RESPONSE TO INTERVENTION:
IMPLEMENTATION AND MONITORING WITH FIDELITY

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Abstract

The purpose of this paper was to determine what is necessary to help teachers understand not only how to implement interventions and monitor progress, but the importance of both components in order to implement and sustain an RtI program with fidelity. More specifically the paper was written to answer the question how progress monitoring data can assist district committees and teachers to effectively implement an RtI program with fidelity and sustain the objectives of the program long term.
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Chapter I: Introduction

Statement of the Problem

Response to intervention (RTI) came about initially in answer to the over-identification of struggling students as special education students (Prasse, 2010). It was developed starting in the late 1970’s by numerous researchers seeking a method of identifying learning disabilities that avoids the problems of the IQ/Achievement discrepancy model. Many educators were concerned that too many students were being identified as having a learning disability, not because they actually had one but “because they had not been successful in a general education program”. Many were also concerned that students with a true learning disability were not receiving the help they needed quickly enough.

Although the Federal government put Child Find and Procedural Safeguards as a practice and structure of special education, they failed to put a practice based on student outcomes either academic or behavioral. After 25 years the initiative of RTI began as a response to addressing student outcomes for special education students however; it quickly became part of a general education. The question asked was “could school districts focus at least as much, if not more, on student outcomes”? This question launched the beginning of RTI.

Since this time schools have been provided numerous opportunities for professional development on RtI, yet still it remains that district committees continue to struggle to implement and sustain RtI with fidelity. Personal experiences suggest that this issue stems from the inability to effectively monitor student progress which adversely affects the ability to efficiently use data to determine appropriate interventions. If teachers understood how to implement adequate scientific research based interventions in the classroom as well as effectively monitor a student’s progress with regard to the interventions, it would better the
chance that a child would improve academically without the need for a special education referral, or lead to needed special education services. The purpose of this paper is to determine what is necessary to help teachers understand not only how to implement interventions and monitor progress, but the importance of both components in order to implement and sustain an RtI program with fidelity.

**Research Question(s)**

How can progress monitoring data assist district committees and teachers to effectively implement an RtI program with fidelity and sustain the objectives of the program long term?

**Background Information on RtI and Definitions**

The basic premise of RtI is to provide struggling students with the interventions they need to help them become successful in the general education curriculum (Martinez & Young, 2011). In other words, RtI is a formal process implemented by schools to provide direct instruction and intervention for all students who experience academic or behavior difficulties. RtI is a problem-solving approach that involves defining a student’s problem, planning an intervention for the student, implementing the intervention and evaluating the student’s progress. If a student responds favorably to instruction and interventions, the student would continue in the general education setting. If the response is not favorable, more intense instruction and interventions would be attempted or a referral for special education eligibility testing would be initiated. It is noteworthy to say that the concept of RtI is not new for classroom teachers when working with struggling students. Intervention either formal or informal, have been used in classrooms for many years.

The RtI model is a three-tier approach (Gerzel-Short & Wilkins, 2009). The Tier I or Universal Intervention is designed around the general curriculum and is implemented in the
classroom. This tier is targeted to successfully meet the needs of roughly 80 percent or more of the students in a classroom. It is the first intervention all students receive. In Tier I students may, for example, receive 90 minutes of reading instruction daily. Those students who do not respond to the core curriculum of Tier I would go on to receive addition services under Tier II.

Tier II or Targeted Intervention involves more targeted interventions that would meet the needs of approximately 15 percent of students who are considered at-risk. These students would require more intensive interventions than what they received in Tier I. For example, these students would receive an additional 20 minutes of reading instruction on top of the 90 minutes they originally receive. The additional time may be spent in small groups with an aide or an intervention specialist.

Students who do not respond to interventions at Tier II would go on to receive more intensive individual support. Tier III or Intensive or Individual Intervention would be directed at about 5 percent of students in a classroom and would be in addition to the support they receive in the first two tiers. Interventions would target the specific needs of the student and consistent progress monitoring would happen. If students do not respond to interventions provided at Tier III, a referral to special education may be recommended.

A core principle of RtI is the early intervening through universal screening (Heinzelman & Lapointe, 2007). Universal screening can be defined as the brief screening assessment of academic skills that are administered to all students to determine whether or not students are meeting grade level benchmarks. Benchmarks are short term or long term assessment goals that indicate that a student is working at grade level. Depending on the skill being screened, assessments can be administered individually or in a whole class format. These assessments are usually administered to all students in a given grade or building three times per year (Mesmer &
Mesmer, 2008). School districts may use commercial products such as the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) for example, as a tool for universal screening. The scores obtained from the universal screening process are compared with minimal benchmark scores and the students not meeting grade level benchmarks receive help.

Once determinations are made as to what students are not meeting grade level benchmarks, scientifically researched-based interventions are put in place to assist the student reach grade level benchmarks. Research-based instruction or interventions is defined as a practice or intervention that is found to be reliable, trustworthy, and valid based on evidence to suggest that when a research-based intervention is used with a child or in a classroom, adequate gains in achievement is expected (RtI Action Network, n.d.). Interventions, especially at the more intense Tier II and Tier II levels, need to target a specific skill or behavior (Mesmer & Mesmer, 2008). These interventions may require additional assessments to clarify the nature of the difficulty. The data obtained from the additional assessments need to be used collaboratively by school staff and parents to develop more intensive strategies. Obtaining the data from interventions implemented is called progress monitoring.

Progress monitoring is a key component of RtI. Progress monitoring is used to assess students’ academic performance, to quantify a student’s rate of improvement or responsiveness to instruction and evaluate the effectiveness of the instruction or intervention (Mesmer & Mesmer, 2008). Usually student progress is monitored through homework assignments, quizzes, tests, projects and standardized tests (Lane, n.d.). When tests are given at the end of a unit or at the end of a term or school year, it is difficult to use these results to make instructional decisions to help a student learn better. Progress monitoring of interventions in an RtI model is usually administered one or more times per week and will typically take one to five minutes. From these
short tests, feedback is immediate and a teacher can tell how well a student has responded to instruction and whether or not instructional changes need to be made. Through progress monitoring teachers and the RtI team can make data based decisions with regard to classroom instruction and individualized targeted interventions.

If a student does not respond to interventions presented, a referral for testing to special education may be developed. The potential benefit of RtI is that when it is implemented effectively there is a reduction in the number of students who are referred and who qualify to receive special education services (Richards, Pavri, Golez, Canges & Murphy, 2007). In the past a student would qualify for special education under the category specific learning disability based on the discrepancy model. Through the discrepancy model identification was determined on the discrepancy between a student’s aptitude and achievement. One of the main criticisms of this model is that it was not effective in enhancing services to students when it came to providing early intervention to struggling students. In this wait-to-fail method struggling students did not receive needed interventions as soon as difficulties were evident. The reauthorization of IDEA in 2004 specified that for a student to be identified with a specific learning disability, evidence-based instruction and intervention must be documented prior to a special education referral (Swanson, Solis, Ciullo & McKenna, 2012). It must be proven that the reason for academic delay is not the absence of quality instruction and it must be noted if academic interventions were implemented, what the interventions were and how the student responded to those interventions. The RtI model has the ability, if implemented with integrity and fidelity, to provide the necessary information to make more solid determinations for special education eligibility.
Additional Definitions of Terms

No Child Left Behind
Federal Legislation that sets the requirements for teacher qualifications, and mandates that all U.S. children be proficient in Reading and Math by 2014.

(IDEIA) Individuals with Disabilities Education Improvement Act.
Law ensuring that students with disabilities are provided with interventions, special education and related services. Often used interchangeably with IDEA 2004.

CBM Curriculum Based Measurement. Brief probes to determine students are reaching the curriculum requirements and used as a tool to monitor progress.

Child Find Child Find is a process of public awareness activities, screening and evaluation designed to locate, identify and refer as early as possible all young children with disabilities and their families who are in need of services.

Procedural Safeguards A system designed to protect the rights of children with disabilities and their parents that begin when a child is suspected of having a disability.
Chapter II: Review of Literature

RtI Model

**Intent.** The RtI framework is meant to provide early identification and preventative intervention to reduce inappropriate special education referrals (Swanson, Solis, Ciullo & McKenna, 2012). However, RtI is not meant to be used only as a means to identify students with special needs but to also ensure that all students are receiving a quality education. As tiered systems are widely incorporated in US classrooms teachers and schools are being asked to show systematic, consistent application of evidence-based practice in more comprehensive and quantifiable ways. In addition, general education teachers are being held responsible for implementing interventions and special educators are being required to move far beyond their traditional roles in education remediation and are being called to assist the classroom teacher.

The paper written by Hoover (2010) supports what Swanson et al. (2012) proclaims. Hoover suggests that the intent of RtI is a process used to not only determine eligibility for special education services but also to identify struggling learners early to provide access to interventions necessary for growth in academics and behavior. Hoover (2010) contends that the first two tiers of RtI involve interventions that are implemented solely by the classroom teacher, however; special education teachers do play a role in the RtI process by providing guidance to the general education teachers and the RtI team.

Short and Wilkins (2009) went further to explain that RtI was designed to provide all students with academic and behavioral interventions in order to increase student achievement. They contended that there are two important components of RtI; universal screening and progress monitoring. The literature provided educators with information to implement an RtI program and monitor student progress with fidelity. Short and Wilkins (2009) described that data
collection tools should be used to determine appropriate interventions and the impact the interventions have on student growth.

The three tiers of Interventions as described by Short and Wilkins were the following:

Tier 1-Universal: Serves as the first intervention all students receive. Designed around the core general education program to successfully meet the needs of 80 percent (or higher) of a given student body.

Tier 2-Targeted: Comprised of a more targeted intervention reaching roughly 15 percent of students who are considered at risk.

Tier 3-Intensive/Individual: More individualized instruction designed to target about 5 percent of students in a given student body. Individualized goals based on consistent progress monitoring (Short and Wilkins, 2009, p. 108).

Short and Wilkins (2009) declared that the keys to using the three-tier model effectively were (a) universal screening three times per year for at risk students and (b) continual checks to determine whether interventions and strategies were meeting the needs of the student. The researchers asserted that universal screening based on curriculum measurements served to assess critical academic skills and allowed the team to determine who had educational problems, why the problems were occurring and what could be done to improve instruction. Also, the team decided how frequently the student’s progress would be monitored as well as what tools would be used. The process described allowed educators the ability to make appropriate academic decisions for students. Because progress monitoring occurred on a regular basis, there was no waiting until the next major assessment to determine whether an intervention worked. If it is determined during progress monitoring that the current intervention is not effective, then the intervention can be altered or completely revised (Short and Wilkins, 2009). Through progress
monitoring teachers were given snapshots of student achievement, an understanding of how to implement adequate scientific research based interventions, and possibly revise interventions based on effectiveness. By implementing RtI with fidelity schools, teachers, and students benefited. While Short and Wilkins (2009) explained in detail the steps taken when implementing RtI, they did not provide information to give clear direction to teachers on which interventions to use, tools for progress monitoring, or how progress monitoring is used to program for students that do not respond to interventions in each tier.

**Special education referral.** In an effort to provide students with disabilities the highest quality education the procedures for identifying learning disabilities have evolved from the discrepancy-achievement model toward a tiered intervention model. This shift is meant to increase early identification of students with learning disabilities as well as decrease the amount of special education referrals.

To address the topic of how special education fits into the RtI model Hoover (2010) examined three main areas: the ideas associated with the special education process and RtI principles; transitioning from pre-referral intervention to the RtI model; and the RtI-special education connection to meet the needs of struggling learners.

According to Hoover (2010) pre-referral interventions grew out of the response to laws that mandated educators must provide appropriate education to all learners and document the effects of the instruction on their progress. The requirements provided demonstrated that efforts must be taken before students could be formally referred for special education. Although the most desirable outcome of RtI is to lower special education referrals, the data obtained from the RtI process assists special education in determining the legitimacy of a referral resulting from a lack of progress after receiving Tier 1 and 2 interventions. The RtI practices differ greatly from
former referral procedures, such as RtI emphasizes early intervention rather than wait-fail, limited or no use of the discrepancy model, use of curriculum based measurements rather than standardized achievement tests to determine progress, and universal screening for early identification. In actual practice more information would be included in consideration of a special education referral within the RtI model. The learner receives needed supports and preventative services long before being considered for special education.

Even before the reauthorization of IDEA 2004 the discrepancy between potential and achievement was scrutinized as not being an authentic assessment of a learning disability. RtI provided the legal foundation for the use of alternative methods for identifying learning disabilities. Within the RtI model discrepancy is the actual student performance levels based on progress monitoring of the interventions put into place. Within this approach both proficiency levels and rates of progress are used to determine special education eligibility decisions. For example, a learner may be functioning at a lower proficiency level yet compared to age and grade level peers, is making adequate rates of progress. This combination suggests that a learning disability may not exist since the student is able to progress commensurate with peers (Hoover 2010).

Under the RtI model students receive immediate academic assistance, emphasis is placed on classroom performance not deficits, decisions concerning effects of instruction are based on progress monitoring data, the learner continues to receive assistance with instructional adjustments, school teams are provided with more accurate data and results from ongoing interventions leading to more accurate identification. Tier 1 and 2 instructional data is highly valuable information to the special education evaluation team.
Hoover (2010) held that special education service was a possible outcome for some learners who fail to make adequate progress within tiered instruction; however, the RtI model represented a promising framework for the early identification and prevention of learning and behavior problems for students struggling in school.

**Universal screening.** A core principle of RtI is the early intervening of struggling students through universal screening (Heinzelman & Lapointe, 2007). As discussed earlier, universal screening involves brief screening assessments of academic skills that are administered to all students to determine whether or not students are meeting grade level benchmarks. An example of a screening tool used for students in kindergarten to third grade is The Dynamic Indicators of Basic Early Literacy Skills (DIBELS). For upper grade level students STAR Reading or STAR Math may be used. Typically these types of assessments are administered to all students in a given grade or building three times per year (Mesmer & Mesmer, 2008).

An article written by Cicek (2012) explored the RtI process and how it is implemented in public schools discussed not only using DIBELS as a tool for universal screening for example, but also talked about using student’s performance on state or district tests. Where a universal screening tool such as DIBELS would typically be administered three times per school year, state or district assessments are only administered once a year thus, making it difficult to monitor immediate progress of a student. In Tier I, the assessments that are given three times per year help to guide instructional decision making and do help to identify those students who need more targeted interventions. However, in Tiers II and III, more frequent assessments need to be administered to monitor student progress. Because, administering DIBELS for example, takes a lot of time, using quick one minute to five minute assessments to monitor growth would be used.
Barriers to Implementation

Interventions either formal or informal have been used in classrooms for many years. As tiered systems are widely incorporated in US classrooms, teachers and schools are being asked to show systematic, consistent application of evidence-based practice in more comprehensive and quantifiable ways. In addition, general education teachers are being held responsible for implementing interventions and special educators are being required to move far beyond their traditional roles in education remediation for students with disabilities and are being called to assist the classroom teacher (Swanson et al, 2012). Without the knowledge necessary to discern between evidence-based practices, a change in teacher perceptions, an understanding of how to monitor progress and the importance of the data progress monitoring provides, teachers and districts will be unable to implement a program with fidelity or sustain it long term.

Teaching practice. The key component of RtI is the use of evidence-based teaching practices. The reauthorization of IDEA (2004) mandated that in order to identify a student with a learning disability there had to be documented evidence-based instruction and intervention prior to a special education referral, ensuring that an absence of quality instruction was not the reason for the delay. Over the course of a year the researchers Lipson, Higgins and Kanfer (2011) followed the number of special education referrals of a Vermont school in their third year of using a RtI model. Despite the implementation of RtI, this school was still experiencing too many special education referrals. The study included reading teachers in the building chosen based on the number of students on their caseloads that qualified for reading services from year to year due to overall below state standards performance. Lipson et al. (2001) found that instruction varied from teacher to teacher and was not well documented. The first profile targeted was the first grade students who showed very limited proficiency, had not met the leveled text
standard for the end of kindergarten and were making little progress. The second profile selected were students in grades three through six who had acquired good decoding skills but whose comprehension was weak, and whose performance had actually declined as they moved through the grades.

The reading teachers had good assessment information available to them collected from screening and periodic benchmarking so the challenge was for them to implement consistent instructional interventions based on the available data. In addition, the teachers did not have a standard assessment (or several) used by all in order to record progress monitoring data. After teachers were provided with professional development training to learn evidence based strategies, a template and set of guidelines for uniform progress monitoring was provided. Researchers found that after a one year period most students in the targeted profiles had shown significant progress in reading, thus reducing the need for special education referrals. Matching student’s needs with instruction by using “if-then” thinking is at the heart of effective and efficient assessment instruction and is essential if RtI is going to make a difference (Lipson et al, 2011).

The research of Lipson et al. (2011) demonstrated that when data based instructional interventions were used students showed progress. Also, that when those data based interventions were documented and student progress was monitored the need for special education referrals declined. The significance of this study was that it determined when teachers understood how to implement interventions and monitor progress both components ensured that the RtI program was implemented and sustained with fidelity.

The study conducted by Swanson et al. (2012) reported on the perceptions and instructional practices of five special education teachers that taught students in grades three
through five that implemented an RtI framework for the previous five years. The qualitative
study employed focus groups and interviews to examine special education teachers’ perception
of RtI. More specifically, the purpose of this investigation was to describe three aspects of RtI:
The perceptions of special education about the RtI framework; the extent to which these
educators teach critical components of reading and mathematics to students in grades three
through five; and, the extent to which these teachers use evidence-based instructional practices to
teach reading and mathematics. The purpose of using this journal article rests in the results found
from special education teacher’s perception of RtI implementation.

Swanson et al. (2012) gathered in-depth data on instructional practices and teacher
perceptions using purposive sampling procedures to identify one school district that met criteria
based on the state assessment scores of reading and mathematics, ethnic diversity and proportion
of students identified with a learning disability, implementation of an RtI framework for at least
three years and a person employed as a designated RtI coordinator. The school selected was
located in a southwestern state near a large city. The school population was 20,000 students with
a rate of specially education enrollment of 9%. More than 1,100 students were English language
learners and 42% of the students were enrolled to receive free or reduced lunch. A total of 17
special education teachers volunteered to participate during Year 1. During the second year of
implementation teachers were reassigned to other classrooms or left the district, therefore only
12 special education teachers participated in the study.

The data sources for the study included observation measures, focus groups and interview
protocols. For observation measures Swanson et al. (2012) used the Instructional Content
Emphasis – Revised (ICE-R) to observe reading instruction. The researchers developed their
own Math Observation Tool (MOT) to use to collect data. The ICE-R measured data which
included (a) multidimensional descriptions of reading or mathematics instruction, (b) amount of
time allocated to instruction, (c) student grouping patterns, (d) types of materials used by
teachers and students, (e) levels of student engagement, and (f) quality of instruction.
Instructional events were coded by a main instructional category and a subcategory. A 3-point
Likert scale was also used for each instructional events and a 4-point scale was used to rate
quality of instruction. MOT was designed for students in grades three through five and was used
in the same way the ICE-R was used. It recorded student engagement, instructional quality and
materials used.

At the end of Year 1, teachers participated in focus groups. A focus group protocol was
developed by the researchers. The questions for discussion consisted of eight open-ended
questions specific to their perceptions about whether their duties in the implementation of RtI
were appropriate for their current job title and level of expertise. Year 2’s focus group included
eight open-ended questions asking teachers to give update developments in RtI and provide
additional information about components of RtI implementation.

The data that revealed the extent to which the special education teacher taught critical
components of reading and math indicated that for reading 42% of the time was spent on
comprehension, 22% on word study and 11% on vocabulary. Reading text and fluency were both
8%. Ninety-two percent of the lessons were identified by teachers as Tier 3 intensive support
groups. All of the mathematics instruction was considered Tier 3 as well. The main instructional
components observed in math were whole-number computation (44%), fractions and decimals
(10%), problem solving (9%) and measurement and place value (9%).

When reading instruction was broken down further the results indicated that of the 42%
of time spent on comprehension activities, 54% of that time was devoted to reading
comprehension monitoring. When comparing to previous research conducted on reading instruction, this indicates a shift toward more beneficial strategy of instruction. The same results were found for vocabulary instruction. When it came to math instruction the results did not support findings from previous research that specified mathematics interventions focus on solving work problems and reinforcing number operation mastery and fluency with both known and unknown word problems as a way for developing insight into deeper mathematical concepts associated with specific number operations. Very little time was spent on problem solving in the special education classroom. Tier 2 and Tier 3 instruction needs to go beyond just instructing students on number operations (Swanson et al, 2012).

Perceptions of RtI. In order for RtI to be implemented and sustained teachers must play active roles in the process. In order for teachers to “buy-in” to the effectiveness of RtI they must be provided with training through professional development in order to have a clear understanding of expectations and outcomes of an RtI program. Teachers must be provided with training, collaborative planning and the appropriate tools in order to feel that they are agents of change for reform in school (Stuart, Rinaldi & Higgins-Averill, 2011).

Stuart et al. (2011) conducted a qualitative research study on teacher’s perceptions of response to intervention during the second year of its implementation at an urban elementary school. The survey mainly seeks to find the prevalence of RtI and teacher knowledge of the program. Results of the survey show most of the school districts employ RtI in elementary settings, while secondary settings are inconsistent in their implementation. Additional information was found by informally interviewing staff members at different school sites to hear their attitudes and opinions of RtI Stuart et al. (2011).
Stuart et al. (2011) asserted that educators play active roles in reform efforts however, their perspectives are seldom discussed and considered in the process. Because of this, they were interested in developing a mechanism for teachers to share their view on developing and implementing a Response to Intervention (RtI) model (Stuart et al, 2011).

The study took place at an elementary school located in a large urban neighborhood with a school population of 332 students. Of the population 54 students (16%) received special education services and 129 students (39%) were identified as having Limited English Proficiency skills by the district. The elementary school employed 26 teachers. These 26 teachers were asked to volunteer to participate in a focus group and individual interviews for the purpose of obtaining a comprehensive and long term view of their perceptions of an RtI initiative. A total of eight female teachers volunteered: four general education classroom teachers, one school reading specialist, and three special education teachers (Stuart et al, 2011).

Data was collected for the study over a 12 month period. During the 12 month period two 90-minute focus groups and follow-up individual interviews took place. The first focus group was held in the fall and the second focus group was held in the spring. All focus group sessions and interviews were videotaped and audio transcribed. After the focus group sessions took place each participant was interviewed. They were also asked to complete a written questionnaire based on important themes derived from the focus groups and individual interviews. Extensive field notes were kept to aide in the reflection upon the context and meaning of the interviews. The notes included descriptions of the participants, their actions, the interview sites and the researcher and subject conversations (Stuart et al, 2011).

Four overlapping stages of constant comparative method were used to analyze the data. At each stage data was coded in as many analysis categories as possible. Emergent themes were
established from the focus groups and were used to formulate questions for the individual interviews. A reconciliation method was used to help the researchers reach consensus on the coded text. If a disagreement occurred then the majority code was used (Stuart et al, 2011).

During the second stage, data was sorted and reorganized inductively and deductively by chunking and clustering it into similar categories and then reorganizing to identify connections between or among categories. The third stage involved the themes being refined and combined which lead to theories being developed. In the final stage the constant comparison method was used again to help drive specific themes from the data collection. Participants reviewed the results and were able to give clarification (Stuart et al, 2011).

The results of the study indicated that the educators’ perceptions of RtI changed between the first and second year of using the model. The study showed that participants had clearer goals for themselves as educators and increased the ways in which they could collaborate to develop and deliver instruction. Noted perceptions of the participants were their abilities to hold higher expectations for students as well as the recognition that their ability to plan for instruction and interventions contributed to student achievement. From the data an overarching theme was the shift in school culture. Further discussion on the satisfaction with the special education referral process, enhanced efficacy of progress monitoring and collaborative planning structures took place (Stuart et al, 2011).

Before the study took place the referral rate for special education was reaching 10% of the student population. After two years of RtI, initial referrals to special education dropped to three percent. Participants felt the RtI model was successful because teachers were given time to problem-solve issues of instructional interventions and had a framework to use data to inform instruction. As for progress monitoring, participants expressed satisfaction with the term
“progress monitoring” however, they were concerned with the amount of time progress monitoring took and how they would balance that time with the time it took to provide instruction. Anecdotal records were commonly used as data and students were not receiving targeted instruction based on needs. After the RtI model was implemented, participants had a more positive perception of progress monitoring in that it did not take as much time to do and the data gathered was used more effectively to drive instruction. As for collaborative planning structures, participants reported the culture of the school as optimistically frustrated. After the second year participants perceived themselves as the primary stakeholder in the RtI reform and perceived the RtI model as an opportunity to increase collaboration (Stuart et al, 2011).

Stuart et al. (2011) indicated that teachers wanted a plan that responded to the specific needs of their community. The teachers were reluctant at first because they did not want a “one size fits all” approach. In the end the participant’s perceptions indicated that teachers who engage in collaborative efforts in student achievement are more likely to see themselves as integral to the reform process. In this study, teachers in the school engaged in the collaborative planning of professional development themes and approaches for delivery felt as equal partners with the administration.

As Stuart et al. (2011) emphasized teachers concerns about the time it took to monitor student progress however, as they gained experience with the RtI process, monitoring student progress did not take as much time as they thought. A study conducted by Sansosti, Gross and Noltemeyer (2011) discovered similar findings. In their study, Sansosti et al, (2011) utilized a qualitative focus group methodology to explore special education directors’ perceptions of current barriers, facilitator’s roles and practices related to RtI implementation. The special education directors from 20 public secondary schools located within four counties in a
Midwestern state attended two focus group sessions. They were asked to answer a five-question electronic survey in order to obtain their experiences with RtI and then asked nine open-ended questions in the focus group session. Because only a small number of special education directors participated, this study is limited as there it is not representative of all special education directors in their areas.

The theme of systems structures was felt to be of importance in RtI implementation however, the current structures were perceived as barriers to RtI implementation within the schools. The barriers included the inflexibility of student schedules and finding time within those schedules to provide effective implementation of interventions and monitor progress. In the schools in which the participants worked, teachers were not being afforded time to engage in RtI related activities such as planning time, problem solving meeting and data collection. The special education directors reported that the teachers needed more guidance and clarification in translating theory and research to fit their school settings.

Sansosti et al. (2011) discovered from their study that changes in the roles and attitudes of educational professionals, parents and community members needed to occur for an RtI program to be effective. The participants stressed that there was a lack of understanding as to the fundamentals of RtI and that teachers need to take more ownership of their students even if the concerns raised extended beyond the subject area they teach. The shared commitment between general education and special education teachers appeared to be a barrier in the roles and attitudes for most participants. There is a need for teachers to understand that RtI is a long term commitment and all stakeholders need to work together to reap maximum benefits.

The special education directors as well as Sansosti et al, (2011) stress that in-service training programs and ongoing professional development is needed to address the attitudes,
beliefs, knowledge and skills of general educators, special educators and administrators in order to effectively implement an RtI program with fidelity and sustainability.

**Scientifically supported interventions.** Districts must be willing to not only educate their teachers on evidence based strategies but also on interventions deemed effective based on scientifically supported data in order to sustain an RTI program with fidelity.

A qualitative study conducted by Powers & Mandal (2011) described the problem-solving approach to designing intensive, data-based, and scientifically supported interventions for students with pervasive reading problems who have failed to respond to less rigorous services. The purpose of the study was to present how advancement in assessment and intervention can be integrated and applied to assisting students with pervasive reading problems. Two case studies which were composites of actual intervention cases were used to illustrate the practical application of strategies to providing Tier III interventions.

School faculty observed the assessment and intervention sessions through one-way mirrors, listening devices, and continual consultation to ensure scientifically based assessment and interventions were employed. Students were referred by their parents and accepted based on their history of underachievement. Academic difficulties in the area of reading were targeted for the purpose of this study.

The students met individually with the clinician one hour twice per week the first two weeks and then interventions were implemented during the remaining six weeks. At the end of the treatment clinicians met with students and their parents to review the results. The clinicians first identified their students skill set in greatest need of intervention by reviewing report cards, statewide assessment results, teacher checklists, and the Woodcock-Johnson III (standardized test) to confirm the appropriate skill was targeted for intervention. Oral Reading Fluency was
measured using curriculum based measurement and intervention goals were based on expected rates of growth and pre-established benchmarks while the child’s progress toward the goal was monitored. To ensure that the assessments adequately measured each child’s skills three probes on three separate days, for a total of nine probes were administered to each child. After which individualized interventions based on direct assessment of each student’s reading skills were developed and implemented (Powers and Mandal 2011).

**Progress Monitoring Data**

*Programming.* Powers and Mandal (2011) reported that the progress monitoring data for the first student indicated that he responded favorably to the interventions put into place. The student’s performance on three oral reading fluency (ORF) probes administered at the end of each session indicated dramatic improvement; by the second week of intervention it became apparent that the student would exceed the intervention goal so a more ambitious goal was set. By the end of the six-week intervention the student had made remarkable gains in ORF. The trend line trajectory indicated his ORF of fourth grade passages increased by 44 WCPM. A Survey Level Assessment found sixth grade material to be within his instructional range, and finally this student correctly matched 22 random vocabulary words to their definitions on a five minute probe (Powers and Mandal, 2011). However, by the third week it was apparent that the second student had not responded to the interventions so revised interventions were put into place. The second intervention plan produced better results and the trend line trajectory indicated his ORF of fourth grade passages increased by 15 WCPM. A Survey Level Assessment found that fourth grade material to be within his instructional range.

Since each intervention plan consisted of a number of different scientifically based interventions selected for their likelihood of success it was not possible to determine which
intervention or combination of interventions were most effective for the student. Essentially, researchers found that progress monitoring data assisted the clinicians to effectively implement a RtI program with fidelity that would yield the most student success. However, researchers were unable to identify which interventions teachers should use in order for students to progress.

The purpose of the study by Greenwood, Carta, and McConnell (2011) was to provide examples of evidence that the use of Individual Growth and Development Indicators (IGDI) as a tool for progress monitoring aided in data based instructional decisions leading to individual academic improvement. The IGDI is a form of measurement that strongly supports the use of curriculum and intervention approaches that could be used universally with all children in a program to identify those children who may benefit most from a change in interventions. They are also designed to monitor individual children’s progress over time and for informing of the need to either continue or change interventions.

The researcher explained that a significant limitation to traditional measurements was the time needed to measure all children in a program frequently enough to monitor progress. Most traditional instruments were not sensitive to short term growth and could not provide information within the course of a few weeks or months of instruction. Often, a mismatch existed between what was taught using specific interventions and what was being measured.

The researcher used direct observational measurement to record the frequency of responses during a short six minute play situation between a familiar adult and a toddler. The partner was taught to interact with the child by following the child’s lead and commenting and playing with objects that were of interest to the child. Targeted communicative skills or behaviors were recorded on videotape, and then the totals of the target skills were converted to a rate per min score and aggregated to provide a total communication score, an index of expressive
communication. The information enabled parents and professionals to judge a child’s need for a change in interventions while receiving services, and to what extent that intervention services were provided. IGDIs followed standard administration protocols and the data were comparable within individual children across time measuring individual growth. The IGDIs were intended for use in data based instructional decision making and measuring the probability of achieving desired outcomes. Compared with more traditional measurement practices the information measured growth toward desired outcomes, and was meant to link to a range of instructional strategies that could be implemented by parents and early childhood practitioners (Greenwood et al, 2011).

This data served to demonstrate how scientific research based interventions as well as effective progress monitoring with regard to the interventions could be used outside of the traditional classroom in order to ensure student growth toward desired goals. One of the limitations to this study was the age of the participants. Even though researchers were able to show that progress monitoring served to drive interventions in small children they were unable to demonstrate how these probes could be effectively used in classrooms with school age children.

**Learning disabilities** The case study by Stecker, Fuchs and Fuchs (2008) described the critical aspects of instruction and assessment within the RtI framework, and specifically how progress monitoring data could be used to provide information regarding student response as well as the presence of a learning disability. Stecker, et al. (2008) offered a case study in which cut scores and rates of improvement could be used to quantify adequate student responses to interventions. Also, how progress monitoring data was useful to illustrate poor response or improvement to assist in determining effective instruction or further programming needs.
The use of assessment data collected during Tier 1 played a key role in the determination of the need for Tier 2 or increased interventions. For example, schools that implemented benchmark assessment systems in which all students were assessed at several points during the school year were able to identify the students who did not meet the criterion or performed below a particular percentile if preventative strategies were not put in place. The assessments allowed the schools to continually monitor students for lack of response to universal instructional strategies. Students targeted as at risk could potentially catch up to peers with further instructional interventions implemented thus reducing the chance that gaps would widen and lead to the potential for special education referrals. Consequently progress monitoring data provided teachers with information about both the level of student performance and his or her rate of progress over a period of time. The data allowed teachers to make decisions periodically to determine if the student needed supplemental Tier 2 assistance (Stecker, et al., 2008).

When progress monitoring data indicated students identified as at risk had made little or no improvement over the course of one to two months the information was used to determine if the student needed to move on to Tier 2. Progress monitoring data was continued through Tier 2 to show progress. If the student’s progress was poor or proceeding at a slow pace in Tier 2 according to the data collected recommendations were made to move the student to Tier 3. If a student received several tiers of preventative measures with progress monitoring data showing little progress they were then considered for special education services (Stecker, et al., 2008).

**Growth measurement.** Progress monitoring is an essential component for measuring growth toward desired goals so that evidence based interventions can be implemented in order to better program for children. Stecker et al. (2008) found that one necessary feature of the well-
designed RtI model was progress monitoring for decision making. In order to ensure students achieved as expected progress monitoring became a critical tool used for targeting students in need of additional instruction and in developing individualized programs for unresponsive students. When implemented well, RtI and progress monitoring data would offer far more data than traditional methods of SLD identification. RtI was described as a better system of coordinated services that provided instructional and behavioral assistance to those students suspected at risk at much earlier points in time as well as early identification of students for special education services. The researchers affirmed that earlier identification would potentially lessen the impact of the disability or prevent some students from developing disabilities.

Stecker et al. (2008) supported that progress monitoring data was necessary for districts and teachers to effectively program for at risk students. In addition, when teachers implemented adequate scientific research based interventions as well as effectively monitored student progress with regard to the interventions, the child had a better chance to improve academically without the need for a special education referral. The Stecker et al. (2008) also reported that RtI, and in particular progress monitoring, allowed earlier identification of a learning disability which enabled the student to receive special education supports before they failed.
Chapter III: Results and Analysis Relative to the Problem

RtI Model

The intent of the RtI framework is meant to provide early identification and preventative intervention to reduce inappropriate special education referral (Swanson et al., 2012). However, RtI is not meant to be used solely as a means to identify students with special needs but to also ensure that all students receive quality education. The process of RtI asks all classroom teachers and schools to provide a more systematic, consistent application of evidence-based practice in more comprehensive and quantifiable ways to ensure the academic and behavioral needs of students are met. This is accomplished by the common practice among school districts of the three tiered approach used within the RtI framework.

The literature supports that there are two important components of RtI which include universal screening and progress monitoring (Short & Wilkins, 2009). By administering universal screening three times per year for at risk students as well as conducting continual checks to determine whether or not students are responding to the interventions put in place, gave educators opportunities to determine who had academic or behavior problems, why the problems were happening and what could be done to improve instruction.

With the reauthorization of IDEA (2004) came new federal legislation that provided directive to put aside the discrepancy model and replace it with the more effective model of RtI (Hoover, 2010). By using RtI as a model for referring students for special education, emphasis is put on early intervention rather than a wait-fail approach. The use of universal screening, progress monitoring and research supported interventions gave school districts the opportunity to provide more accurate information on student academic and behavior achievement which, in turn, lowered the rate of special education referrals.
The core principle of RtI is the early intervening of struggling students through universal screening (Heinzelman & Lapointe, 2007). This is the first step in assessing academic skills to determine whether or not students are meeting grade level benchmarks. Widely used by school districts are universal screening tools such as DIBELS and STAR Math and Reading. Whereas universal screening tools are only administered three times per year, it makes it difficult to monitor immediate progress of a student.

The data obtained from universal screening help to guide instructional decision making and to help identify those students who required more targeted interventions (Cicek, 2012). When students begin receiving interventions in Tiers II and III, less time consuming assessments for progress monitoring occur more frequently. The data derived from progress monitoring also help to guide instruction and should only take a short amount of time to administer than a tool used for universal screening.

**Barriers to Implementation**

There were several common theme among the literature regarding to barriers to implementing RtI with fidelity and sustaining the objectives of the program long term. RtI requires the use of evidence-based teaching practices that are geared towards the specific needs of the student (Johnston, 2010). This is not only best practice but it is also required by IDEA 2004 to document the evidence-based instructions and interventions used in the referral for special education process. However, research indicated that not all teachers use evidence-based teaching practices in their classroom and the instruction used varied from teacher to teacher (Lipson et al, 2011). If evidence-based instruction based on progress monitoring data was used in the classroom, it failed to be documented by teachers. When this occurred, students showed limited growth.
Swanson et al. (2012) found similar barriers to implementing RtI in their study. They discovered that teachers who provided interventions for reading and math instruction at the Tier II and Tier III levels where only using very basic interventions that touched on reading comprehension activities only and not on vocabulary and word study, for example. The same findings applied to math interventions where students received instruction mainly on number operations only. In order for an RtI program to be implemented effectively, interventions must address the individual needs of a student, the interventions and instruction must be evidence-based and it must be documented for the purpose of determining next steps for the student. Lastly the interventions, as lacking in the Swanson et al. (2012) study, need to cover all components of an instructional program.

Perceptions of school staff showed that understanding of the RtI process greatly affected the how effectively RtI was implemented in the school (Stuart et al, 2011). Both teachers and administrators reported that they required more guidance on all aspects of RtI. When teachers were able to experience firsthand the RtI process for an extended period of time, they were able to view the RtI process more positively. The teachers realized that progress monitoring did not take as much time as they thought; the teachers were more accepting of the special education referral process through RtI; and, they enjoyed the time spent problem solving and collaborating with colleagues. RtI provided the teachers with a framework to use data to inform instruction and that RtI was not a “one size fits all” approach.

Attitudes and roles of educational professionals, parents and community members can also impede affectively implementing an RtI program (Sansosti et al, 2001). The lack of understanding as to the fundamentals of RtI can lead to negative thinking. If administration does not understand the process then they are less likely to support teachers in implementing RtI
effectively within their school. Parents who want their children identified for special education do not want to go through the process of RtI and want their child to immediately qualify for special education services. They believe RtI is a waste of their time. The shared commitment between general education and special education teachers in the RtI process tends to be a barrier because they do not want to commit to the long term. These teachers reported the barriers of inflexible student schedules and finding time within those schedules to provide effective implementation of interventions and to monitor progress. Administration did not give them the needed time to engage in RtI related activities.

If teachers and administrators do not understand the process of implementing an RtI program effectively then they do not understand the effective use of scientifically supported interventions. When intervention plans consist of scientifically supported interventions, the likelihood that the student will respond favorable increases (Powers & Mandal, 2011). The interventions however, need to be guided by the results of progress monitoring. Whether interventions are used for academics or behavior purposes, they need to be monitored, reviewed and revised on a regular basis.

**Progress Monitoring**

All of the researchers agreed that a key component of RtI is progress monitoring; using data to make instructional decisions, and for implementing evidence based interventions. Progress monitoring has been defined as the frequent and ongoing measurement of student knowledge and skills and the examination of student data to evaluate instruction (Vaughn, Bos, & Schumm, 2007). Progress monitoring differs from traditional assessments because it focuses on specific student performance on a few critical skills (Powers & Mandal, 2011). Progress monitoring requires that teachers use repeatable and brief probes to measure the effectiveness of
instructional interventions. Progress is monitored closely at each tier to actually see if the strategies implemented are working. By effectively and continuously monitoring the interventions teachers are able to pinpoint specific difficulties and use the data to determine the effectiveness of the strategies in order to make instructional modifications. Additionally, if teachers understood how to implement adequate scientific research based interventions in the classroom as well as effectively monitor a student’s progress with regard to the interventions; it would better the chance that a child would improve academically without the need for a special education referral, or lead to needed special education services.

**Problem**

A consistent discrepancy with the literature stemmed from the fact that each study concluded that progress monitoring was essential to implementing and sustaining an RtI program yet none of the researchers were able to identify common and consistent tools for monitoring progress. It is also noteworthy to mention that although legislation requires school districts to use appropriate scientific, researched based instruction by qualified personnel (Federal Register, 2006), it fails to offer educators specific guidance on instructional strategies, progress monitoring and assessment procedures. IDEA 2004 is also vague on the specifics on how to effectively implement an RtI model. IDEA 2004 does not mandate the use of an RtI model; it only suggests that this is method to determine special education eligibility.
Chapter IV-Recommendations and Conclusion

The purpose of this paper was to determine what is necessary to help teachers understand not only how to implement interventions and monitor progress, but to recognize the importance of both components in order to implement and sustain an RtI program with fidelity. More specifically, the paper was written to answer the question: How can progress monitoring data assist district committees and teachers to effectively implement an RtI program with fidelity and sustain the objectives of the program long term?

Recommendations

It takes a great deal of commitment by a district and staff to develop and implement RtI with fidelity. Before implementing RtI a district must embrace a program of school-wide improvement to ensure that when provided with scientifically research-based processes they can effectively teach all children. Building administrators must assure that fidelity to implementation of RtI is embedded in the way business is done in the building (Heinzelman & Lapointe, 2007). The first step in implementing RtI is to develop a leadership team consisting of the building principal, a person with data analysis expertise, a person with behavioral expertise, one with reading expertise, grade level representation, and program representation. The team should be able to commit to participation in sustained professional development during the proposed timeline for the district. The teams’ goal should be to develop a collaborative problem-solving panel with local expertise to implement and sustain the RtI model with fidelity. An example of a timeline using a multi-year phase-in model targeting all students K-5 in the district could look like the following:
Year One-

- Establish a district goal for improving student achievement (ex. All students will read at grade level by 2016-2017)
- Identify a scientifically research-based instructional model
- Select or develop universal screening assessments

Year Two-

- Reallocate all professional development money to focus on training in the instructional model, including data analysis and the problem-solving process.
- Initiate a K-5 universal screening assessment (to be administered three times per year)
- Develop collaborative planning by grade level, where teachers meet to analyze data by grade level and share instructional plans

Year Three-

- Initiate a multi-tiered intervention system by adding small group targeted interventions for students not responding to the high quality differentiated instruction in the general education classroom
- Professional development (ongoing) on the assessments, data collection and analysis, and intervention

Areas for Further Research

In several of the articles used for the paper study samples included schools from many different school districts to answer each research question. A recommendation for further research would be to conduct a study within an entire school district instead. The study would begin when the district adopted an RtI model and conclude after a three year span. This would include the use of surveys regarding teacher perceptions taken from staff members before RtI
was introduced and at the end of the three year period. Also, the average number of special education referrals before RtI was implemented would be gathered and compared to the number of special education referrals after the third year of RtI. Tangible progress monitoring data would be gathered which would include teacher records of probes, report cards, and individual student growth charts. In addition, gathering suggestions in the form of surveys from administrators and teachers that could be used to address the need for further professional development, the use of common progress monitoring tools and specific strategies that were used and the effectiveness of each intervention throughout the three tiers of the model. The results of which could be used to determine if progress monitoring effectively drove the use of interventions in order to increase student growth and fewer referrals for special education.

Conclusion

Progress monitoring plays a critical role in the RtI process because the data collected can be used to identify students who require more intensive instructional interventions, and to determine what interventions are effective or if a change is necessary in order to provide necessary support. When progress monitoring is implemented on a school wide basis, it can be used to determine the success of classrooms, programs, and the school as a whole, and can be a critical source of information to support instructional and administrative success (McLane, 2006). RtI is a long term commitment and all stakeholders need to work together to reap maximum benefits. RtI is a dynamic problem solving process built upon intertwined and constantly interactive principles.
Responses to Intervention

References


