplete assignments or the students’ parent expresses concerns. These behaviors comprised all of the choices for this survey’s questions, meaning that all of the options were endorsed by a majority of respondents. Because of this, the questions did not help to narrow down the behaviors that teachers use to identify that a student is struggling academically.

The second research question centered on teacher knowledge of evidence based interventions. The teachers in the study reported that they sourced interventions through colleagues, such as support staff and other teachers, as well as via internet resources and continuing education workshops. These teachers reported having used several basic interventions as part of the preferral process; however, the majority of participants had reportedly not attempted any of the listed Tier 1 interventions in math or writing. Additionally, the majority of participants had not attempted any Tier 2 interventions. These findings are not surprising because many of the participants are not in schools which use the RTI(I) model. The RTI(I) model mandates that Tier 1 and Tier 2 interventions be attempted prior to more intensive services, including a referral for
special education. In addition, over half of participants were teachers in a nonpublic setting, where resources are limited and Tier 2 interventions are typically not implemented by a classroom teacher.

Survey Questions designed to answer research question three addressed how teachers learn about interventions and the assistance they require when implementing interventions in the classroom. Teachers who participated in the study reported consulting with other teachers when there are concerns regarding a student’s academic progress. In addition, the majority have access to a reading specialist, school psychologist, school counselor, and school administrators. Understanding that teachers typically choose most often to consult with each other can help guide teacher trainings on interventions, including ways to support colleagues or demonstrate to others how to implement such interventions. In terms of other resources, over half of participants reported having Title 1 reading, internet access in every classroom, and Smartboards at their school.

Finally, survey questions that were designed to address research question four helped to identify types of evidence that teachers use to determine if a child needs a psychoeducational evaluation. Teachers typically attempt an intervention for 3-4 weeks and decide that it is effective in a number of ways, including the following: improvement in performance on classroom assignments, on-task behavior, improvement on tests or on data have been collected on the goal which demonstrates improvement. Interventions are continued if there is a noticeable increase in academic performance or if student engagement has increased. Interestingly, there was no majority opinion on the factors that influence the decision to refer for a psychoeducational evaluation. However, many participants indicated that they viewed the prereferral process as a way to access an
evaluation for special education. This is consistent with previous research findings, such as the study by Eidle, Truscott, Meyers, and Boyd (1998), which found that the end goal for some prereferral team members was ultimately special education placement. The purpose of the prereferral process is largely to better meet the needs of students with academic or behavioral problems in the academic setting (Chalfant & Pysh, 1989) and to maintain students in the least restrictive environment (Graden, Casey, & Christenson, 1985). If the prereferral process is viewed in this manner, it is unlikely that it will be effective or that there will be a significant reduction in the number of referrals for special education.

In addition to items that directly addressed the research questions, additional questions were asked in order to provide a deeper understanding of teacher prereferral practices, including experience and use of interventions. One such question asked the participants about their experience levels with RTI(I). Approximately half of the respondents indicated that they had heard of RTI but had never received formal training. About 29% reported being involved with using RTI with students in the classroom. The participants who taught in public school were significantly more likely to report having some experience with RTI than participant who taught in private schools. This is likely due to the greater resources in the public school setting, such as access to government funding and the fact that the RTI model is not typically utilized in private school settings.

Participants were also asked to rate if the interventions that are typically identified are evidence based. The following options were provided: strongly agree, agree, disagree, and strongly disagree. The majority of participants indicated that they “agree” that the interventions are evidence based; very few of the teachers surveyed selected “disagree”
and “strongly disagree”. It would have been interesting to include a follow up question regarding how they know that the interventions are evidence based.

Additionally, another part of the survey included questions regarding teacher satisfaction with the prereferral process at the schools in which they work. The majority of respondents indicated that they “agree” that their schools’ prereferral process is effective; however, only a few participants selected “strongly agree”. Participants were also asked whether or not they felt there should be significant changes made to their schools’ prereferral process. The majority of respondents reported that they “disagree”, with approximately 63% making this selection. About 26% of participants indicated that they “agree” that there should be significant changes made. It would have been interesting to include follow up questions regarding what kind of changes should be made and what areas are currently unsatisfactory.

Several survey questions were designed to assess teacher objectives when initiating the prereferral process for a student. As previously mentioned, the results suggest that teachers largely initiate the prereferral process in order to gain access to a referral for special education. Although not statistically significant, teachers in nonpublic settings were more likely to indicate this option. This is possibly due to the fact that intensive interventions are typically not available in nonpublic schools and a full evaluation is often thought to be the only valid option.

**Impact of the Findings**

The current findings provide insight into teacher use of the prereferral process, including how teachers identify potentially struggling students, what they do after they
identify a student, how long interventions are attempted, and how many interventions are typically attempted prior to referral for special education. The findings indicate that teachers identify a variety of behaviors that indicate a student is struggling academically. The majority of participants reported that the first strategy they use after identifying a struggling student is to break the concept into smaller parts. Slightly less than half of participants indicated continuing with classroom based interventions before requesting a referral for special education.

Additionally, previous research regarding teacher perception of the prereferral process found that teachers often view the prereferral process as a way to access an evaluation for special education (Eidel, Truscott, Meyers, & Boyd, 1998). The current study supports those findings, with more than half of participants indicating that it is typically true that the goal for initiating the prereferral process is to refer the student for a psychoeducational evaluation. In addition, over half of participants agreed that most of the children who go through the pre-referral process should eventually be evaluated. In terms of teacher use of evidence based preferral interventions, the current study suggests that teachers believe the interventions generated through the prereferral process are evidence based.

**Implications for Practice**

Given the fact that teachers reported sourcing interventions through others, through continuing education trainings, and internet resources, it would be beneficial if teacher trainings provided explicit instruction in evidence based Tier 1 interventions. It would also be helpful if such trainings were to provide information regarding where to
find evidence based interventions online. Additionally, the results of the survey show a need for further training in Tier 2 interventions. The study also supports previous findings that teachers often initiate the prereferral process in order to access a referral for special education. This suggests that further training regarding the usefulness of interventions and the importance of attempting to meet student needs without referral for special education is needed.

Potentially the most significant implication of this study is the continued need for training and the emphasis on the importance of the prereferral process. A majority of teachers in the current study indicated that the goal when initiating the prereferral process is to gain access to a referral for special education. This is worrisome, given the fact that the prereferral process is designed to provide interventions in order to address a student’s struggle and to prevent the need for special education altogether.

Limitations

The current study was conducted using survey data in order to examine teacher knowledge and use of academic interventions. It is important to identify several limitations to this research. One such limitation involves the research design. The survey was created by the study’s author. Thus, the reliability and validity of the instrument is unknown. Questions were developed in order to answer the four research questions as well as to gain information relevant to the purpose of the study. One limitation to survey research in general is that it can be used only to collect individuals’ perspectives of his or her behavior. Therefore, there is no way to know whether or not the responses are a true representation of actual behavior.
A significant limitation of the current study is the generalizability of the findings. A sample of convenience was used and included only teachers from the southeastern part of Pennsylvania. Thus a randomized sample was not used, which limits the generalizability of the results.

Several issues arose during the recruitment phase. Many school districts and/or individual schools who were contacted declined to participate in the study. Therefore, the sample size was smaller than was expected. Recruitment occurred in May, which is near to the end of the school year. This may have influenced staff willingness to participate in the research. Additionally, during an analysis of the responses, it became clear that several individuals who participated were not currently working as a k-8 classroom teacher.

**Future Directions**

In terms of future research, a similar study using a randomized sample of classroom teachers in a larger geographic region, with a larger number of participants would be useful in order to increase generalizability. In addition, it would be helpful if future research delved further into the decision making process when it comes to referring students for special education. This study was unable to find a majority in terms of factors that influence the decision to refer a student for a psychoeducational evaluation.

It would also be beneficial for future research to use different questions, to ask more open ended questions regarding initial strategies and basic interventions after identifying a struggling student. The way that the current study was designed made it
difficult to get an understanding of teachers’ overall knowledge of interventions. Further assessment of specific supports that teachers expect from the prereferral process would also provide valuable information. In addition, follow up questions regarding what changes teachers would make to the current prereferral process would be beneficial.

In conclusion, further research continues to be needed in the area of teacher knowledge and implementation of evidence based interventions. This study provides confirmation of findings from previous studies; it also provides new information regarding teacher practices when a student is identified as struggling academically as well as teacher knowledge of evidence based prereferral interventions.
References


Schonlau, M., Fricker, R. D., Jr., & Elliott, M. N. (2002). *Conducting research surveys via e-mail and the Web*. Santa Monica, CA: RAND.
Shapiro, E. (2014). Tiered Instruction and Intervention in a Response-to-Intervention Model. *Center for Promoting Research to Practice,*


Appendix A

Cover Letter

Dear Educator,

I am a school psychologist who is currently working towards a doctoral degree at the Philadelphia College of Osteopathic Medicine. As part of my dissertation, I have developed a survey designed to examine teachers’ implementation of interventions during the prereferral process, as well as to examine teacher perception of the process.

Your participation in this study is strictly voluntary but would be greatly appreciated. If you elect to participate, you can do so by clicking on the link listed below. This will take you directly to the online survey posted on SurveyMonkey.com. By completing the survey, you are giving your consent for the information to be utilized in the study. Please feel free to contact me with any questions at (717) 682-2096 or by email at kathrynhott@pcom.edu. You may also contact Dr. Diane Smallwood at dianesm@pcom.edu.

The survey should take approximately 10-15 minutes to complete. It includes no identifying information and your responses are anonymous. Thank you for your time. I realize that your time is both limited and valuable. Your participation and assistance is greatly appreciated. If you are interested in receiving information regarding the results of the study once it is completed, you can request this information by contacting me at the phone number or email address listed above.

Sincerely,

Kathryn Hottenstein
Teacher Knowledge and Implementation of Evidence-Based Interventions

* 1. Are you currently employed as a teacher in an educational setting that services students in any grades from K-8?
  - Yes
  - No

2. What student behaviors indicate to you that a student is struggling academically? (Check all that apply)
  - Poor test grades
  - Acting out in class
  - Parent has expressed concerns
  - Problems with homework completion
  - Off task
  - Forgetfulness, not turning in assignments

Other (please specify)

3. What is the first strategy that you use when a student appears to struggle academically?
  - re-explain the lesson pair
  - with another student
  - break the concept into smaller parts
  - Other (please specify)

4. How long do you continue with regular instruction to determine if a student is struggling before initiating your school's prereferral process
  - Less than 4 weeks
  - 4-6 weeks
  - 3-4 months
  - More than 4 months
  - Other (please specify)
5. During the last school year, how many students in your classroom required the preferral process?
- 0
- 1-2
- 3-4
- 5+
Other (please specify)

6. Of those students in your classroom who went through the prereferral process, how many went on to be evaluated for special education services?
- 0
- 1-2
- 3-4
- 5+
Other (please specify)

7. How many of the students who were evaluated were identified as in need of special education?
- 0
- 1-2
- 3-4
- 5+
Other (please specify)

8. What is the first step you take after identifying a struggling student?
- Consult with colleague
- Refer to the preferral process
- Attempt interventions on my own
Other (please specify)
9. What type of prereferral process does your school have? (Check all that apply)

- Instructional Support Team (IST)
- Response to Intervention and Instruction (RTII)
- Team Child Study Team
- Consultation with educational specialists (school psychologist, school counselor, reading specialist, etc)
- Consultation with school principal or other administrative staff
- Other (please specify)

10. What sources do you use to learn about research-based educational interventions? (Check all that apply)

- Books
- Internet resources (interventioncentral.org, etc)
- Continuing Education workshops
- Other teachers
- Supervisor
- Support staff (reading specialist, school psychologist, school counselor, etc)
- Other (please specify)

11. Which of the following interventions have you tried as part of the prereferral process? (Check all that apply)

- Changing the method of presentation for the struggling student
- Repeated readings
- Provided the student with extra time
- Provided the student with visual aids (steps to a problem, written directions, graphic organizers, etc)
- Other (please specify)

12. Which of the following tier 1 interventions in reading have you tried? (Check all that apply)

- Repeated reading
- Error word drill
- Question-answer relationships
- None of the above
- Other (please specify)
13. Which of the following tier 1 interventions in math have you tried? (Check all that apply)

- Say-Ask-Check
- Strategic Number Count instruction
- Error-less learning math worksheets
- None of the above
- Other (please specify)

14. Which of the following tier 1 interventions in writing have you tried? (Check all that apply)

- Cover-copy-compare
- SCOPE proofreading strategy
- Self-monitoring and graphing for writing fluency
- None of the above
- Other (please specify)

15. Who do you consult with when you have concerns about a student's academic progress? (Check all that apply)

- Other teachers
- School psychologist
- School counselor
- Reading specialist
- School Principal
- Other (please specify)

16. Have you implemented any tier 2 interventions yourself? If so, please include those interventions in the comment field (ex: Read Naturally, focusMATH, etc)

- Yes
- No

Other (please specify)
17. What kinds of resources are available to you for support? (Check all that apply)

☐ Reading Specialist
☐ Continuing Ed trainings
☐ School Psychologist
☐ School counselor
☐ Math specialist
☐ Learning consultant
☐ School Administrators
☐ Other (please specify)

18. What kinds of program resources does your school have? (Check all that apply)

☐ Title 1 reading
☐ Title 1 math
☐ Paraprofessional working with small group
☐ Other (please specify)

19. What technology resources does your school have to offer? (Check all that apply)

☐ Internet access in every classroom
☐ SmartBoard
☐ Individual laptops/ipads
☐ Allowing use of a personal smartphone
☐ Access to educational applications and software
☐ Other (please specify)
20. How do you ensure that an intervention is implemented with fidelity?
- Using the template/format that has been published
- Continual communication with the individual who recommended the intervention
- Following the guidelines of an intervention, without altering the intervention
- Completing an implementation checklist at varying intervals
- We do not have a procedure
- Other (please specify)

21. Who helps to monitor that an intervention is implemented as planned?
- School Psychologist
- Reading Specialist
- Counselor
- Principal
- No one
- Other (please specify)

22. How likely are you to alter part of an intervention after starting the intervention?
- Not likely at all
- Somewhat likely
- Very likely
- Other (please specify)
23. What factors indicate to you that an attempted intervention is working? (Check all that apply)
- Improvement in performance on classroom assignments
- Improvement on tests
- Data collected on identified goal
- Parent satisfaction
- Student on-task
- Improvement in standardized testing
- Improved homework completion
- Other (please specify)

24. How long do you typically utilize an intervention before changing the intervention or starting a new intervention?
- 1-2 weeks
- 3-4 weeks
- 5-6 weeks
- more than 6 weeks Other
- (please specify)

25. How do you decide if there is value in continuing an intervention?
- There is noticeable progress in the student's academic performance
- Test grades have improved
- Student engagement has increased
- Data collection on identified goal shows improvement
- Other (please specify)

26. How many interventions do you typically attempt prior to referral for special education?
- 1
- 2
- 3
- More than 3
- Other (please specify)
27. How long do you continue classroom based interventions before requesting a referral for special education?

- Less than 1 month
- 1-2 months
- 2-3 months
- More than 3 months
- Other (please specify)

28. What factors influence your decision to refer a student for a psychoeducational evaluation?

- The student continues to struggle after multiple instructional strategies have been used
- Pace of the students progress
- The size of the gap between the student and the class average
- Increasing signs of frustration, anxiety, and/or stress in the student
- The length of time interventions have been in place with limited or very slow progress
- Pressure from the student's parent(s)
- Other (please specify)

The following questions address your experiences with the prereferral process at your school

29. The pre-referral interventions that have been identified are evidence based

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<tbody>
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</table>

30. I find my school's prereferral process effective

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
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</table>

31. When initiating the prereferral process, my goal is to refer the student for a psychoeducational evaluation

<table>
<thead>
<tr>
<th>Never true</th>
<th>Typically not true</th>
<th>Sometimes true</th>
<th>Typically true</th>
<th>Always true</th>
</tr>
</thead>
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32. There should be significant changes to my school's prereferral process

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
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</table>
33. Most of the children who go through the prereferral process should eventually be evaluated

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
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34. Do you have other comments about your school's prereferral intervention process?

Tell us about your background

35. What is your gender?
   - Female
   - Male

36. What is your age range?
   - 21-30
   - 31-40
   - 41-50
   - 51-60
   - 60+

37. How many years have you been teaching?
   - 0-5
   - 6-10
   - 11-15
   - 15-20
   - 20+

38. What is your highest educational degree?
   - Bachelor's Degree
   - Master's Degree
   - Doctoral Degree
   - Post Doc
   - Other (please specify)
39. What is your experience level with RTI(I)?
- I've heard of it but I've never received formal training
- I've had training but no opportunity to use it
- I've been involved in using RTI with students in class
- I'm a member of the RTI team at my school
- Other (please specify)

40. Does your school use an RTI(I) model?
- Yes
- No
- I don't know
- Other (please specify)

41. What teaching certificates do you hold?
- Elementary Education
- Secondary Education
- Special Education
- Other (please specify)

42. What grade level(s) do you teach?
- Primary (K-2)
- Middle elementary (3-5)
- Middle school (6-8)

43. How many students are in your classroom?

44. How many students attend your school?
45. How would you describe your current school setting?

- [ ] Urban public school
- [ ] Suburban public school
- [ ] Urban parochial/private school
- [ ] Suburban parochial/private school
- [ ] Other (please specify) ____________

Submit your name and contact information for a chance to win a Starbucks gift card! (Optional)

If you would like to be entered for a chance to win a $10 Starbucks gift card, please email your name and email address to Kathrynhott@pcom.edu. Your contact information can not be linked to your survey submission.