IMPLEMENTATION AND EFFECTIVENESS OF RESPONSE TO INTERVENTION FOR
THE IDENTIFICATION OF LEARNING DISABILITIES

by

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Abstract

The purpose of this paper was to review the implementation and effectiveness of the Response to Intervention (RTI) method. Within this paper, research articles were reviewed that both supported and opposed the new legislation that promotes the RTI method to identify learning disabilities. Based on this research, it is concluded that the RTI method, with all of its components, has the potential to reduce the number of students placed both at-risk and in special education programs. Research suggested that both proper training and on-site support were imperative to ensure effective implementation and long term fidelity of the RTI method. Other RTI concerns included lack of specifics in reference to cut-off scores, research-based assessments, and ways to determine students as nonresponsive. Finally, cost effectiveness of the method must be considered when implementing the RTI method in schools that are already in financial trouble. Suggestions for areas of further research are also mentioned.
CHAPTER 1: INTRODUCTION

Students carrying the Learning Disability (LD) label in the field of special education have increased by an alarming rate of almost 300% since 1976 (Lerner, 2003, as cited in Burns, Jacob, & Wagner, 2008). This alarming increase prompted the U.S. Department of Education to consider the possibility of including a change in the classification of LD in the next reauthorization of the Individuals with Disabilities Education Act (IDEA). This possibility of change led to the Response to Intervention (RTI) model (Wiener & Soodak, 2008). Until the last decade, RTI was used primarily as a prevention program. The difference now is RTI has been accepted in federal education law as a model to determine the eligibility of a student for special education services (Burns, Jacobs, & Wagner, 2008; Canter, 2006).

RTI is a theory or model being used in place of IQ-achievement discrepancy to avoid the “wait to fail” stigma. RTI is an intervention method designed to be incorporated into the regular classroom environment to determine the level of research-based intervention needed for each individual student. The level of intervention is based on the nonresponsiveness of the student to the current practices being used. Each tier of the model increases the intensity of the intervention and the student is “tested” periodically to check for progress. If a student does not reach established benchmarks after all tiers have been used, the student is then referred for further testing and the possibility exists that the student has a learning disability. The goal of RTI is to aid in the identification of students with specific learning disabilities (SLD) by preventing both academic and behavioral problems and using the tiered method of intervention (Reutebuch, 2008).
RTI, in appearance and theory, seems like the “perfect fit” for identifying learning disabilities through early intervention and research based practices. The implementation of RTI can be problematic largely in part because the components that use training and practitioner support may be implemented differently or ineffectively.

The state of Michigan accepts both the IQ-Achievement discrepancy model and the RTI model as methods to determine Learning Disability (LD) eligibility for students. In Michigan, the RTI development and model type are currently in the developmental stages using pilot implementation involving professional development (Berkeley, Bender, Peaster, & Saunders, 2009). Many schools in the state of Michigan have applied for and received grant money to implement the Michigan’s Integrated Behavior and Learning Support Initiative (MiBLSi) as a foundation for their RTI model. MiBLSi is designed to monitor students’ reading and behavior performances and to implement school-wide research-based reading interventions and Positive Behavior Support (PBS) to improve both reading and behavior success. The MiBLSi website serves as a state resource center that provides participants with technical assistance and professional development as well as local, regional, and statewide support.

I work at the Carney-Nadeau Public School and we just received the MiBLSi grant money to implement Response to Intervention and Positive Behavior Support in our elementary school. This, along with the fact that RTI is the “craze” in the field of special education, is the reason that I have chosen to investigate “Implementation and Effectiveness of Response to Intervention on the Prevention of Learning Disabilities”.
Statement of the Problem

Whether implementation is driven by a state initiative or some other means, there exist many components involved in the successful and effective implementation of Response to Intervention as the model to determine eligibility of students for special education services. These components include: understanding the approaches to and components of RTI, professional development, maintenance, and cost effectiveness. Each of these components has strengths and weaknesses, which will be discussed within this literature review. The problem with the realization of RTI goals often involves the implementation of the components. Interpretation of “intervention” can alter the effectiveness of the RTI process. Professional development regarding implementation and progress monitoring also are important to the fidelity of RTI. Finally, RTI needs to be cost effective to the school district in order to remain the method used to identify students at risk for academic failure. Many concerns have been stated throughout the literature in support of the need for school-wide commitment, training for all staff members involved with RTI, and on-site support for educators. Through this investigation, I will attempt to determine how the RTI process can be implemented effectively across a school district to reconcile the discrepancy between espoused and actual practices and components.

Research Question

The purpose of this paper is to review the research literature on strategies to overcome the barriers in the implementation and use of RTI to identify students with learning disabilities. Despite both research on RTI and the MiBLiSi initiative that supports the RTI process; many schools are still unable to implement RTI to its highest level to allow early intervention and detection of learning disabilities. This paper will also answer the following questions: “What are
the barriers to successful, effective implementation of RTI and what are possible strategies to overcome the barriers? ”

**Definition of Terms**

Response to Intervention: “RTI is an assessment and intervention process for systematically monitoring student progress and making decisions about the need for instructional modifications or increasingly intensified services using progress monitoring data” (Johnson, Mellard, Fuchs, & McKnight, 2006, p. 2).

Progress monitoring: “Formative evaluation: Teachers use the data to determine whether they need to change their curricula, materials, or instructional procedures” (Fuchs & Fuchs, 2006, p. 94).

Curriculum: “A school’s scope and sequence of knowledge and skills to be learned, and is operationalized by the materials and methods used to deliver that content” (Kovaleski, 2007, p. 639).

Performance feedback: “Variables that can improve the integrity of intervention steps by teachers” (Sterling-Turner, Watson, & Moore, 2002 as cited in Duhon, Mesmer, Gregerson, & Witt, 2008, p. 20).

Multitiered instruction: The different levels of academic interventions that “changes at each tier, becoming more intensive as a student moves across the tiers” (Fuchs & Fuchs, 2006, p. 93).

False negatives: Occur when “children who in higher tiers seem responsive and nondisabled but who, nevertheless, cannot survive in the mainstreamed classroom” (Fuchs & Fuchs, 2006, p. 94).
CHAPTER 2: REVIEW OF LITERATURE

In December of 2004, President Bush signed the Individuals with Disabilities Education Improvement Act into law. One large difference between this version of the law and earlier versions is that this version allows practitioners to use RTI as a method to identify students with LD rather than the IQ-achievement discrepancy method previously used (Fuchs & Fuchs, 2006). RTI can be implemented in early grades (kindergarten, first and second), as compared to the IQ-achievement discrepancy method, which usually does not appear until third grade.

RTI defined

The RTI model focuses on individual student needs. RTI uses tools such as Dynamic Indicators of Basic Early Literacy Skills (DIBELS) to identify these individual needs. The needs of the student are used to create interventions that use research-based methods to address the needs of the student (Johnson, Mellard, Fuchs, & McKnight, 2006). The RTI method of identification for students at risk for school failure provides early intervention methods without the cumbersome paperwork involved in special education. In order for a student to receive special education services, the student must be formally referred, have parental consent for testing, be tested and be one half his or her chronological age in at least one developmental domain. If the student qualifies, an Individual Education Plan is designed to address his or her needs. This process can take months and the student will forego services until proven to be eligible for special education services.

The purpose of RTI is to reduce the number of students placed at risk that are diagnosed with a learning disability. This is achieved by providing solid instruction through a core reading
program complemented by an assessment tool that can identify the needs of the struggling students (Fuchs & Fuchs, 2006).

Unlike previous models of intervention: resource-room model, pre-referral interventions and the consultation model, RTI is based on “controlled scientific research”. The amount of research is minimal, but some of the research shows promise when performed in the earliest years of school (Gersten & Dimino, 2008). “The odds of becoming an average reader in the later elementary grades if you are a poor reader in the early primary grades is no better than 50-50 without intervention and, in fact, may be significantly worse” (Simmons, Coyne, Kwok, McDonagh, Harn, & Kame’enui, 2008, p. 159). Simmons et al., tested several different areas of reading and pre-reading skills using DIBELS measures of Letter Naming Fluency (LNF) and Initial Sound Fluency (ISF) to determine if a “window of intervention opportunity” truly exists for certain reading skills. This window could be used to increase the reading performance of the students who struggle with the specific reading skills. The study had 464 participants from seven different elementary schools in the Pacific Northwest. All 464 students that entered kindergarten in the seven schools were tested in September to identify students who were at risk for reading difficulties. The DIBELS tests placed 117 of the 464 students at risk for reading failure. Placement was based on three criteria. First, national norms were used on the LNF test and a student had to score at or below the 30th percentile. Second, confirmation of each student’s performance on the LNF test had to be corroborated by the kindergarten teacher. Third, local kindergarten cohort scores were used on the ISF test and the student had to score in the bottom quartile to be considered at risk. Exclusions from this study included students with significant hearing or visual acuity and students with limited English proficiency.
The results, collected over a four-year period, indicated a steady decline in the number of students that remained in the at risk category. The study used both criterion and normative-referenced measures to gauge risk. At the end of Kindergarten, 88 of the 117 original students remained in the at risk category. By the end of first grade, the number of students still placed at risk declined to 71 students. Second grade reduced the number of students placed at risk to 60 and upon completion of third grade 41 students were still placed in the at risk category. The study suggested that early intervention in the areas of Word Attack and Word Identification will improve reading performance if the interventions occur in kindergarten and include intervention for Passage Comprehension no later than first grade (Simmons et al., 2008).

Early detection and intervention without the requirements of a referral to special education or a label are strengths of the RTI model. The RTI design is created to prevent the “wait and fail” method that exists in the IQ-achievement discrepancy model. RTI uses early intervention as a means to prevent reading failure and asserts that if students become proficient readers by the end of first grade, they will remain good readers. The irony of early detection is that the earlier we test students, the less accurate the results are (Gersten & Dimino, 2008).

**Implementation of RTI**

Five clearly defined principles have been determined to be essential to the successful implementation of RTI by experts in the field of education. Twenty-five articles were cited in a report written by Barnes and Harlacher (2008). The cited articles discussed either the general aspects of RTI or gave solid examples of either complete RTI models or components of an RTI model. The report was written in an attempt to reduce the confusion surrounding the implementation of RTI and to separate the principles of RTI from the features of RTI. The
principles of RTI never change but the features of the model may differ in each school system. The report identified the five clearly defined principles of RTI as: “(1) a proactive and preventative approach to education, (2) ensuring an instructional match between student skills, curriculum, and instruction, (3) a problem-solving orientation and data-based decision making, (4) use of effective practices, and (5) a systems-level approach” (Barnes & Harlacher, 2008, p. 417).

Implementation of RTI requires the development of a valid and reliable assessment for students of all age levels (Gersten & Dimino, 2008). In addition, professional development in the area of reading is needed, as well as training in curriculum-based measurement for staff members involved in the RTI process. Staff members include regular education teachers, special education teachers, Title One staff, and other remedial specialists (Kovaleski, 2007). Teacher education and professional development in conjunction with on-site support are crucial elements to effective implementation of RTI and continued fidelity in the RTI process. For “real school improvement” to occur, training needs to include the use of evidence-based practices, effective professional development and effective implementation strategies must then be in place (Danielson, Doolittle, & Bradley, 2007).

The RTI process focuses on reading instruction and, more specifically, early reading problems. RTI differs from IQ achievement discrepancy model in that the RTI process begins in the general education classroom where student progress is monitored and the first level of interventions occurs. With continued student monitoring used to track student progress, student interventions change and intensity of the interventions increase. If all attempts to intervene do not show “adequate progress”, the student will be referred for a special education evaluation and possibly qualify for special education services (Fuchs, Mock, Morgan, & Young, 2003).
To decide whether the student needs more intensive instruction, each student must be screened using a research-based tool with a benchmark that can predict the year-end performance score of a student on “high stakes tests” (Fuchs & Fuchs, 2006, p. 93). Researchers suggest that the determinant for the student that is responsive versus the student that is nonresponsive is an important piece of the RTI process and “that cut-point is the most significant determination of responder status” (Barth, et al., 2008, p. 304).

Once the students who are at risk for school failure are identified, teachers monitor the students for responsiveness in the general education classroom. Monitoring can be done using an achievement test, and after a brief time, comparing the students placed at risk performance for weekly improvement using local or national normative figures or criterion-referenced figures (Fuchs & Fuchs, 2006). To establish baseline scores and to identify elementary students that are considered at risk, tests such as the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) are used. DIBELS tests are designed to estimate the year-end reading performance of all students. According to DIBELS benchmarks, students might be targeted to be at or below grade level in reading performance at the end of the year. Keep in mind that these benchmarks are only guidelines and to use DIBELS scores as a means for further assessment; DIBELS scores must be consistent for a period of time (Gersten & Dimino, 2008).

A flaw in the RTI model is that RTI screening tools only focus on phonological measures. RTI screening tools lack measures of nonphonological factors. Nonphonological factors also predict long-term reading outcomes and the possibility of reading disabilities. Screening tools lacking the nonphonological factors (oral language proficiency, expressive language development, and sentence or story recall), means the early grades must incorporate
vocabulary instruction and listening comprehension in daily reading instruction (Gersten & Dimino, 2008).

**Progress Monitoring**

Progress monitoring is a large part of the RTI process. Progress monitoring allows teachers to use ongoing assessments as a record of change in the rate that the student is learning. The assessment information can then be used to develop intervention methods to improve the rate at which the student is learning or recommend the student for further testing and the possible need for a special education evaluation (Fuchs & Fuchs, 2006).

The use of curriculum-based assessment (CBA) to address instructional practices and curriculum-based measurement (CBM) to assess effectiveness of instruction have proven helpful in an RTI model. In a study conducted by Burns (2007), participants consisted of 60 third grade students. Each student was diagnosed with a learning disability in basic reading skills based on the IQ discrepancy model. Each student had “IQ standard scores between 90 and 110, and reading decoding age-based standard age scores between 70 and 80” (Burns, 2007, p. 302). Similarly, each student received special education services that addressed reading fluency as one of their short-term objectives. The services were provided for one to two hours every day.

The students attended one of 30 resource rooms found in 20 elementary schools located in three rural school districts in central Michigan. Included in the study was one student, selected at random, from each resource room. For three weeks, CBM probes were used to assess progress in the reading curriculum in each local resource room for all students that were either selected or received equal time in the resource room. From this data, a baseline was established and the selected student was paired with a second student whose CBM median baseline was closest to
the original student selected for the study. This method created 30 pairs of students. One student from each pair was selected at random to receive the treatment while the other was selected at random to be the control student. One student moved out of the district leaving 29 pairs of students to calculate results.

A student researcher, an undergraduate special education teacher, was assigned to each resource room. The student researcher was trained in assessment CBA, CBM, and the treatment before receiving his or her assignment. The student researcher taught the students in the treatment group unknown words three times each week for 12 weeks. These 36 treatment sessions occurred during noninstructional time. Each session lasted 10-15 minutes and was completed in the resource room at a table separate from other students. This allowed the students to continue to receive their special education instruction as stated in their IEPs. The students in the control group did not receive the extra sessions on a regular basis. The control students did receive individual help during noninstructional time from the assigned researcher. Three times each week (36 total sessions), the control group participated in guided reading from the assigned researcher.

On the same day of the week, each of the 12 weeks, each student in the study was given three randomly selected pages to read orally from the third-grade basal reader. Students read for one minute and the researcher marked and tabulated reading errors to determine the words read correctly per minute.

The results of this experiment demonstrated a four times greater growth rate for reading fluency with students in the treatment group compared to the control group using an analysis of covariance (ANCOVA) to compare mean slopes. Results also indicated that the number of students in the treatment group reading at the instructional level or independent level was higher
than the control group during all intervals except the first. To determine the relationship between reading material presented at the instructional level and reading growth, a category count score was generated using students’ scores that were in the instructional level. The count score was then compared with the progress slope for all students. The comparison implied a strong and significant relationship. Finally, the study identified 19 of the 29 treatment group (65.5%) students as responders to intervention while only 8 of the 29 control group students (27.6%) were identified as responders to intervention. This is considered a significant effect using a chi-squared analysis (Burns, 2007).

Effective progress monitoring is achieved with unvarying testing schedules. Recommended practice suggests each student receive testing three times each year. Students’ test performance is compared with established criteria that identify students who are progressing at the expected rate using national benchmarks, local norms or classroom norms. Using local norms, students who perform somewhat below the desired rate in the “emerging” range (between 20th and 40th percentile of the local district) often are monitored carefully by the teacher to see if intensive interventions may be necessary. Students with scores in the “deficit” range (in the lowest 20 percent of the local school district) are considered at risk for reading problems and provided with immediate attention, usually small group intervention. The use of monitoring allows the teacher to track the students and if intervention does not increase rate of progress, a special education referral or some type of specialized intervention might be appropriate (Gersten & Dimino, 2008).

RTI Approaches and the Multi-tiered Intervention Process

Progress monitoring leads to intervention. If a student is not responding to the instruction he or she receives, additional intensive instruction is supposed to be available with tiers. The RTI
process is multi-tiered and uses one of two approaches. Each tier increases the intensity of instruction for the students that were nonresponsive to the previous tier of instruction. The increased intensity can be achieved by “(a) using more teacher-centered, systematic, and explicit instruction; (b) conducting [the intervention] more frequently; (c) adding to its duration; (d) creating smaller and more homogenous student groupings; or (e) relying on instructors with greater expertise” (Fuchs & Fuchs, 2006, p. 94). These tiers of intervention can be designed using the problem solving approach or the standard treatment protocol approach.

The problem solving approach is a more individualized approach that uses the students’ responsiveness as the “driving force” for the intervention and typically occurs in the classroom. Each tier has the same goals: establish what the problem is and how severe the problem is, create and carry out a research-based intervention to address the problem, adapt the intervention as needed based on progress monitoring data, yet each tier is individualized to the specific needs of the student (Fuchs & Fuchs, 2006). The strength of the problem solving approach is individualization, but a weakness is that assessment and intervention expertise is required for practitioners using this method.

With the standard treatment protocol, the tiers do not differ from student to student and typically occur outside of the classroom. Each student is involved in small group or individual instruction to determine responsiveness. The students responding to Tier 1 return to the classroom for instruction. The students that are nonresponsive move to Tier 2 and, if successful, return to classroom instruction. Once again, if a student is nonresponsive to Tier 2, the student needs further evaluation to rule out the possibility of a learning disability (Fuchs & Fuchs, 2006). Treatment integrity is paramount. Each tier or intervention must be done entirely. Any less would result in the student being denied her or his right to receive a free and appropriate public
An important point to remember is that interventions do not replace the reading program. As Mesmer and Mesmer (2008) wrote, “We liken the intervention and the reading program to a balanced diet. The intervention is like an extra serving of milk, but [the intervention] does not replace meat, fruits, or vegetables” (paragraph 17).

No matter which approach is used, measuring and defining nonresponsiveness are key components to RTI. First, the school must agree upon the interpretation of what measures student responsiveness to instruction. Second, the school must create a standard that will define nonresponsiveness, which allows anything that falls below that standard to be a consideration for a learning disability (Fuchs & Fuchs, 2006). Many methods can be used to spell out these two assessment components. However, using different methods can alter the group of students that are identified as nonresponsive (Fuchs & Fuchs, 2006). Researchers must develop a common approach to define and assess nonresponsiveness to avoid the “unreliability of the diagnosis” criticism that the IQ-achievement discrepancy method received in regards to the identification of LD (Fuchs & Fuchs, 2006, p. 98). Another consideration is that a valid assessment method used for beginning decoding skills may not be valid in the area of reading comprehension (Fuchs, Fuchs, & Compton, 2004).

Both the problem solving and standard protocol approach can identify false positives and false negatives, which threaten the accuracy of methods used to classify the students into at risk and not at risk groups. A false positive is when the score of a student falls below the cut off and the student is falsely identified as at risk. A false negative, on the other hand, is when the score of a student is above the cut off and the student later exhibits reading problems (Jenkins, 2003).
The instruction used in the problem solving approach is not as exhaustive or as methodical as the standard protocol approach and is more likely to identify students as false positives. Whereas the instruction used in the standard protocol approach is more likely to identify false negatives as well as true positives (Fuchs & Fuchs, 2006). When considering special education referrals, the flexibility of the problem solving approach reduces the expectations of nonresponsiveness and increases entrance into special education. Choosing an approach to RTI requires a school to decide if the goal of the school is to identify or to prevent special education services (Fuchs & Fuchs, 2006).

**Strengths and Weaknesses of Response to Intervention**

Many unanswered questions and issues exist involving the use of RTI as the structure to identify students with disabilities. Throughout this review, many of the strengths and weaknesses have been discussed which will be expanded upon now to address the effectiveness of RTI on the prevention of learning disabilities.

RTI has positive aspects to consider. For example, RTI is a “proactive not reactive” model that can begin to assess at risk students as early as kindergarten to improve reading instruction and put an end to school failure (Fuchs & Fuchs, 2006). Assessment is done using a tool such as DIBELS to establish a baseline with students. The baseline can then be used to establish whether a student is progressing as he or she should be within the general education curriculum. Monitoring can then be used to determine the need for interventions for the students placed at risk and provide documentation to support these interventions. The promise of identifying a deficit before the deficit widens to the discrepancy requirement is a definite strength of the RTI method. RTI also allows more collaborative decisions to be made and the data to be used to make curricular decisions regarding each student (Feifer, 2008).
If implemented correctly, RTI will reduce the number of students referred for special education due to poor teaching methods with evidence-based approaches, research-based interventions, and effective progress monitoring (Fuchs & Fuchs, 2006). The initial RTI interventions can occur in the general education classroom and provide students the extra support needed without being pulled away from their peers. The RTI method has provided increased quality and quantity of instruction provided by classroom teachers (Mesmer & Mesmer, 2008).

In contrast to the above statements, and as stated earlier in this review, potential problems exist with RTI, which include problematic reading instruction and poorly planned interventions. A student could be nonresponsive because the teacher is lacking the skills or training needed, does not consistently use the RTI method, or uses the “one-size-fits-all” approach instead of individualizing the intervention to the area of need for the student (Gersten & Dimino, 2008). Unfortunately, the skill of contingent instruction never attains mastery (McEneaney, Lose, & Schwartz, 2006). Contingent instruction changes with each intervention and needs to be tweaked with each student. Professional development and teacher education will need to do more than create a literacy-learning model. Professional development and teacher education will need to continue to support an ongoing program involving responsive contingent instruction (McEneaney, Lose, & Schwartz, 2006).

Research findings support the many concerns regarding pre-service and in-service training of staff members involved in the RTI framework. These concerns include the preparation of the school psychologist, effective approaches to classroom management, lack of training in implementation of evidence-based practices, and the training of prevention professionals (Kratchowill, Vopiansky, Clements, & Ball, 2007).
Duhon, Mesmer, Gregerson, and Witt (2008) conducted two experiments that tested the effects of performance feedback (PFB) on the treatment integrity and fidelity of the RTI method. The first experiment tested treatment integrity using PFB after fidelity had declined to levels that were undesirable. Undesirable levels were defined as below 70% integrity for at least two successive days. The second experiment tested the maintenance of treatment integrity using PFB before fidelity declined to low levels.

Experiment One used the problem-solving approach and participants consisted of three elementary teachers and four regular education students who were referred for academic concerns. Teachers were given materials necessary to perform the intervention before the training session. Training occurred before the intervention process was implemented and more training sessions were held the day before each RTI team meeting. The RTI team met weekly to discuss interventions and student progress/student responsiveness. Prior to implementation of interventions, a baseline performance was measured for each student. Each intervention was to be done daily and last 5-15 minutes in duration. Intervention implementation only counted if the intervention was completed accurately. Intervention folders were provided for accuracy purposes. PFB was not implemented until treatment integrity fell below 70% for two successive days. The teacher received PFB from the researcher at the next intervention team meeting. Researchers used a multiple-baseline design to test the effect of PFB on treatment integrity after treatment integrity had dropped off to undesirable levels during the independent implementation phase. Once treatment effect was established, PFB was stopped to test the maintenance of the treatment effect without the use of PFB. Results of the experiment showed a sustained increase in treatment integrity for all teachers with the use of PFB and a quick decrease in treatment integrity when PFB was stopped. By the time the last five sessions occurred and PFB was being
used, implementation increased dramatically. In fact, the last three intervention sessions in the experiment showed an increase in accuracy of individual student outcomes ranging between 33% and 78% from each student’s original baseline accuracy score. Once PFB was stopped, interventions no longer occurred (Duhon, Mesmer, Gregerson, & Witt, 2008).

Experiment Two had participants from the same school and consisted of four elementary teachers and four regular education students who were referred because of academic concerns. RTI team meetings were held the same as the RTI meetings in Experiment One. Treatment integrity, student academic performance, teacher training, pre-intervention assessment, intervention development, and intervention implementation were also measured, developed, or prepared the same for Experiment Two as Experiment One. The purpose of this experiment was to study the role of PFB maintenance of treatment integrity prior to implementation decline. For this reason, PFB was put into operation before the independent phase. Before PFB could be stopped, treatment integrity had to stay at acceptable levels with the use of PFB. In the attempt to guarantee high treatment integrity before any decline occurred, teachers received PFB at the first team meeting held after implementation. Otherwise, PFB was delivered the same way in Experiment Two as in Experiment One. PFB was eliminated if the teacher did not fall below the 70% criterion for more than two consecutive days. Data would still be collected but no other contact with the teacher occurred. Similar to Experiment One, integrity increased with the use of PFB and dropped off when PFB was stopped. The last three sessions in Experiment Two showed an increase in individual student outcomes ranging between 56% and 1043%. The 1043% increase was achieved through a modeling and feedback intervention. The student’s baseline accuracy score was 7% and increased to 80% accuracy following intervention (Duhon, et.al, 2008).
The limitations of this study include: external validity, the reliance on permanent products, the removal of both PFB and mandatory attendance for team meetings simultaneously and the fact that results of these experiments lack the information needed to determine the level at which treatment integrity improves student outcomes (Duhon, et.al, 2008). The reliance on permanent products refers to the intervention packets provided to each teacher to perform the interventions rather than each teacher creating their own intervention method. Removing the PFB and mandatory attendance for team meetings simultaneously makes evaluating the exact cause for the change in teacher behavior an unattainable task. Treatment integrity in these experiments was not an independent variable causing the change in student outcomes; therefore, the experiments do not create a true causal relationship between treatment integrity and improved student outcomes (Duhon, et.al, 2008).

Both experiments expanded on previous research and produced positive results indicating the importance of PFB on the implementation and fidelity of the RTI method (Duhon, et.al, 2008). However, seven of the cases experienced an immediate decline of intervention implementation when PFB was removed indicating the need for teacher training and support when implementing the RTI model. The effectiveness of the RTI method appears to hinge on consistent high quality, research-based interventions implemented with integrity and fidelity.

Two potential problems also exist in the studies regarding RTI. The first problem is that most RTI research is based on the effectiveness of the different components of RTI rather than the effectiveness of the RTI process as a whole. The second problem being is that most RTI studies are done by “well funded research centers” and implemented by highly trained research associates that increase the level of fidelity and integrity of the implementation. A genuine
concern exists that schools may not be able to implement RTI using “front line educational professionals” (VanDerHeyden, Witt, & Gilbertson, 2007, p. 226).

A set of principles that do not change is necessary to avoid confusion in the implementation of the RTI method. The features of the RTI may look different but the principles need to stay constant (Barnes & Harlacher, 2008). First, RTI lacks specifics when looking at cut-offs, research-based assessments, and ways to designate the student as nonresponsive. Second, RTI is missing material providing research-based intervention models for the school staff to use and follow as a guide. Third, RTI focuses mostly on reading and not other facets of curricula. Finally, the RTI approach also lacks the ability to identify the possible causes of the deficit or potential disability without further testing. Therefore, RTI is an approach that cannot stand alone (Feifer, 2008).

Cost effectiveness of RTI

Regardless of which approach is used, support from a reading specialist or reading coach and the administration is imperative. With school budgets stretched to their limits to pay the teachers, it seems nearly impossible to find the monies to hire a reading specialist or onsite reading coach to aid in the planning for the students that are nonresponsive to current practices.

To be accepted and successful the RTI model must “mesh with the lives of teachers in classrooms and the realities of the core reading programs they are using” (Gersten & Dimino, 2008, p. 103). When lack of support exists, the implementation of the RTI method is that much more difficult. Teachers need support to be available and convenient for them. Support needs to be on-site to allow teachers the ability to not only review information concerning progress monitoring but also to help create, model, observe, and give feedback regarding research-based interventions (Gersten & Dimino, 2008). A specialist, coach, or consultant stopping in once each
week does not allow the teachers the time and dedication they deserve to implement the RTI method.

Ultimately, RTI is designed to reduce the number of students referred for special education services and, at least, lessen the number of students wrongfully placed in special education programs. The cost to implement an effective RTI program in any school district may initially appear to be out of reach for struggling districts. However, when compared with the cost of a student placed in a special education program for their entire school career, the cost is minimal. The use of grant monies, such as MiBLiSi in the state of Michigan, help with the initial start up costs for the implementation of RTI programs by providing money for staff training, curriculum purchases, and new items for the school to make both transitions and new expectations simple and attainable. The monies do not pay salaries but can offset the cost of a reading specialist, coach, or consultant hired in a district by alleviating the expenses covered by the grant monies.

When considering the cost of teaching students with learning disabilities is two to three times higher than the cost of teaching regular education students, finding new alternatives to special education services seems almost crucial for the public schools (Fuchs & Fuchs, 2006). The percentage of students that qualify and receive special education services under the SLD label is at 48.3% (U.S. Department of Education, 2004). The increased cost combined with the number of students receiving special education services justifies the need for a new process for determining learning disabilities in students.
CHAPTER 3: RESULTS AND ANALYSIS RELATIVE TO THE PROBLEM

This paper was written to review the research literature on strategies to overcome the barriers in the implementation and use of RTI to identify students with learning disabilities. Numerous weaknesses exist in both the RTI and IQ discrepancy models which make using either of the models exclusively as the way to label a student as learning disabled a less than desirable method. It is apparent throughout the literature that more research is needed to make the Response to Intervention method a process that is well-defined and a protocol that is easy to follow.

Many concerns exist when considering best practices for the implementation of RTI. Much of the literature supports the need for school-wide commitment, training for all staff members involved with RTI, and on-site support for educators (Burns, 2007; Danielson, Doolittle, & Bradley, 2007; Feifer, 2008; Gersten & Dominio, 2008; Kovaleski, 2007; Kratchowill, Vopiansky, Clements, & Ball, 2007; McEneaney, Lose, & Schwartz, 2006; Mesmer & Mesmer, 2008; Simmons, et al., 2008). To maximize the effectiveness of RTI, each member of the team must commit to work together to meet the needs of each student that is considered at risk. Administrators, educators, and support staff must receive training that enables each member of the team to effectively complete the components of the RTI process. Each component must be implemented with fidelity to ensure the effectiveness of the RTI method. Universities also need to prepare future teachers, administrators, psychologists, and counselors that are majoring in the field of education to the RTI process (Kovaleski, 2007). RTI training at the university level could alleviate school districts from total responsibility in regards to the high cost of extensive training for all staff members involved in the RTI process.
Studies should be conducted on the effectiveness of RTI in regular school settings to help determine ways that teachers can effectively implement RTI in their classrooms. Unless proper training and on-site support become a requirement of RTI, both may be neglected based on lack of money available to provide these services. Legislation must be specific about RTI requirements to guarantee proper implementation. If schools are not required to provide proper training and on-site support, school districts with budget constraints could eliminate both to save money.
CHAPTER 4: RECOMMENDATIONS AND CONCLUSIONS

Recommendations

The flexibility of RTI can have a negative impact on the effectiveness of the method. The current language allows the school districts to interpret components of RTI differently. The varied interpretations of each component can affect both the accuracy and integrity of the RTI method. To be considered a reliable method for the identification of students with learning disabilities, the components of the RTI method must be more specific.

Guidelines need to be employed to allow for efficacy in the implementation of RTI. These guidelines would delineate cut-off points to determine what constitutes nonresponsiveness in students placed at risk, the contents of each intervention tier, development of a timeline for each intervention tier, and a protocol for progress monitoring before and after interventions occur. These components are very important in the RTI process and should be clearly defined to create consistency in determining eligibility for special education services. Lack of any one of these elements could change the face of eligibility.

Currently, specific guidelines do not exist. To best utilize RTI as a method to identify students with learning disabilities, schools should choose the desired RTI approach and set the standards high for the implementation of RTI. Rather than take short cuts to eliminate expenses, schools should invest now and reap the long term benefits of an effective RTI program. If needed, schools should take advantage of the research that suggests the positive outcomes that proper training, on-site support, and teacher accountability to justify the added expense for the implementation of RTI.

The barriers that exist with the RTI method are largely based on interpretation and application. To overcome these barriers without legislation requiring more stringent guidelines,
schools must consider the needs of students at risk and, no matter what the initial expense, make meeting those needs a priority.

*Areas for Further Research*

Researchers need to invest more money into studies that focus on research-based interventions, real practitioners using RTI in the school environment, the difference proper personnel training has on RTI implementation, and longitudinal results from the earliest RTI programs.

Training and on-site support may only become standard when research suggests a positive or direct relationship between the effects of training and on-site support and the successful implementation and continued efficacy of the RTI method. To ensure both training and on-site support are available, more research should be completed to determine the importance of these two elements in the implementation and continued success of the RTI method.

A study should be conducted in true school settings to show the direct relationship between effective implementation of the RTI method and reduced numbers of students at-risk and students referred for special education. This study should also include a control group of students in schools that are still using the IQ Discrepancy model to compare the RTI model to the IQ Discrepancy model. The study would be a longitudinal study and the students selected for this study would include Kindergarten students considered at-risk based on DIBELS scores. The students would be monitored until they reached the end of the 3rd grade using DIBELS scores and progress monitoring or teachers’ notes.

To compare the effects of the RTI model using both training and on-site support, the schools used in the study would be randomly selected and placed into one of three groups.
A: At-risk students in schools using the RTI method with proper training and on-site support; Group B: At-risk students in schools using RTI method without proper training and on-site support; and, Group C: At-risk students in schools using the IQ Discrepancy method. Group C would be the control group used to compare the RTI method to the IQ Discrepancy method. Data collected would be analyzed using the Chi Square Test to determine how many students were no longer considered at-risk in each group following the experiment.

Limitations to this study would include: Students in each group are not true random selections…only the participating districts would be random; the number of school districts that “fit” into such specific groups (A, B, and C) may be quite limited; groups would either have both training and on-site support or neither training and on-site support making determining which of the two is more necessary for effective implementation; the number of students in the study are limited to the number of students in the participating district for each group.

Results from previously conducted studies must be used to support the need for research-based interventions, proper training, and the importance of on-site support. Research needs to be evidence for RTI as an effective method to reduce the number of special education students with the use of the tiered intervention program. The larger the number of studies completed with positive findings in support of the RTI method, the stronger the case becomes for RTI as the model to determine special education eligibility.

Summary and Conclusion

RTI is a step in the right direction for the education of all students. RTI appears to decrease and perhaps even prevent the large numbers of students being labeled with learning disabilities who only needed more direct, explicit instruction and time to succeed in the general education curriculum. RTI has great potential to reduce the number of students referred for
special education with early intervention and progress monitoring if the shortcomings can be corrected.

RTI is a more effective method for the early identification of students that are at-risk. The RTI method provides interventions for the students identified at-risk prior to a special education referral and involves families in the tiered process, if desired. The early identification and intervention for students considered at-risk are long awaited concepts in the field of education that can become reality with the RTI method.
References


