TEACHERS MAKING SENSE OF DATA WITHIN A RESPONSE TO INTERVENTION MODEL: A CASE STUDY

By

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To my husband Denny
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This qualitative research study addressed teacher use of assessment data within a school that has adopted an RtI problem-solving model. More specifically, this study focused on teacher use of student assessment data and the impact of data on teacher understanding and decision making with regard to reading instruction, intervention, and the RtI problem-solving approach. Additionally, the role school psychologists and other support personnel have in the process of data collection, analysis, and service delivery was explored.

Qualitative methodology was used to gain a deeper understanding of the factors that foster a viable service model, effective teamwork and curriculum, data collection and decision-making, as well as successful teacher learning and student outcomes. The multiple sources of evidence gathered over a 5 month period included interviews, observations, document review, and personal experience. Data analysis included coding, finding patterns, labeling themes, and developing category systems.

Data analysis produced three overarching themes that contributed to understanding factors that impact how teachers make sense of and use student assessment data, and how a school psychologist can facilitate this process. The three identified themes were: (1) making sense of the data through interpersonal interaction; (2) challenging personal assumptions and thinking
about practice; and (3) promoting a dynamic and collaborative learning community. General ideas are discussed relating to the use and sustainability of evidence-based practices benefiting professionals involved in school improvement. In addition, suggestions for future research are provided.
CHAPTER 1
INTRODUCTION AND REVIEW OF RELATED LITERATURE

Response to Intervention (RtI) has become an important, well-known term in education. RtI can generally be described as practices focused on providing students with evidence-based, high-quality instruction and intervention based on academic and/or behavioral needs. Student progress is systematically assessed and frequently monitored in order to make informed educational decisions. It is important that student data is evaluated and utilized to make accurate decisions linked to effective instruction and intervention. In addition, the data may be used to identify students at risk for academic and/or behavioral problems, to determine those with more intensive needs through eligibility, to decide resource allocation, to develop effective instruction and intervention, as well as to evaluate programs (Burns et al., 2007; Linan-Thompson, Vaughn, & Cirino, 2006).

RtI has also been associated with multiple tiers of instruction, problem solving, and as an alternative to the IQ-achievement discrepancy model for identifying students with learning disabilities (LD). With subsequent moves through each tier in this process, students receive increasingly specific and intense services matched to address their individual needs. Response to instruction and intervention at each tier is monitored, and the data is a critical part of decision-making to determine the effectiveness of instruction and intervention implemented (Burns et al., 2007). Thus, students who meet grade level expectations are deemed to have responded to instruction/intervention, and can be expected to continue to make adequate progress with good instruction in the general education classroom. Those students who do not meet expected benchmarks despite receiving evidence-based, high-quality instruction and intervention may require more long-term, intensive services, and even special education services (Linan-Thompson, Vaughn, & Cirino, 2006).
It should be noted that numerous policy and federal law documents have made a point of including RtI. Analyses of these policies and laws indicate a united front as evidenced by unanimously recommending a change of current delivery systems to align with RtI practices. Thus, RtI is actually a general education approach that started with a number of initiatives concentrating on improving educational practices for students with learning disabilities (Burns et al., 2007). This constitutes a significant paradigm shift in thinking for all stakeholders. For example, the National Summit on Learning Disabilities commenced in August 2001 to consider alternatives in specific learning disabilities (SLD) identification (Bradley, Danielson, & Hallahan, 2002). The President’s Commission on Excellence in Special Education (PCESE) held in October 2001 determined it was time for a change and made recommendations on ways to improve the reauthorization of IDEA (U.S. Department of Education, Office of Special Education and Rehabilitation Services [OSERS], 2002; 2005). Recommendations included utilizing response to instruction, as well as continuous progress monitoring using scientifically validated practices to inform the decision-making process for SLD (Barnett, Daly, Jones, & Lentz, 2004; Gresham, 2001). Other major recommendations included focusing on results instead of the process (Danielson, Doolittle, & Bradley, 2005), implementing a model of prevention instead of one of failure, and understanding that students with learning disabilities were general education students first (Batsche et al., 2006; Burns et al., 2007).

The Response to Intervention (RtI) model is consistent not only with the previously mentioned initiatives, but with the Individuals with Disabilities Education Improvement Act (IDEA 2004) and the No Child Left Behind Act of 2001 (NCLB), as it builds upon concepts integral to the latest federal legislation (Barnett, Daly, Jones, & Lentz, 2004). According to Batsche et al. (2006), the intention of these laws is to “produce better outcomes for all children
and to apply procedures with strong scientific bases to a wide range of decisions, including
determination of eligibility for special education in the category of specific learning disabilities”
(p. 3). The purpose of this literature review is to explore the RtI approach as a viable alternative
for making special education decisions and providing educational accountability. Areas of
exploration include the RtI definition, principles and models, tiers of intervention, incorporating
an RtI approach to LD identification, and accompanying barriers and/or technical issues
associated with each area.

**Definition of Response to Intervention**

The Colorado RtI Task Force provides the following definition of RtI:

Response to Intervention is an approach that promotes a well-integrated system connecting
general, compensatory, gifted, and special education in providing high quality, standards-
based instruction/intervention that is matched to students’ academic, social-emotional, and
behavioral needs. A continuum of intervention tiers with increasing levels of intensity and
duration is central to RtI. Collaborative educational decisions are based on data derived
from frequent monitoring of student performance and rate of learning. Downloaded from

Even with the best instruction/intervention available, individual responses will vary, so these
responses must be assessed in RtI in order to make modifications and adjust goals. Learning rate
is an individual’s growth with regard to achievement and/or behavior over time when compared
to previous baseline performance levels or peer growth rates. An individual’s level of
performance is derived through criterion or norm referenced measures. Ultimately, educational
decisions about the need, duration and intensity of interventions are based on an individual’s
response to instruction and multiple tiers of intervention (Gresham, 2007).

**Core Principles of RtI**

To implement practice on a large-scale, there must be an understanding of core principles
for guidance. RtI practice is based on the belief that all children can learn. It is incumbent upon
professionals to identify and promote appropriate instruction, curriculum, and supportive
environmental conditions conducive to learning. In addition, we must intervene early utilizing a
multi-tier model of service delivery and problem-solving methodology. Practices used should be
research based, including validated instruction and interventions. On-going progress monitoring
of students is essential, as educational decisions will be based on the data. Finally, the three
types of assessment used in RtI include screening, diagnostic, and progress monitoring (Fuchs et
al., 1992; Waldron & Hayes, 2007). With core principles established, attention must be focused
on ways to deliver intervention services in an RtI model and these approaches are discussed in
the following sections.

Response to Intervention Models

Currently, RtI is defined based on the use of two models for the delivery of intervention
services. One is the problem-solving model and the other is the standard protocol model (Fuchs,
Mock, Morgan, & Young, 2003; Gresham, 2007). Evolving models combining the two
approaches are considered promising for school settings. This model combines portions of the
problem-solving approach and the standard protocol approach. One example includes designing
a set list of interventions from which a problem-solving team can deliberate and decide which
intervention to implement first (Barnett, Daly, Jones, & Lentz, 2004; Gresham, 2007;
VanDerHeyden, Witt, & Naquin, 2003). The section concludes with a look at barriers to
implementation affiliated with the two models.

Problem-solving Model

The problem-solving model is derived from the behavioral consultation model initially
described by Bergan (1977) and subsequently revised by Bergan and Kratochwill (1990). This
systematic process includes establishing relationships, problem identification, problem analysis,
plan implementation, and plan evaluation (Allen & Graden, 2002; Kratochwill, Elliott, & Callan-
Stoiber, 2002). The goal in this process is to accurately define the problem using specific, operational terms, utilizing data collection to focus on the variables and conditions that are hypothesized to influence the student’s difficulty, to develop an intervention plan and implement it with integrity, and to evaluate the effectiveness of the intervention (Bergan & Kratochwill, 1990). As can be expected, the model has strengths and weaknesses to consider.

The problem-solving model is collaborative and uses the knowledge and expertise of faculty and staff. It also uses data that is readily available and tends to foster buy-in from the teachers and other professionals involved, as they are all stakeholders in the process. Weaknesses may include ill-defined interventions that can hamper evaluations, a fluid process that can be subject to anecdotal rather than statistical analysis, and no clearly defined time periods set up with regard to intervention. In addition, intensive and ongoing training is required and collaborative relationships are key (McCook, Fuchs, Mock, Morgan, & Young, 2003).

The Heartland Area Education Agency (AEA) in Iowa has used the problem-solving model for over 10 years. In addition, the Minneapolis Public School’s problem-solving model (PSM) was initially implemented in 1994. Other sites involved in the problem-solving model include the states of Pennsylvania and Ohio (Fuchs, Mock, Morgan, & Young, 2003), the state of Florida (Batsche et al., 2006), and the University of Maryland (McCook, 2006).

**Standard Protocol Model**

The standard protocol model is derived from Deno’s databased program modification model (Deno, 1985; Deno & Mirkin, 1977). It was developed primarily to address academic skills problems using validated treatment protocols (Gresham, VanDerHeyden, & Witt, 2005), and precise, direct measurement through curriculum-based measures (CBMs). Deno and colleagues believed using CBM would enable them to measure behavior more frequently resulting in increased sensitivity to growth. Depending on the results, decisions could be made
with regard to modifying instruction and/or changing goals. This standard protocol model has formative evaluation rules already established to guide the process (Batsche et al., 2006). According to McCook (2006), this model also has strengths and weaknesses.

The standard protocol model specifies one intervention; so training is shorter, simpler, and more focused. Since the intervention has already been designated, there is no time spent in meetings discussing what intervention might be best. In addition, the evaluation is simpler and the results are more statistically clear; unimpeded by confounding variables such as the effectiveness of multiple interventions, training, and how long the intervention runs (Fuchs, Mock, Morgan, & Young, 2003; McCook, 2006). With regard to weaknesses, one intervention may not be beneficial for everyone, it tends to deter the buy-in factor due to the lack of problem solving required, it is labor intensive, and is often considered a one-dimensional approach (McCook, 2006).

Researchers who have conducted studies utilizing the standard protocol approach include Vellutino et al. (1996), Vaughn (2003), O’Connor (2003), and Torgesen et al. (1999). The results indicate positive outcomes with regard to reading instruction, and provide empirical evidence this approach can be utilized to remediate reading difficulties in most students. The quest for better educational outcomes for all children is critical in light of Torgesen’s (2000) discussion of “treatment resisters” and “curriculum casualties.” Torgesen examined five studies addressing specific methods to prevent reading difficulties, in light of the goal that every child should acquire adequate word reading skills during early elementary school. He estimates that even when applying our best current intervention methods broadly, 2% to 6% of children would still have inadequate reading skills in the first and second grades (Torgesen, 2000). The final
section under RtI models will focus on barriers with regard to the models, treatment integrity, teacher’s attitudes, and implementation on a large scale.

**Barriers**

According to Kovaleski (2007), both models have extensive empirical support, and emphasize utilizing evidence based instruction and progress monitoring, so there is no reason practitioners should have to choose between them. The author sees the two approaches as complementary with regard to designing a comprehensive spectrum of services across a multitiered system. Marston (2005) agrees and states that both approaches show promise when it comes to decreasing placement in special education as well as establishing achievement gains; however, there are still barriers associated with the models.

*Problem-solving model and limited research.* Although consultants using traditional behavioral problem solving are frequently successful in addressing a wide range of student problems with results such that teachers and consultants regard it as worthwhile, the consultation as well as the problem-solving model process is not always smooth. Barriers include limited research data supporting the problem-solving model, possibly due to the number of individualized interventions utilized in this approach, which impacts training, treatment integrity, and evaluation. (Fuchs, Mock, Morgan, & Young, 2003). Few dispute the popularity of problem-solving approaches; however, the implication is that researchers and practitioners have sporadically assessed this model’s approach to intervention (Gresham, VanDerHeyden, & Witt, 2005). According to Fuchs, Mock, Morgan, and Young (2005), “the few who have done so have generally failed to produce persuasive evidence that classroom-based interventions (1) are implemented with fidelity and (2) strengthen students’ academic achievement or improve classroom behavior” (p. 163).
**Treatment integrity.** Gresham, VanDerHeyden, and Witt (2005) note that if practitioners are to base decisions about students on a problem-solving approach, there is a need to be increasingly precise with regard to intervention implementation (see also Gresham, 2007). Treatment integrity is defined as the extent to which an intervention is implemented as it is intended or designed (Gresham, 2007, Noell et al., 2005, Noell, Gresham, & Gansle, 2002; Wilkinson, 2006). Thus, it follows that poor implementation may affect the success and effectiveness of intervention plans making treatment integrity a major factor (Noell et al., 2005; Truscott et al., 2003). According to Wilkinson (2006), “a lack of treatment integrity information compromises our knowledge of what interventions (or components) are responsible for problem resolution or improvement” (p. 428).

Noell et al. (2005) made use of performance feedback and business management literature (Alvero, Bucklin, & Austin, 2001; Balcazar, Hopkins, & Suarez, 1985, as cited in Noell et al., 2005) to investigate the feasibility of adult behavior change. Performance feedback has been proven to successfully increase performance in various organizational settings for more than 20 years (Alvero, Bucklin, & Austin, 2001). According to Noell et al. (2005), “these behaviors may be new to the individual, they are effortful, they may require resources the person lacks, and they exist in an environment in which multiple opportunities and demands compete for the adult who is asked to implement them” (p. 88). The researchers demonstrated that teachers could reliably and consistently implement academic and behavioral interventions resulting in positive outcomes with the use of performance feedback. This approach involved follow-up contact by a consultant to review treatment implementation and student progress. As stated earlier, the research base is substantial as it covers follow-up and support procedures ranging from a traditional management
procedure in the form of daily performance feedback (Witt, VanDerHeyden, & Gilbertson, 2004), to weekly performance feedback (Mortenson & Witt, 1998).

To summarize, Fuchs et al. (2003) state that there is a consistent finding that teachers who implement interventions without adequate follow-up and support characteristically results in poor implementation and outcomes. The research on performance feedback, as well as in applied behavior analysis, indicates that interventions can be implemented with fidelity if consultants provide support, follow-up and specific performance feedback. Further, if treatments are implemented with integrity, this will increase the likelihood of positive outcomes (Elliott, Witt, Kratochwill, & Stoiber, 2002).

At the same time, “a fundamental and unresolved issue is the extent to which typical practicing school psychologists can or will achieve similar levels of integrity with implementation and student outcomes using behavioral consultation methods” (Gresham, VanDerHeyden, & Witt, 2005, p. 19). RtI, utilizing a problem-solving model, will require increased responsibilities from professionals such as school psychologists to ensure increased precision with regard to intervention implementation. In addition, professionals will have to adjust from using the clearer and more established practice of interpreting fixed test results to a flexible, ongoing process of interpreting intervention data over time (Barnett, Daly, Hones, & Lentz, 2004).

**Teacher’s attitudes and research to practice gap.** According to Gresham (2007), the standard protocol approach may allow better quality control regarding instruction than the problem-solving model. The scripted protocols may also promote treatment integrity of instruction; however, it is not without its own inherent problems. This is aptly illustrated in research by Datnow and Castellano (2000) who examined how teachers responded to a whole-
school scripted reform model called *Success for All* (SFA). The literature on teachers and school reform indicate that teachers are considered to be the focal point of educational change and thus, must “own” the process of change. The researchers examined how teacher’s experiences, beliefs, and program adaptations impacted implementation of the program. Teachers fell into four categories ranging from being strongly supportive of SFA to resistant to the program. There was no direct correlation between support for the reform and teachers’ personal characteristics such as gender, ethnic background, or experience level. In addition, a teacher’s level of SFA support was not predictive of how precise their intervention implementation was. In fact, almost all teachers made adaptations to the program, despite the developers’ requirements of treatment integrity. Teachers continued to support SFA implementation because they believed it benefited students; however, they also felt SFA stifled their creativity and negatively impacted their autonomy (Datnow & Castellano, 2000). It should also be noted that Fuchs et al. (2003) point out that the standard protocol approach has been used almost exclusively by researchers rather than school practitioners. Thus, this research to practice gap constitutes a barrier to the wide scale implementation of the RtI model.

*Large-scale implementation.* Finally, “the greatest challenge in implementing RtI is that we have limited experience implementing it on a large scale, across all academic areas and age levels. Ideally, large-scale implementation of innovations would be preceded by large research and development efforts” (Danielson, Doolittle, & Bradley, 2005, p. 137; see also Denton, Vaughn, & Fletcher, 2003; Kratochwill et al., 2007). In the working world, however, policy frequently comes first and drives research and development efforts. According to Fuchs et al. (2003), neither of the models to date has proven themselves feasible for implementation on a
large scale. The next areas to be addressed in this literature review are the tiers of intervention, which follows.

**Tiers of Intervention**

As stated earlier, a key feature of the RtI approach is the implementation of effective instruction in the general education classroom and conducting ongoing progress monitoring to determine students’ responsiveness to interventions. One question that repeatedly comes up pertains to the number of tiers of intervention needed in an RtI model (Marston, 2003). There is no definitive answer; however, one frequently finds three tiers recommended in the literature (Marston, 2003; McCook, 2006; O’Connor, 2003; Tilly, 2003; Vaughn, 2003). Four tiers are also mentioned (Batsche et al., 2006; Torgesen, 2007); however, for the purpose of illustration, three tiers will be described.

Regardless of how many tiers are utilized, a multi-tier service delivery model promotes efficient resource allocation. This system puts increasingly intense levels of instruction in place that corresponds in direct proportion to students’ individual needs. Each tier contains support structures to help teachers deliver research-based instruction to improve student responsiveness and achievement and decrease at risk status (Batsche et al., 2006). Each tier is briefly described in the following sections.

**Tier I**

In Tier I, a core curriculum using evidence-based instruction is provided for all students in the general education classroom. Programs include a standardized scope and sequence that provide connection and common terminology on the same grade level, but also between grade levels. All students receive Tier I instruction for at least 90 minutes a day or more. Instruction is differentiated within the core curriculum in order to meet a spectrum of student needs (Grimes & Kurns, 2003; Vaughn, 2003). Schools utilize universal screening and monitoring (usually three
times a year) to determine each student’s proficiency. The data is structured such that one can see both individual and group performance with regard to specific skill areas. The analysis of this resulting data serves two purposes. One is to assess the functionality of the core curriculum. The other is to determine which students require additional intervention at Tier II (O’Connor, 2003). According to Vaughn (2003), Tier II instruction should be implemented with students as soon as possible after being identified as falling behind grade level expectations through benchmark testing/progress monitoring.

**Tier II**

In Tier II, students who are struggling receive additional targeted instruction in small groups. These interventions are in addition to the core curriculum and differentiated instruction resulting in 20 to 30 minutes of extra instruction per day. More frequent progress monitoring is implemented at this stage (Grimes & Kurns, 2003; Vaughn, 2003). As stated earlier in this review, those whose response moved them out of the at risk category would be given no additional supplemental instruction, while those who remained at risk would receive either another round of Tier II intervention, more intense supplemental instruction, and/or be considered for special education placement as they move into Tier III (Vaughn & Fuchs, 2003). In Vaughn’s (2003) research, the length of a round of Tier II intervention lasted 10 to 12 weeks or the equivalent of 50 sessions.

**Tier III**

Tier III provides intensive, strategic, additional individualized instruction targeting specific deficits to promote a student’s response to instruction and increase progress. An additional 30-minute session per day would be added to the 90-minute core curriculum and the 30-minute session provided in Tier II. Thus, there is increased instructional time for those students who have not been adequately responsive to previous interventions. A round of Tier III intervention
would last considerably longer than the 10 to 12 week Tier II round. The grouping focuses on homogenous small group instruction (1:3) and the intervention uses sustained intensive research based programs emphasizing the critical elements of reading (Vaughn, 2003). Again, there is also frequent progress monitoring (Grimes & Kurns, 2003). Another area that warrants attention is the RtI model of LD and identification, which is the focus of the next section.

**Incorporating an RtI Approach to LD Identification**

As stated earlier, decisions regarding special education eligibility based on the traditional IQ-achievement discrepancy approach have been the source of extensive and ongoing controversy (Reschly & Ysseldyke, 2002). While the IQ-achievement discrepancy approach continues to have its’ supporters, most academic and professional organizations acknowledge its’ inherent measurement and conceptual problems. The biggest criticism is the inability to differentiate between poor readers with discrepancies and those without (Lyon et al., 2001; Stuebing et al., 2002). Further, those low achievers with and without discrepancies do not show a difference in their response to instruction, and the discrepancy approach fails to inform instructional decisions (Vaughn & Fuchs, 2003). It should be noted, “The reauthorized version of IDEA does not require nor does it eliminate IQ-achievement discrepancy as a basis for identifying children with LD. Moreover, it allows, but does not require, school districts to use a response to intervention approach to identify LD” (Gresham, VanDerHeyden, & Witt, 2005, p. 13). Having made that statement, the advantages and possible pitfalls of the RtI approach are examined in the following paragraphs.

**Advantages of RtI**

The literature identifies several advantages of implementing an RtI approach with regard to LD identification. These advantages include the following: (1) early identification and instruction, (2) conceptually identifying students with learning problems utilizing a risk model
rather than deficit model, (3) reducing identification bias, and (4) focusing on student outcomes by linking identification assessment with instruction (Vaughn & Fuchs, 2003). A brief discussion of each advantage follows.

**Early identification.** RtI creates opportunity to provide help to children who need it immediately. Traditional practices in LD identification have been termed a “wait to fail” model as students have fallen further behind before any intervention, referral, or evaluation is provided (Gresham, 2007; Reschly, 2003). The chance of being identified as LD increases significantly between 1st and 4th grades. The rate of identification doubles between 1st and 2nd grades, and then doubles again between 2nd and 3rd grades. Between 3rd and 4th grades, identification goes up by a factor of 1.5 (U.S. Department of Education, 2002).

Utilizing a discrepancy approach has frequently resulted in delaying delivery of potentially effective and early interventions that could remediate learning problems. In addition, teacher referral and reliance on the traditional discrepancy approach has often resulted in high rates of false negatives (not identifying students who are LD) and high rates of false positives (incorrectly identifying students as LD). Ideally, RtI can provide more effective practices and better outcomes by closing the identification to intervention gap (Vaughn & Fuchs, 2003). Early screening for literacy problems make effective early interventions available to students in a preventive effort to remediate their difficulties (Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998; O’Connor, 2000).

**Identification using risk instead of deficit models.** RtI utilizes a risk model, which emphasizes early identification and intervention for children with learning difficulties. Ideally, all children from kindergarten up to 2nd or 3rd grade would be screened early for potential problems – both academic and behavioral. Evidence based supplemental instruction and/or
behavioral intervention would be provided immediately for students identified at risk to reduce or remediate their difficulties (Gresham, 2007; Gresham, VanDerHeyden, & Witt, 2005; Vaughn & Fuchs, 2003). Monitoring and documentation would establish response to the evidence-based instruction/intervention. Those whose response moved them out of the at risk category would be given no additional supplemental instruction, while those who remained at risk would receive more intense supplemental instruction or be considered for special education placement (Vaughn & Fuchs, 2003).

A critical concept in any RtI model is matching intervention intensity (e.g., time, effort, resources toward intervention support) to response resistance and the severity of a child’s difficulties (Barnett, Daly, Jones, & Lentz, 2004). The interventions that typify this approach differ in terms of intensity, comprehensiveness, and take into consideration the aforementioned resistance to intervention (Gresham, VanDerHeyden, & Witt, 2005). If implemented well, an RtI model can better integrate general and special education services, and focus more educators directly on student outcomes (Vaughn & Fuchs, 2003).

Reducing identification biases. Referral by a student’s teacher is a necessary, but insufficient requirement in the process of being considered for special education services. Teachers often rely on local norms, and at times, even classroom norms, to decide whether a child’s academic performance puts them at risk (Gerber, 2005; Gresham, VanDerHeyden, & Witt, 2005; Vaughn & Fuchs, 2003). The concept guiding teacher referral is that of relativity. Bocian, Beebe, MacMillan, and Gresham (1999) ask, “What is the likelihood that this teacher will be able to close the gap in achievement relative to the child’s peers in both the classroom and grade level, given class size, past responsiveness of the child, and the resources available in
the class?” (p. 2). If the teacher concludes that this gap cannot be addressed without help, this makes the decision to refer more likely (Gerber, 2005).

In addition to academic difficulties, a teacher may also be influenced by factors such as socioeconomic status, minority group membership, and gender (Reschly, 2003). The RtI model with a systematic approach to early school-level screening has the potential to reduce the bias found in the present referral and identification process. Thus, it also has the potential to reduce the overrepresentation of minority groups receiving special education services. The goal is to provide the students most at need with what they need (Vaughn & Fuchs, 2003).

**Focusing on student outcomes.** Currently, schools use a considerable amount of resources to evaluate and identify students for special education services. Unfortunately, there is not a lot of connection between information derived from traditional eligibility assessment and a plan for effective instruction. Clearly, the discrepancy approach has not lead to effective interventions, differentiated instruction, successful remediation, nor has it provided service for children in need who have not met criteria (Dombrowski, Kamphaus, & Reynolds, 2004). The advantage of using an RtI model to identify students with learning disabilities is maintaining student learning as the focal point and the degree to which educational goals are met. Emphasizing ongoing educationally relevant assessment promises continuing student progress monitoring, as well as the development and testing of procedures for adapting instruction (Vaughn & Fuchs, 2003).

Additional knowledge with regard to how effective a variety of adaptations and accommodations are, and how they are connected to positive outcomes for students with LD is required. At the same time, areas in the learning disabilities field have solidified and there is a substantial knowledge base from which to work (Hallahan & Mercer, 2001). In the past 2
decades, special education research has made significant strides in identifying effective instructional practices and services for students with learning disabilities (Boardman, Argüelles, Vaughn, Hughes, & Klingner, 2005; Lyon et al., 2001). Examples of areas that special education research has increased knowledge and understanding include important features of effective teaching (e.g., amount of time; group size), characteristics of research based instructional materials, and how much/what kinds of instructional practice and feedback is necessary for the best student outcomes (Vaughn, Gersten, & Chard, 2000).

Layering educational support based on what students need (O’Connor, 2000) is one way to determine effective reading instruction and decrease reading failure and thus the number of students referred and identified for special education services. As mentioned earlier, studies by Vellutino et al. (1996), Torgesen (2000) and Torgesen et al. (1999) have endeavored to identify “nonresponders” and “treatment resisters,” and to remediate those struggling with reading. Also stated earlier, even when applying our best current intervention methods broadly, it is expected that 2% to 6% of children would still have inadequate reading skills in the first and second grades (Torgesen, 2000).

Thus, goals for utilizing an RtI approach to LD identification would involve the following components: procedures for ongoing progress monitoring, knowledge of effective research-based instruction and what kinds of outcomes could be expected from their use, a general education system committed to successful core academic instruction and behavioral interventions, resources and knowledge to implement supplemental programs, and a system for screening and tracking the progress of students on a large scale (Vaughn & Fuchs, 2003). The final section of incorporating an RtI approach to LD identification looks at barriers to implementation.
**Barriers**

Despite the promise and potential of the RtI model for LD identification, critical conceptual issues and methodological approaches to RtI must still be specified, studied and resolved. Barriers to implementation include validated intervention models and measures, whether RtI has a legitimate basis for determining LD, what constitutes comprehensive assessment under RtI, the issue of adequately trained personnel to implement RtI, and when due process should be initiated.

**Validated intervention models and measures.** Validated prevention approaches or adaptations are needed to implement RtI. Measures are also required to catalog responsiveness to instruction over time. These tools are available in the area of reading; however, validated treatment protocols are needed in areas such as mathematical reasoning and calculation, spelling, and written expression (Gresham, VanDerHeyden, & Witt, 2005; Mastioperi, 2003; Vaughn & Fuchs, 2003). Furthermore, with regard to age levels, there is more information in kindergarten through 3rd grade than there is for 4th grade and above. According to Vaughn and Fuchs (2003), an RtI model “at the later grades not only depends on the development and testing of procedures for implementation, it also requires conceptual analysis to determine its tenability later in the course of academic development” (p. 142). The same quality of research sponsored by the National Institute of Child Health and Human Development (NICHD) in the area of reading needs to be applied in other academic areas (Gresham, VanDerHeyden, & Witt, 2005).

**Whether RtI has a legitimate basis for determining LD.** In addition to the need for quality outcome research in other academic areas, whether RtI provides a legitimate basis for determining the presence of a learning disability remains a valid question (Gresham, VanDerHeyden, & Witt, 2005; Mastioperi, 2003; Mastioperi & Scruggs, 2005; Vaughn & Fuchs, 2003). Does a student who responds adequately to instruction indicate that he or she was not
learning disabled? Was this same student’s learning difficulties caused solely by inadequate instruction? Does a student who does not respond adequately to instruction mean that he or she has a “true” learning disability (Gresham, VanDerHeyden, & Witt, 2005; Speece, Case, & Molloy, 2003)? Perhaps these questions are more pertinent to researchers than to teachers or parents. An argument could be made that in the medical field, a diagnosis of cancer is not confirmed by a patient’s response to chemotherapy. In other words, the diagnosis is made independent of treatment. The education field does not have that luxury, as the primary goal of assessment is to connect identification assessment with instructional planning and progress monitoring (Vaughn & Fuchs, 2003). The field of learning disabilities has always been confronted with overwhelming measurement and conceptual difficulties in evaluating processing and other cognitive abilities in order to connect them meaningfully to instruction and intervention (Reschly & Ysseldyke, 2002). From an RtI point of view, one could argue that if a student’s learning difficulties are remediated, then continuing the debate over whether the student originally had a learning disability or not may not be productive (Gresham, VanDerHeyden, & Witt, 2005).

**What constitutes comprehensive assessment under RtI.** Comprehensive assessment in an RtI approach to LD is a vast topic for educators and researchers to consider. Supporters of RtI make a case that comprehensive assessment is connected to student outcomes and the goal is to gather important functional data (Witt, VanDerHeyden, & Gilbertson, 2004). As referred to above, the primary goal of assessment is to connect the data from this assessment to instruction and intervention. There is direct measurement of the instructional environment, achievement, and behavior as the main focus of comprehensive assessment under RtI. RtI emphasizes aspects of the instructional environment that can be measured and changed, and are connected to student
outcomes in academic and behavioral domains (Gresham, VanDerHeyden, & Witt, 2005). With regard to the discrepancy model, a considerable amount of resources are utilized to test and identify students for LD. The emphasis is on identification with little connection between information derived from assessment and designing effective instruction/intervention (Vaughn & Fuchs, 2003).

With comprehensive assessment, it is important to concentrate on teachable skills connected to the curriculum that helps decision makers and stakeholders with what to implement and how to do it. The data collected in an RtI evaluation must use direct and representative measures that focus on referral concerns and provide answers to assessment questions. Decisions at every juncture in an RtI evaluation will be driven by student achievement and behavioral outcomes (Gresham, VanDerHeyden, & Witt, 2005; Vaughn & Fuchs, 2003). With all of these criteria, comprehensive assessment under RtI remains an unresolved issue.

**The issue of adequately trained personnel to implement RtI.** If RtI models are to be implemented on a large scale across the nation, than a substantial number of appropriately trained personnel will be needed. Stakeholders will require adequate knowledge and skills to participate in effective problem-solving models, implement validated interventions and measures, conduct ongoing progress monitoring, analyze and interpret the data, and make decisions about eligibility based on outcomes (Kratochwill et al., 2007; Vaughn & Fuchs, 2003. Furthermore, such an endeavor would require a “paradigm shift” in thinking about assessment and intervention for professionals such as school psychologists, administrators, teachers, and other relevant stakeholders (Peterson, Prasse, Shinn, & Swerdlik, 2007; Reschly & Ysseldyke, 2002).
When due process should be initiated. A final issue that is unclear and yet to be addressed is that of due process and how this would work within an RtI approach. There are many questions to be considered including whether due process should begin with problem-solving instruction in the general education classroom or in a more intensive supplemental intervention phase. Perhaps due process should be delayed until special education identification and placement is imminent (Gresham, VanDerHeyden, & Witt, 2005; Vaughn & Fuchs, 2003).

On one hand, implementing due process early on may give students protection against lingering in the system some where between general education and some level of intervention without parent involvement. Conversely, starting due process early can be expensive due to time, resources, and personnel requirements (Vaughn & Fuchs, 2003). Subjectivity may come into play as professional judgment may be called upon more often under an RtI model. “RtI calls for making a series of decisions pertaining to important issues such as whether an intervention is evidenced based, whether it is being implemented with integrity, whether it has continued long enough and ultimately whether it was effective” (Gresham, VanDerHeyden, & Witt, 2005. p. 29). Clearly, due process is an unresolved issue that warrants further discussion and investigation.

To this point, RtI has raised a surfeit of questions that professionals around the country are attempting to address. It is worthwhile to consider some of these questions in the final piece of this section, including the nature of the problem, future roles for school psychologists, linking assessment data to intervention, developing substantive professional interactions with colleagues, the problem statement, and key research questions.

The Nature of the Problem

A primary issue that schools face today is how to prevent reading difficulties. Despite substantial knowledge about reading and reading instruction, there is considerable concern that
schools have not been effective in teaching all students to read. For example, the National Center for Education Statistics (2001), found 37% of fourth grade students could not read well enough to meet grade level expectations. The National Research Council commissioned a report titled *Preventing Reading Difficulties in Young Children* prepared by Snow, Burns, and Griffin (1998). The report indicated concerns with regard to literacy stemming from ever increasing demands for higher levels of literacy. Young children who grow up to be adults with low levels of literacy are at a distinct disadvantage in today’s highly technological society that demands effective reading skills.

According to Torgesen (2002), changing the way schools teach students to read will warrant reallocation of resources to promote early identification along with preventive instruction. The costs of waiting until the middle of elementary school are too high. Children who fall severely behind with regard to critical early reading skills will miss out on opportunities to practice reading, and research suggests the loss makes it more difficult for students who remain poor readers through grades K – 2 to obtain average levels of reading fluency (Torgesen et al., 2001). In addition, longitudinal studies indicate that students who significantly struggle with reading at the end of first grade rarely achieve average reading skills at the end of elementary school (Francis, Shaywitz, Stuebing, Shaywitz, & Fletcher, 1996; Juel, 1988).

Torgesen (2002) states schools must change how they teach reading in three broad ways. The first requires high quality core reading instruction in early elementary school. Any elementary school producing high numbers of poor readers in 4th and 5th grade must look to the reading curriculum in their general education classrooms. In addition, explicit teaching to develop phonemic awareness and decoding skills, word recognition fluency and text processing, oral language vocabulary, spelling, reading comprehension strategies, and writing skills are all
identified as essential components of early reading instruction that should be delivered with consistency and skill (Snow, Burns, & Griffin, 1998). Second, schools need procedures in place to effectively identify students at risk for falling behind in reading. Finally, schools must provide the identified students with reading instruction that is more explicit, more intense, and more supportive than is found in the average classroom. Clearly, a large number of reading and early intervention research published between 1995 and 2005 greatly influenced RtI policy (Wanzek & Vaughn, 2007). In the end, stakeholders had to generate the will to change how schools taught reading, which leads directly to implementing an RtI approach in reading.

School personnel will play a number of significant roles when it comes to utilizing RtI to provide effective and needed reading instruction to all struggling students. These roles may require putting aside previously held assumptions and making important, fundamental changes to general and special education assessment and intervention. Collaboration and roles may vary depending on the setting, and the amount of experience and training of those involved. The implementation of an RtI model entails altering instruction for struggling students to improve student outcomes academically and behaviorally. Schools must utilize their collective resources in order to meet the needs of all students (Canter, 2006; Ehrhardt-Padgett, Hatsichristou, Kitson, & Meyers, 2004).

Sheridan and Gutkin (2000) have advocated for a paradigm shift in school psychology moving from service delivery systems founded on medical models to those based on ecological perspectives. Service delivery systems with an ecological focus promote the development of healthy environments where children spend much of their time (e.g., schools, home and family). In addition, work at the individual, group and systems level emphasizes problem solving and collaboration (see also Curtis, Grier, & Hunley, 2004). The implementation, design and
evaluation associated with RtI create opportunities for school psychologists who will still be fulfilling familiar, but somewhat expanded roles. For example, school psychologists have extensive training in academic and behavioral interventions, consultation, research, counseling and assessment. These skills will be useful as schools implement RtI procedures. In the following sections, new and expanded roles will be explored under areas of system design, team collaboration, and serving individual students (Canter, 2006).

**System Design**

According to Canter (2006), there are many roles school psychologists can fill under system design. Examples include the following:

- Working with administration to facilitate system change, identify key leaders and important stakeholders, and maximize “buy in.”
- Researching and analyzing relevant RtI and problem solving literature to identify effective approaches for schools, local districts, or states.
- Carrying out needs assessments to determine concerns, potential obstacles, and training needs.
- Help design evidence-based models appropriate to local needs/resources.
- Help in planning and carrying out faculty/staff training in preparation for implementation (e.g., evaluating student progress.)
- Contributing to the development of local norms with regard to academic achievement (e.g., on-going measure of student monitoring and curriculum-based measures) and monitor the reliability/validity of the norms.
- Carrying out and evaluating pilot projects.
- Consulting and facilitating ongoing communication with important stakeholders including administration, teachers and parents.
- Investigating and identifying systemic patterns of student need in order to follow up with effective, evidence-based interventions.

Curtis, Grier, and Hunley (2004) state the ability to create healthy, ecologically sound environments will ultimately depend on expertise in system-level change. At the same time,
understanding systems and system-level change has not been a service that has been emphasized by many school psychologists. According to Curtis and Stollar (2002), to effectively engage in system-level consultation, school psychologists need to understand and view human behavior through a social systems lens, utilize problem solving and collaborative planning procedures, and be familiar with principles associated with organizational change. This leads to the next section, which explores new and expanded roles under team collaboration.

**Team Collaboration**

No single person or group can adequately and effectively address the academic and health needs of all students. School psychologists must work in synergistic partnerships with school faculty and staff, families and communities in order to help implement important systems-level change (Ehrhardt-Padgett, Hatsichristou, Kitson, & Meyers, 2004). Synergy is defined as increased effectiveness or achievement produced by combined action or cooperation (Hall, 2001). Thus, collaboration is essential to meet the needs of each student and to achieve mutual goals. Everyone involved in this endeavor has an important role to play. According to Canter (2006), critical roles with regard to team collaboration and the implementation of RtI include the following:

- Providing ongoing consultation with regard to RtI implementation issues in addition to individual student needs.
- Working with school personnel to develop team procedures (e.g., referral procedures, measuring response to intervention, and monitoring/evaluating at each tier).
- Identifying team training needs, then helping to obtain or provide relevant training (e.g., joint examination of the data and training to link progress monitoring procedures to decision-making).
- Promoting home-school connections by helping parents understand how the new model impacts their child, and ensuring parental input with regard to each tier of intervention, and ongoing progress-monitoring and evaluation.
Functioning as liaisons to community agencies and providers to familiarize them with the new model through inservice training, thereby, with parental consent, ensuring appropriate community involvement and communication.

Overseeing ongoing progress monitoring and the subsequent integration of the data in team decision-making.

Clearly, with the scope of the issues children face today, better planning, greater collaboration, as well as program implementation across agencies and disciplines is required. As a result, school psychologists may assume leadership roles on school teams. Even if school psychologists are not given the responsibility of leading the initiatives, they must bring to the table information pertaining to issues including assessment, outcomes, mental health, and home-school, as well as school-agency collaboration (Canter, 2006; Crockett, 2004). Crockett (2004) states that in order for school psychologists to make an impact as change agents, they must make themselves available to their constituents instead of the other way around. Furthermore, in order for the field of school psychology to progress, collaboration with training institutions may be necessary to implement up to date training for veteran school psychologists. This is relevant as the next section addresses new and expanded roles with regard to serving individual students.

**Serving Individual Students**

As stated earlier, school psychology has focused largely on deficit-oriented models instead of primary prevention models. Rather than treating the problem, Meyers and Nastasi (1999) recommend implementing preventive services focused on empowering students by providing strategies that promote resiliency, self-efficacy, and social competence. When it comes to intervention, research has overlooked the fact that each student is unique as there is the presumption that interventions are equally effective across cultural groups. In addition, school psychology has historically targeted intervention with individual students, not taking into consideration environmental systems such as family, community, peers, and school that could
impact effective change (Sheridan & Gutkin, 2000). According to Canter (2006), the majority of school psychologists will continue to spend a substantial amount of time serving individual students. New and expanded roles within an RtI model may include the following:

- Providing consultation with parents and teachers with regard to early intervention activities at home and in the classroom – due to an RtI emphasis on Tier I interventions, school psychologists may find themselves spending more quality time and effort at this stage than they did previously.

- Training personnel and implementing ongoing progress monitoring strategies with regard to individual student intervention plans, as well as helping school personnel interpret the resulting data as an integral part of the ongoing decision-making process.

- Identifying the most effective procedures to address referral concerns as well as individualizing the assessment based on student need.

- Providing a comprehensive evaluation of a student’s academic, behavioral, and mental health history and functioning that may impact school performance.

- Collaborating with school personnel, service providers, and home to design effective intervention, set relevant and realistic goals, oversee ongoing progress monitoring measures, and evaluate student progress.

School psychologists who work within RtI frameworks have extensive and challenging opportunities available to them. According to Dawson et al. (2004) school psychologists should be cautious about lack of follow through and accountability, too much emphasis on a national agenda without addressing change at the state and local level, and failing to adjust the training of school psychologists to the new and expanded roles they will be expected to perform. In addition, school psychologists must guard against too broad a vision that may result in severing the link between identified goals and subsequent actions needed to achieve these goals. One cannot afford to forget that the point of RtI is to reallocate a school psychologists’ time in order to implement early intervention and prevention strategies to catch students before they fall (Canter, 2006).
Clearly, a substantial amount of research is needed to answer questions and further operationalize RtI implementation. One area of critical importance is applying assessment data toward intervention. Not only must service delivery become more effective with regard to areas of education and mental health, there is also a need to document what is being done is working. More important than accountability is the welfare of students’ school psychologists and school personnel purport to serve. Assessment is an important and functional tool utilized in establishing baselines and monitoring progress and performance. In addition, it can help determine both potential and existing needs in schools. According to Ehrhardt-Padgett, Hatsichristou, Kitson, and Meyers (2004), data derived from assessments allows the expansion of linkages between assessment and intervention, thus promoting the utilization of assessment methods that incorporate intervention. Meyers and Nastasi (1999) advocate effectively shaping interventions through evaluation of the process, as well as the outcomes of interventions. This would also entail evaluating data on both treatment acceptability and integrity. The final sections take the link between assessment and data and looks at how teachers and schools can utilize this process to improve student achievement, and to develop substantive professional interactions with colleagues.

**Linking Assessment to Intervention**

One important principle contributing to the process of change and how a new approach is eventually incorporated into daily practice entails linking research to improvements in student learning (Abbott, Walton, Tapia, & Greenwood, 1999; Fuchs & Fuchs, 2001). According to Abbott, Walton, Tapia, & Greenwood (1999), “helping teachers learn to use a problem-solving method of inquiry that links change in practice directly to change in student performance is fundamentally important” (p. 349). Teachers’ attitude toward innovative approaches before implementation and staff development are not accurate predictors of how successful the
implementation might be. Instead, teachers became more motivated about an innovation as they observed actual changes in student outcomes and academic performance (Gersten, Vaughn, Deshler, & Schiller, 1997).

A frequent mistake made by researchers and other change agents is their collection, organization and documentation of student outcome data without working with teachers to help them understand how to use this data to benefit students and their own teaching (Cochran-Smith & Lyle, 1999). If teachers are not taught how to use this data, they will continue to rely on observable student behavior instead of more effective assessment data. A good example of this is the fact that teachers rarely look at curriculum-based data unless it is made a focal point of discussions with consultants (Fuchs, Fuchs, Hamlett, Phillips, & Bentz, 1994).

According to Fuchs, Fuchs, Hamlett, and Stecker (1991), adapting instruction calls for teachers to make judgments about how successful previous lessons for individual students were, and based on those judgments, make adjustments to subsequent strategies and/or goals. The field of educational psychology maintains a long held assumption that successful educational outcomes and responsive instructional adaptation are linked. Thus, there is a need to determine 1) what conditions prompt teachers to make adjustments to their teaching to better address student difficulties, and 2) investigate how these adaptations are related to student outcomes.

One line of research has focused on investigating instructional adjustment in natural contexts by looking at ongoing assessment systems over a 15 to 20 week period conducted by teachers with normal caseloads. One example is a study by Fuchs, Deno, and Mirkin (1984), whose work indicated that using objective ongoing assessment data related to instruction, as well as systematic methods for utilizing this data to establish unsatisfactory student progress was beneficial in several ways. As a result, teachers were more accurate with regard to identifying
inadequate progress, followed up and made instructional adjustments more frequently, and their students had better outcomes and achievement. It should be noted that teachers were recipients of consultation to assist them in making pedagogically sound adjustments, so the impact of this contribution is unknown. In addition, the above-mentioned study investigated the amount of instructional adaptations rather than the nature of such adjustments.

A study by Fuchs, Fuchs, Hamlett, and Stecker (1991) sought to contribute to the knowledge base of teacher instructional adaptations by looking at the impact of ongoing assessment systems in conjunction with instructional consultation on the nature and amount of instructional adjustment as well as student achievement. The authors posed the following question: “What are the effects of an objective ongoing assessment system, with and without instructional consultation, on the amount and type of teachers’ instructional adjustment and on student achievement?” (p. 619). Thirty-three teachers participated in the study and were randomly placed in treatment groups for 20 weeks. The groups included a control group with no curriculum-based measurement (CBM) and no expert system instructional consultation (ExS); CBM with no ExS (CBM-NexS); and CBM with ExS (CBM-ExS). In comparison to the control group, both CBM groups made adaptations to students’ instructional programs more frequently; however, only the CBM-ExS group evidenced superior student achievement. Teachers in this group focused not only on the types of problems to teach students, but also what kinds of strategies to utilize for teaching. The CBM-NexS group focused only on the types of problems needed for reteaching.

Baker and Smith (2001) provide examples of elementary schools that used generated data on student learning to document improvements in student achievement and program effectiveness. The authors state the following:
Establishing an effective beginning reading program at the school level is a complex and difficult task. Determining essential program components for all students at each grade, determining what adjustments must be made for students with disabilities, and documenting that programs actually leads to satisfactory learning outcomes for students requires complex decisions on the part of teachers and administrators at each school. (p. 315)

According to Baker and Smith (2001), there are four critical reasons schools should collect data with regard to program effects on student learning. The first is implementation of a new approach (treatment integrity) will vary substantially among teachers. Time backed by data is needed to solidify and justify changes made to programs and practices before we can expect students to make satisfactory progress. Second, there is ample technology available to schools that can facilitate the collection of high quality data in grades K through 3. This makes data collection more efficient and a normal part of any school’s routine. Feasibility is an important characteristic if an innovative practice is to be sustained over time (Vaughn et al., 2000). Third, regular analysis of collected student data can prompt teachers, administrators and stakeholders to problem-solve the complex process of systematically improving classroom practices and intervention. Fourth, schools must strive to function effectively and efficiently in this era of accountability. Schools that collect and analyze their own data to document, evaluate, and shape their programs put their students in a better position to fare well on state mandated assessments. In addition, the schools that collect data before grade 3 are better positioned to determine which students are on track and which students may require more intense interventions (Good & Kaminski, 1996).

Baker and Smith (2001) provide a couple of examples of schools that utilized the data they collected to shape the application of evidence-based practices in the classroom. For example, School L utilized direct instruction and had implemented an intense reading intervention for first graders for three months. The first grade teachers strongly believed that students in this
intervention group were catching up to their peers by the middle of first grade. Upon examining the data, the teachers realized that the intervention was not as effective as they originally thought. This led to three major decisions: 1) the length of the intervention was increased from three months to a full year; 2) a literacy intervention program was set up in kindergarten (one extra hour a day); and 3) the school tracked the effect of first grade intervention on achievement in first and second grade. This leads to the next section, which looks at the impact of professional interactions and relationships on the implementation and sustainability of new approaches.

**Substantive Professional Interactions with Colleagues**

Another important principle contributing to the process of change and how a new approach is incorporated into daily practice looks to substantive professional interactions with colleagues and developing a collaborative community of learners to support the sustainability of new approaches (Boardman et al., 2005; Cochran-Smith & Lytle, 1999; Englert & Rozendal, 2004). Many factors influence the quality of teachers’ work, as well as their level of commitment. Examples include compensation, recognition, planning time, teacher input, the opportunity for professional development and engagement (Gersten, Vaughn, Deshler, & Schiller, 1997). These are just some of the factors that go in to creating a school’s culture, which in turn, can substantially influence what a teacher can do or chooses to do when it comes to adopting or implementing innovative practices in the classroom (Boardman et al., 2005).

Teaching and learning networks, teams, and partnerships flourish in school communities that view collaboration as the norm. Such communities understand the powerful potential of teamwork, and choose to harness this energy to accomplish goals (Englert & Rozendal, 2004). According to Walther-Thomas, Korinek, and McLaughlin (1999):
These schools believe that all individuals are valuable to the community. Formal and informal support structures are developed to ensure that all participants are successful. In addition, these schools provide opportunities for all members to contribute to the well-being of the community, because every person has skills, talents, knowledge, and experiences to offer that will make the school a better place. (p. 3)

Characteristics of collaborative communities include the delegation and distribution of professional responsibilities, established decision-making procedures, shared knowledge, experiences, and resources, and appropriate, well-developed, and well thought out accountability measures (Gersten, Chard, & Baker, 2000; Klingner, Arguelles, Hughes, & Vaughn, 2001). In addition, collaborative communities recognize the importance of dialogue to foster more effective problem solving and solution-finding through discussion with colleagues, consultants, and other professionals (Cochran-Smith & Lytle, 1999; Englert & Rozendal, 2004; Ross & Blanton, 2004). Collaborative schools tend to be less hierarchical and more democratic. Furthermore, Walther-Thomas et al. (1999) state, “Collaborative communities often reflect openness in discussions, teaching that is personal but not private, clear respect for others’ opinions and beliefs, and a healthy sense of belonging to a group and working as a team” (p. 3).

An interesting line of research worth noting, and a good example of the principle referred to above, has to do with the connection between instructional policy and classroom practice, and how teachers adapt, interpret, and transform policies as they are implemented. In a qualitative case study of an elementary school, Coburn (2001) investigated how teachers constructed and reconstructed a multitude of policy messages with regard to reading instruction in the context of their school and professional communities. Putting forth a model of collective sensemaking, Coburn focused on how teachers collectively co-constructed meaning and understanding of policy messages. Based on this understanding, teachers decided which messages to follow up on in their classrooms, and navigated the technical and conceptual aspects of implementation through conversations with their colleagues. In addition, the study advocates considering both
formal network structures as well as informal alliances among teachers when it comes to shaping
the relationship between instructional policy and classroom practice. Finally, Coburn looked at
the role school leaders played in helping to shape this process.

Coburn (2001) found that teacher communities are multifaceted, complex, and dynamic as
teachers in a variety of formal and informal communities often make different sense of the same
thing. As a result, policymakers could be concerned that teachers did not always make sense of
messages sent the way they might have hoped. On the other hand, this kind of sensemaking may
be an inevitable process as policy messages are often abstract (e.g., materials, ideas, and
description of practices) and teachers’ work entails action. Conversations with colleagues may
have facilitated the process through practical knowledge as it helped them convert abstract ideas
into something that worked in the classroom. In addition, “sensemaking in communities has the
potential to provide conditions for teachers to engage with messages from the environment in
ways that encourage them to question their assumptions, challenge their frames, and continue to
improve their practice over time” (Coburn, 2001, p. 163).

Considering the possibility that a reconstruction process may be necessary in order to
move ideas into practice, what kind of conditions might facilitate the kind of collective
sensemaking that would promote learning and growth? According to Coburn (2001), first,
policymakers should encourage a collaborative school culture by supporting both formal and
informal networks. This endeavor may require funding to support high-quality, sustained
professional development. In addition, school leaders play key roles in establishing an
environment of openness and communication to promote teaching and learning, as well as a
school culture that strives for mutual support with regard to matters of instruction (Louis, Marks,
& Kruse, 1996). Second, conditions in formal settings should promote collaboration, and
productive work and conversations, enabling teachers to question preexisting ways of doing things and to engage deeply with ideas. Third, leaders should arrange collaboration around activities that are authentic and have clear, understandable connections to the classroom. Finally, teachers require adequate access to ideas, research, and knowledge resources to help them understand new materials or approaches in sufficient depth enabling them to make principled professional judgments and decisions in order to bring them into their classrooms.

According to Dawson et al. (2004), results from the 2002 multisite conference on the future of school psychology recognized the need for action research and qualitative inquiry. The authors report that the focus on “evidence-based” indicates that traditional research methods are somewhat limited “in terms of what they tell us about effective interventions. To increase and enhance our repertoire of tools, school psychologists need a broader understanding of what action research and qualitative inquiry have to offer, as well as the skills to perform this kind of research” (p. 117).

There is also much to be learned from “working intensively in a few specific school sites, using that experience to help determine which factors are necessary to support sustained use, and to better understand the realities of serious implementation” (Greenwood, Delquard & Hall, 1989). The complexities present in a school setting or classroom must be intentionally accounted for when designing a research scheme if researchers want to assess the power of interventions in place. Studies that consider this larger context will require an alternating view between the micro and macro perspectives (Gersten et al., 1997). This entails systems thinking (Senge, 1990), which provides a framework for focusing on patterns of change “by viewing behavior from a systems perspective, using collaborative planning and problem solving
procedures, and pursuing strategies that are based in principles for organizational change” (Curtis & Stollar, 2002).

Furthermore, there are some foundational principles that have been found to contribute to knowledge of teaching practices, collaboration, and creating learning communities. These principles include: 1) knowledge of teaching practice is developed within communities; 2) all community members are co-inquirers as each has important expertise to contribute to the process; 3) community members collaboratively inquire about both craft knowledge and formal propositional knowledge to develop knowledge of teaching practice; 4) teacher education results from a progression of critical inquiry; and 5) teacher education strategies used provide opportunity for members to work collaboratively, share different perspectives, and examine knowledge (Cochran-Smith & Lytle, 1999; Ross & Blanton, 2004). The final section will address the problem statement and research questions.

Problem Statement

Numerous policy and federal documents (e.g., NCLB and IDEA 2004) have emphasized the inclusion of RtI. Analyses of these policies and laws indicate a united front as evidenced by unanimously recommending a change of current delivery systems to align with RtI practices. Thus, RtI is actually a general education approach that started with a number of initiatives concentrating on improving educational practices for students with learning disabilities (Burns, et al., 2007).

The revision of federal legislation came about in response to preventing reading difficulties, which is the primary issue schools face today. Despite substantial knowledge about reading and reading instruction, there is considerable concern that schools have not been effective in teaching all students to read. Schools must change how they teach reading in three broad ways. First, schools must provide high quality core reading instruction. Second, explicit
teaching in essential reading elements is required. Third, reading intervention must be more explicit, more intense, and more supportive than is found in the average classroom (Torgesen, 2002; Snow, Burns, & Griffin, 1998). The ways schools must change to more effectively teach reading is consistent with an RtI approach.

Although there is considerable knowledge available with regard to RtI components including a system of tiered intervention with increasing levels of intensity, and the use of both problem solving models and standard protocol models for delivery of intervention services (Gresham, 2007; Kovaleski, 2007), very little is known about implementing RtI on a large scale. According to Jimerson, Burns, and VanDerHeyden (2007), “educational practices are already being modified; however, there is a paucity of resources that synthesize essential knowledge regarding the conceptual and empirical underpinnings of RtI and actual implementation” (p. 7). RtI models show considerable promise for screening, effective core reading instruction, intervention, service delivery, and as catalysts for system change. Few studies exist that explore the factors promoting sustained use and strong implementation of an RtI approach. In addition, there are few studies of teachers within an RtI model with regard to data based decision-making, fidelity of implementation, instruction, and intervention, and the link between assessment and instruction/intervention.

This qualitative research study will provide an in-depth look at an RtI problem-solving model developed at a single elementary school. More specifically, this study will focus on data collection, the impact this data has on teacher understanding and decision making with regard to instruction, and the role school psychologists have in this process. The primary research questions that will guide the design and data collection procedures for this study include:

1. How do teachers understand and use the data within an RtI model?
   • How do they understand and use curriculum-based and progress monitoring data?
• What data do teachers value most in making instructional decisions about students?
• How do they use data to inform instruction and intervention?

2. What is the role of school psychologists and other support personnel in providing and analyzing data when working collaboratively with teachers within an RtI model?
CHAPTER 2
RESEARCH METHODS

This chapter outlines the research methodology and procedures that were used in this study and includes sections addressing: the nature of the research study, site description, participants, data collection and analysis, methodological issues, and researcher qualifications and assumptions.

This qualitative research study addressed teacher use of assessment data within a school that has adopted an RtI problem-solving model. More specifically, this study focused on teacher use of student assessment data and the impact of data on teacher understanding and decision making with regard to instruction, intervention, and the RtI problem-solving approach. Additionally, the role school psychologists and other support personnel have in the process of data collection, analysis, and service delivery was explored. The primary research questions that guided this study were:

1. How do teachers understand and use the data within an RtI model?
   - How do they understand and use curriculum-based and progress monitoring data?
   - What data do teachers value most in making instructional decisions about students?
   - How do they use data to inform instruction and intervention?

2. What is the role of school psychologists and other support personnel in providing and analyzing data when working collaboratively with teachers within an RtI model?

The use of qualitative methodology (Patton, 2002) was appropriate for this study due to the focus on describing teacher use of data within an RtI model. There is a need to gain a deeper understanding of the factors that foster a viable service model with regard to data collection and decision-making, as well as successful teacher learning. This study exhibited the five features of qualitative research defined by Bogdan and Biklen (2006): (1) naturalistic; (2) descriptive data; (3) concern with process; (4) inductive; and (5) meaning. According to Bogdan and Biklen
(2006), the researcher is the primary instrument in gathering data from real-world settings, and the collected data is rendered in words or pictures rather than numbers. In addition, qualitative researchers emphasize process rather than just outcomes or products, the theory is grounded in the data, and there is concern with participant perspectives. This study was best conducted within a qualitative paradigm because it exemplifies the following: clarifying and understanding phenomena and situations; understanding how participants perceive their roles or responsibilities in an organization; determining the history of a situation; finding original and innovative approaches to commonly known problems; and generating knowledge in an attempt to determine general principles of effective practice (Merriam, 1998; Patton, 2002).

A case study design was used to consider factors that contribute to teacher’s understanding and use of the data, and how a school psychologist can facilitate the data process within a school implementing an RtI approach. According to Yin (1998, 2003; see also Stake, 1995), a case study design is most relevant when a researcher wants to clarify how and why events occur. The current case study was chosen “because it is itself intrinsically interesting, and one would study it to achieve as full an understanding of the phenomenon as possible” (Merriam, 1998, p. 28). Thus, a case study design is “chosen precisely because researchers are interested in insight, discovery, and interpretation rather than hypothesis testing” (Merriam, 1998, pp. 28-29). Information derived from this case study provides better understanding of how to support teachers, provide training and professional development, and the role that school psychologists and other support personnel can take to facilitate teacher learning as well as the ongoing development of the RtI model.

**Site Description**

The FAB Lab School (FAB) is a public school that serves approximately 1150 students in grades K to 12. This site was selected for the research study due to several reasons. FAB has
had a long standing commitment to collaborative culture and learning, the generation and sharing of new knowledge, maximizing resources, and members who constantly strived to take practice to the next level. Parents take pride in being very involved with the school, and all faculty members are highly qualified as over 82 percent have advanced degrees. These factors are important as FAB places an emphasis on research.

In order to fulfill this research mission, the school population approximates the demographic composition of Florida’s school age population. As a result, FAB is comprised of a diverse student population and provides a range of academic support services to students. Teachers and administrators are willing to engage in research to facilitate evidence-based practices and increase positive student outcomes. FAB has also accepted the responsibility of disseminating innovative solutions and successful instructional programs to other schools and districts. To accomplish the goals set out for the school, FAB works closely with a nearby university’s College of Education on a variety of projects geared towards enhancing student achievement and accomplishment. Instructional practice is investigated through faculty directed research, and formal studies assisted by university faculty, professors in residence, and graduate students. FAB has been the recipient of numerous grants including the Florida Reading Initiative (FRI) and the Eastern Regional Reading First Technical Assistance Center.

Therefore, it is not surprising that before implementing an RtI model, FAB already had many practices aligned with RtI (Waldron & Hayes, 2007). As an FRI professional development site for effective reading instruction, FAB believes their teachers should be trained in evidence based reading practices. Historically, there was a school-wide focus on reading for at least 7 years before RtI implementation. As a result, teachers at FAB were trained in the five essential elements of reading instruction; they utilized differentiated reading instruction; a 90-minute
block of reading instruction was provided, and there was an available basal reading program in grades K to 2. In addition, FAB was using and periodically analyzing screening and benchmark assessments; daily, evidence-based small group instruction was provided for students performing below expectations; and there were evidence-based materials readily available to support more intensive small group instruction and intervention.

In addition, FAB had an organized system of professional development and grade level teacher planning time as evidenced by grade level team meetings, Student Success Team meetings, Wednesday afternoon inservices and workshops, periodic “Wacky Wednesday” all day planning periods for grade level teams on a rotating basis, and special area classes scheduled for each grade level at a designated time. Thus, FAB was positioned to take the next step and implement an RtI model.

FAB first implemented an RtI model in the 2006-2007 academic school year in grades K to 2. This study was conducted in 2007-2008 during the second year of RtI implementation, which was extended to 3rd, 4th, and 5th grade. Thus, a paradigm shift was occurring with regard to understanding, utilizing, and making sense of the data collected. New and developing roles and activities were inevitable. School psychology was evolving as the team was involved in the vast majority of these activities including: developing and implementing procedures for RtI; revising the Student Success Team meetings and process; conducting progress monitoring assessments with students receiving intervention; and setting up an assessment data base for students receiving intervention. These new activities also necessitated the revision of Exceptional Student Services (ESE) and 504 eligibility referral and evaluation procedures. As a result of these new activities, the focus of student services personnel was on collecting and analyzing data
to make important decisions with regard to improving instruction and intervention outcomes for all students.

**Participants**

Participant selection was important for the researcher to gain insight and understanding, therefore, the three teachers on the first grade team at FAB were selected to participate in this study during the 2007-2008 academic school year. The first grade teachers were involved in delivering core instruction and Tier II intervention, and were engaged in data generation and progress monitoring, as well as participation in Student Success Team (SST) meetings where databased decisions were made about intervention. At the same time, there was considerable variability across the teachers with regard to age, years of teaching experience, years at FAB, experience with differentiation, grouping, adhering to a curriculum scope and sequence, and with data-based decision-making and tiered interventions. After careful consideration of the research questions for this study, it was determined that collecting data from this teaching team would render rich information about their understanding of the data, the impact it has on student decision making, the link between assessment and intervention, and the RtI model.

Although the teachers possess specialized expertise and knowledge, the implementation of RtI required teachers to enhance core instruction, establish consistency with scope and sequence, assume more responsibility for Tier II interventions through differentiating instruction, and document the delivery of instruction as well as intervention plans. Basic demographics for the teachers who participated in this study are provided in Table 2-1.

As stated earlier, the three teachers on the first grade team at FAB were recruited to participate in this study as a result of purposeful sampling. According to Merriam (1998), there are two basic types of sampling. The first is probability sampling that often entails simple random sampling. This approach allows the researcher to analyze the results of the study and
make generalizations between the sample and the population from which it was obtained. Generalization in a statistically affiliated sense is not an objective of qualitative research; so utilizing probability sampling is not appropriate (see also Stake, 1995).

The second option and the preferred method for qualitative researchers is nonprobability sampling. This approach addresses qualitative problems such as investigating what occurs, the implication of occurrences, and the relationships that link these occurrences. Purposeful sampling is the most common form of nonprobability sampling. It assumes the researcher wants to focus on understanding, discovering, and gaining insight into certain phenomena. With these goals in mind, the researcher must select a sample that one could learn the most from (Merriam, 1998; Patton, 2002). According to Patton, “The logic and power of purposeful sampling lies in selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of inquiry . . .” (p. 230).

The teachers within the first grade team constitute an example of intensity sampling, consistent with Patton’s (2002) recommendations for participant selection. An intensity sampling targets information-rich cases that clearly illustrate the phenomenon of interest to an intense, but not extreme degree. Choosing an intensity sampling warrants some prior knowledge and information, as well as a substantial degree of judgment. These particular teachers played an integral part in the first year implementation of the RtI model at FAB, and were now in the second year of an evolving process. The focus was on teacher understanding and use of the data within an RtI model, so a teacher team rather than individual teachers in isolation more richly informed the study. In addition, prior knowledge and information about these teachers indicated that this particular team evidenced an ability to think deeply about student assessment data.
With regard to limitations, the researcher must be specific in defining research study parameters as selecting the sample or unit of analysis depends on it, as does focus throughout the study. In general, selecting an appropriate unit of analysis should come about after the primary research questions are specified. If the questions do not lead to the favoring of one sample or unit of analysis over another, then the research questions may either be too vague or too numerous. As a result, the researcher may have difficulty conducting the case study (Yin, 2003).

**Data Collection Procedures**

Data collection was completed primarily through interviews, observations, and document review. Interview meetings were scheduled with each participant. All components of the research study were clearly described for the teachers (Appendix A, Letter of Informed Consent). The participants were also made aware of the data collection process and the purpose of the research study. The letter of informed consent, the interview protocols (Appendices B & C), as well as the demographic protocol (Appendix D) were given to teachers in advance of each interview.

**Interviews**

In this study, interviews with each participant were the primary means of data collection. An interview is a purposeful conversation, usually held between two people, and the interviewer guides the conversation in order to obtain information from the interviewee (Bogdan & Biklen, 2006). Interviews were utilized to collect descriptive data in the words of each teacher participant, which enabled the researcher to develop understanding and insights with regard to how participating respondents interpret some part of the world (Bogdan & Biklen, 2006; Schwandt, 1997). Interview protocols (see Appendices B & C) were employed to guide the content of each interview. Topics included in the interview protocol consisted of the kinds of data collected, what data teachers find useful, how different kinds of data are used, the link data
has to decision-making, instruction, and intervention, and how school psychologists and other support personnel facilitate the use of data.

This semi-structured interview approach had a standardized format detailing specific questions. At the same time, this approach allowed for exploration of topics, which offered flexibility in probing, and at times, made it possible to ask questions about new areas of inquiry that were not anticipated when the original interview protocol was developed (Patton, 2002). Probing facilitated understanding with regard to how the teachers were thinking about the data and what they understood about the data. Thus, information garnered through flexible semi-structured interviews presents a richer understanding of the link between data and intervention. Furthermore, adding focus group interviews allowed exploration of common themes and topics enabling the teachers to share their perspectives.

Each interview lasted from between 30 to 90 minutes (see Table 2-2 for a summary of data collection hours). The study included a series of interviews over a 4-month period in 2008, with the first and second interviews audiotaped to ensure that everything the interviewees said was preserved for analysis. In addition, listening to the initial interviews helped with evaluating and improving subsequent interviewing questions and probes. Notes were also taken during each interview. The written notes were helpful in pacing the interviews, recording a reaction to something one of the interviewees said, or underscored what was perceived to be important and should have been noted (Merriam, 1998).

As referred to earlier, the three first grade teachers served as an intensity sampling within a purposeful sampling framework. Lincoln and Guba (1985) state, “In purposeful sampling the size of the sample is determined by informational considerations. If the purpose is to maximize information, the sampling is terminated when no new information is forthcoming from new
sampled units, thus redundancy is the primary criterion” (p. 202). By focusing on all of the teachers on a grade level team rather than individual teachers in isolation, redundancy of ideas was reached after a series of interviews.

Limitations with regard to data derived from interviews included potentially distorted responses due to anxiety, anger, personal bias, politics, and/or the emotional state of the interviewee at a given time. Additional limitations include recall error, self-serving responses, and how the interviewee reacted to the interviewer. The purpose of implementing a series of interviews was to facilitate engagement and immersion in the process, establish collegial relationships, and generate meaningful data. In addition, there was a need to corroborate information or facts the researcher believed had already been established (Yin, 2003).

Observations

Observations were also an important source of data utilized in this qualitative research study. This kind of data collection is differentiated from interviews in two ways. First, observations take place in a natural setting rather than a designated location chosen for an interview. Second, “observational data represent a firsthand encounter with the phenomenon of interest rather than a secondhand account of the world obtained in an interview” (Merriam, 1998, p. 94). In reality, interviews and guided conversations are frequently interwoven with observation.

Observation is considered a valid research tool when it is deliberately planned, serves designated research purposes, the recordings of observations are systematic, and there are controls and checks with regard to reliability and validity (Merriam, 1998). The researcher strives to be a careful and systematic observer. This entails writing descriptively, being disciplined when recording field notes, carefully separating trivia from detail, and being rigorous and methodical with regard to validating observations.
There are several benefits to gathering information through observation. First, observations can be used to confirm information reported in interviews. Second, observers may notice things that participants regard as routine, things that could facilitate understanding of context. Third, observations (along with document review) are conducted to triangulate and substantiate findings. Finally, observations may provide insight to specific behaviors, incidents, or knowledge of the context that may be used as reference points for follow up interviews (Merriam, 1998; Patton, 2002). In this research study, opportunities for observations included RtI leadership team meetings, RtI workshops, and grade level team meetings as well as SST meetings, where teachers used and analyzed data, as well as problem-solved and made decisions about student needs and intervention. With regard to this research study, the researcher conducted observations in formal meetings and settings for a total of 15 hours. In addition, the researcher had 120 contacts with the first grade teachers in informal settings for a total of approximately 30 additional hours. This resulted in a grand total of 45 hours of observation in both formal and informal settings. Limitations with regard to observations include an observer who inadvertently affects the situation being observed, participants behaving atypically in response to knowing they are being observed, and the possibility of the observer distorting the data through selective perception (Patton, 2002).

Document Review

Merriam (1998) states using documentation as data is not very different from using interviews and/or observations. According to Yin (2003), one of the most important objectives with regard to using documents in a case study is to corroborate and enhance evidence gathered from other sources. Due to the overall value of on-going progress monitoring data collected at FAB, and the role data plays within an RtI model, these documents played an explicit role in this study’s data collection plan. Documents that were used in this case study included progress
monitoring data and summary sheets, test and CBM protocols, notes from SST and team meetings, and notes, impressions and observations from informal meetings recorded in an ongoing journal. There are several general advantages documentary materials possess as sources of evidence. The first is the stability of documents, as they can be viewed repeatedly. The second is the unobtrusive nature of documents, as they are not generated because of the case study. Third, documents are precise with regard to details, and fourth; they have a broad range of coverage with the capability of documenting a multitude of events and settings, as well as over long spans of time (Merriam, 1998; Yin, 2003).

Limitations with regard to documents include inaccurate and/or incomplete records, as well as files that are maintained inconsistently. Thus, files can vary in quality and detail. At the same time, analyzing documents provides the research with a behind-the-scenes view of a program that may not be observed directly or come to light through interviews (Patton, 2002).

According to Merriam (1998), when it comes to assessing the value of a data source, “a researcher can ask whether it contains information or insights relevant to the research question and whether it can be acquired in a reasonably practical yet systematic manner” (p. 124). With regard to the assessment data collected at FAB, the answer is affirmative for both questions above. The goal was to seek congruence between the documents used and the research problems in a continuing effort to develop understanding, uncover meaning, and discover insights pertinent to the research questions.

**Data Collection and Analysis**

Data collection and analysis occurred simultaneously as the study was completed from January to May in 2008. Prolonged engagement through a series of interviews with greater depth and narrower focus generated more in-depth understanding with regard to teacher use of student assessment data, and the impact of data on teacher understanding and decision making.
pertaining to instruction, intervention, and the RtI problem-solving approach. Initial data was
coded to identify emerging themes, and then highlighted to note areas requiring additional data
collection. This iterative process was complete when the data collected resulted in redundancy,
and is illustrated by the data collection schedule/sequence in Table 2.3.

According to Schwandt (1997), data analysis can be defined as, “working with data,
organizing them, breaking them into manageable units, synthesizing them, searching for patterns,
discovering what is important and what is to be learned, and deciding what you will tell others”
(p. 157). The first stage of data analysis was concerned with systematically organizing all of the
data, developing a notation system ensuring that data was properly labeled, making sure that the
interview transcriptions were completed, and getting a sense of the whole (Patton, 2002). In
order to break down the data into manageable units, Patton’s (2002) approach to data analysis
was utilized, which involves a process of coding, finding patterns, developing category systems,
and labeling themes.

In the initial stage of data analysis, the first and second interviews were transcribed
verbatim to ensure that the actual conversations between the interviewer and teacher participants
were accurately documented. This also provided an opportunity for the researcher to be
immersed in the data. After interview transcriptions were completed, each one was reviewed for
accuracy by listening to the tapes while reading the transcripts (Patton, 2002).

In the next stage of the data analysis process, each interview transcription was reviewed
and coded to facilitate the search for topics, themes and patterns. During the initial reading of
each transcript, potentially meaningful units of data were highlighted. According to Merriam
(1998), “Units of data – bits of information – are literally sorted into groupings that have
something in common” (p. 179). Ongoing records of formal and informal interviews and field
notes of observations with key ideas, reflections, and episodes of note captured were an integral part of this overall data analysis. These notes, combined with document analysis, were used to substantiate and enhance the interview transcripts by providing context and interpretive commentary (Stake, 1985). During the ensuing process, recurring regularities in the data emerged to reveal patterns that were sorted into categories. These patterns and categories were filled out by extending and building on information that was known, and bridging pieces of data by making connections between them (Guba, 1978).

Themes emerged naturally out of the sorted categories. At this point, descriptions of the themes and categories were written, as well as outlining membership and non-membership rules for each group (Lincoln and Guba, 1985). With these rules in mind, each transcript was analyzed and categories were grouped thematically using color-coded post-it notes. After these categories were grouped and coded, the transcripts were reviewed again to cut and paste all data unit examples and put them into one document. According to Patton (2002), the process is basically complete when resources of information have been expended, “when sets of categories have been saturated so that new sources lead to redundancy, when clear regularities have emerged that feel integrated, and when analysis begins to ‘overextend’ beyond the boundaries of the issues and concerns guiding the analysis” (p. 466).

**Methodological Issues**

To enhance the credibility of this qualitative study, rigorous and systematic methods of data analysis were employed. Case study is recognized as a triangulated research strategy based on the rationale of utilizing multiple sources of evidence (Tellis, 1997; Yin, 2003). According to Denzin (1984), there are four types of triangulation. Investigator triangulation occurs when more than one investigator examines the same phenomenon. Theory triangulation arises when investigators with different perspectives interpret the same results. Methodological triangulation
comes about by following up one approach with another to augment confidence in the interpretation. Finally, data source triangulation looks for the data to remain consistent and reliable in different contexts. Methodological and data source triangulation were applied to this case study to provide assurance that the information collected was credible and consistent. Interviews with each teacher, observations, document and data review, field notes and reflections, as well as this researcher’s experience working at FAB Laboratory School supported both methodological and data source triangulation (Denzin, 1984; Denzin & Lincoln, 2000; Patton, 2002).

The researcher’s experience at FAB Laboratory School contributed to the reliability of the data. The researcher worked for five years with the School Psychology Team, and thus had substantial working knowledge of the school. During the first four years, the researcher had a part-time graduate assistantship and provided school psychology services to the elementary school in grades K to 5. During the year of the study the researcher was completing a full-time doctoral internship, and worked with students in grades K to 12. During this time, the researcher not only became familiar with FAB’s philosophy and collaborative culture, but had also built working relationships with teachers, students, and parents. There was also an existing understanding of and previous involvement with the RtI model and implementation. As a result, the researcher had experience participating in workshops, RtI leadership meetings, Student Success Team (SST) meetings, and collecting benchmark assessments, as well as ongoing student progress monitoring data. The goal was to utilize multiple sources of evidence and collect data until all participants were heard and redundancy was reached within and across respondents. The researcher reached a point in data collection where nothing new was learned, and there was increased confidence the information collected was not attributed to chance.
To further augment credibility in this study, the researcher utilized member checks (Merriam, 1998; Patton, 2002) by submitting transcriptions and interpretations to the teachers from whom they were derived for feedback. Review by participants provided this researcher with valuable information about completeness, fairness, accuracy, “and perceived validity of data analysis by having the people described in that analysis react to what is described and concluded” (Patton, 2002, p. 560). Lincoln and Guba (1985) propose that the use of member checks is one of the most necessary forms of validation in qualitative studies. After submitting the transcriptions to the teachers, the researcher scheduled follow up meetings with each participant. The member checks provided the opportunity to confirm the accuracy of the information. The researcher was also able to share impressions of what had been heard and get feedback from participants with regard to observations, categories, and themes. The teachers agreed with the categories, themes and conclusions, and teacher C made minor changes with regard to some of the things she said in her interview to provide clarity. The on-going member checks of the information, categories, themes, and conclusions contributed to the trustworthiness of this study.

Additionally, the researcher was a member of a weekly dissertation support group, and met with two peer doctoral students consistently for approximately a year. This experience highlighted the importance of peer examination and debriefing techniques as a means of enhancing credibility. The researcher maintained contact with both members of this group throughout the study and data analysis. The members of the group read over the literature review, and provided feedback on research questions and the interview protocol. These peer debriefers also provided valuable feedback on multiple versions of the developing coding system and manuscript. The last six months of meeting were the most productive as all group members
had regularly set weekly goals, and took the opportunity to brainstorm, test hypotheses, and question assumptions about data. In this study, peer review provided an objective, independent assessment of the suitability of analytical concepts, the adequacy and appropriateness of interpretations, and sensitivity to the participants involved (Wolcott, 1990).

**Researcher Qualifications and Assumptions**

As a school psychology doctoral student and the primary instrument of data gathering, the researcher brought unique experiences, training, characteristics, and perspectives to the study. Important demographic information about the researcher is provided in Table 2-4.

As a teacher at a private school in Hawaii for students with learning disabilities for 6½ years, the researcher served students who represented a range of exceptionalities including gifted, ADHD, at-risk and/or learning disabled. Currently certified in Orton-Gillingham methodologies, the researcher also has working knowledge of a variety of instructional and intervention strategies including Kagan Cooperative Learning, Mortensen Math, Lindamood-Bell, On Cloud Nine, and Visualizing and Verbalizing. The researcher also served in various roles including project director of a grant, summer school science academy teacher, Orton-Gillingham training assistant, teacher representative, and member of an accreditation leadership committee. After teaching in Hawaii, the researcher went on to be a principal at a school in Singapore for 2 years where supervisory, training, and collaborative skills were further developed. Then, in the fall of 2001, the researcher started the School Psychology graduate program at the University of Florida, and accumulated practicum experience at 6 schools in 4 Florida counties. Additionally, the researcher served one year as a field supervisor to 16 graduate students completing a teaching pre-internship at 10 different schools.

I enjoyed working in such a wide variety of schools and had the opportunity to meet and learn from dedicated professionals. These experiences were critical as I was in the process of
redefining myself, and shifted from thinking about myself as a teacher to an aspiring school psychologist. As I started to make connections about best practices, I noticed many instances where there appeared to be a gap between what was defined as best practices in the literature and actual practice in schools. A primary example is the link between assessment and intervention. As discussed in the literature review, with regard to the discrepancy approach, there is often a limited connection between information derived from traditional eligibility assessment and plans for effective instruction and intervention. I have observed this situation repeatedly in practicum experiences and have come to realize that evaluating to place students and evaluating to provide effective intervention is not the same thing. The RtI model focuses on students’ learning and monitors whether students are responding to intervention and educational goals are met. Thus, emphasizing the link between assessment and intervention ensures continuing student progress monitoring, as well as ongoing development and procedural testing for adapting instruction (Vaughn & Fuchs, 2003).

I have worked for 5 years with the School Psychology Team at FAB Laboratory School and thus have substantial working knowledge of the school that served as the site for this study. During the last four years, I had a part-time graduate assistantship and provided school psychology services to the Elementary school in grades K to 5. During the year of the study, I completed a full-time doctoral internship in grades K to 12. My work at the school expanded my depth of knowledge and skill set with regard to RtI, collaboration, problem solving, systems and organizational change, curriculum, reading benchmarks, and educational goals. Examples of school psychological services provided at the school include the following: instructional consultation to teachers; general education intervention services; assessment of students for exceptional student education (ESE) eligibility; positive behavior support systems for disruptive
students; and progress monitoring of students with academic and behavioral difficulties. The school psychology team also collaborated with the school counseling program, and implemented counseling groups to address areas such as social skills, organizational and test-taking skills, anxiety and stress management, as well as bullying prevention.

Since FAB is in the second year of RtI implementation, the school psychology team has played an integral part in collecting benchmark assessment and progress monitoring data necessary for a problem solving model and a tiered system of intervention to be effective. Personally, I have enjoyed consulting and collaborating with teachers, and working as a team.

With regard to limitations, I tend to gravitate towards consensus building, and have a tendency to not highlight the negative. As a result, I may gloss over negative aspects and not give adequate voice to dissenting views.

Throughout this chapter, I have provided several reasons as to why this school was a good site for the study. Clearly, FAB utilizes and integrates many evidence-based practices to serve the needs of students with identified learning needs and disabilities. With RtI implementation, FAB has committed itself to the generation and sharing of new knowledge to improve prospects for children in school. It should also be noted that I earned my Master of Arts in Education in August 2006. My thesis was a qualitative study that explored the sustainability of evidence-based practices in a separate school for students with learning disabilities. As an aspiring school psychologist, I continue to prepare myself to provide supports such as facilitating the use of assessment data for students, teachers, parents, and other professionals.

I foresee growing momentum towards models that entail uniting educators, parents, policy members, and community members to work to meet the needs of all children. I am interested in analyzing how FAB links assessment to intervention, how the school implements these methods,
and what supports are in place that contribute to the school’s success in sustaining the focus on student’s outcomes. As most institutions in and around my county are not implementing an RtI model to date, I believe this research study can contribute to the RtI knowledge base as FAB establishes an RtI model for other schools.
### Table 2-1. Participant Demographics

<table>
<thead>
<tr>
<th>Name</th>
<th>Age range</th>
<th>Gender</th>
<th>Race/ethnicity</th>
<th>Degrees/certifications</th>
<th>Years at FAB</th>
<th>Years teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher A</td>
<td>46-50</td>
<td>Female</td>
<td>Caucasian</td>
<td>Bachelor’s degree, Master’s degree, &amp; certification in Elementary Education</td>
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<td>23</td>
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<tr>
<td>Teacher B</td>
<td>31-35</td>
<td>Female</td>
<td>Caucasian</td>
<td>Bachelor’s degree in Speech Pathology &amp; Audiology, Master’s in Special Education, &amp; certification in Special Education &amp; Elementary Education</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Teacher C</td>
<td>51-55</td>
<td>Female</td>
<td>Caucasian</td>
<td>Bachelor’s degree in Liberal Studies, &amp; certification in Elementary Education, Art, &amp; Early Childhood</td>
<td>11</td>
<td>&gt; 30 yrs.</td>
</tr>
</tbody>
</table>

### Table 2-2. Data Collection

<table>
<thead>
<tr>
<th>Data collection procedures</th>
<th>Hours of contact between January and May 2008</th>
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</thead>
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<tr>
<td>Interviews</td>
<td>7 hours</td>
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<tr>
<td>Formal meetings</td>
<td>15 hours</td>
</tr>
<tr>
<td>Informal meetings</td>
<td>30 total hours</td>
</tr>
<tr>
<td></td>
<td>Teacher A = 10 hours</td>
</tr>
<tr>
<td></td>
<td>Teacher B = 8.75 hours</td>
</tr>
<tr>
<td></td>
<td>Teacher C = 11.25 hours</td>
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Table 2-3. Schedule of Data Collection and Analysis

<table>
<thead>
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<th>Month</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2008</td>
<td>Initial teacher interviews conducted, attended mid-year SST meeting and RtI lead team meeting, took notes, and reviewed documents such as progress monitoring data and summary sheets, test and CBM protocols, notes from SST team meeting, and notes, impressions and observations from informal meetings recorded in an on-going research journal.</td>
</tr>
<tr>
<td>February 2008</td>
<td>Transcribed and analyzed initial teacher interviews, observation notes and documents, and continued informal meetings and research journal.</td>
</tr>
<tr>
<td>March 2008</td>
<td>Continued analysis of initial teacher interviews, observation notes and documents, attended the grade level team meeting on DIBELS data, took notes, reviewed documents, and continued informal meetings and research journal.</td>
</tr>
<tr>
<td>April 2008</td>
<td>Conducted second teacher interviews, transcribed and analyzed second interviews, and integrated information with initial interview data, observation notes and documents, attended the monthly SST meeting, and continued informal meetings and journal.</td>
</tr>
<tr>
<td>May 2008</td>
<td>Final focus group meeting to include member checking and share data analysis and findings. Finished transcribing and analyzing interviews, observation notes and documents, and concluded informal meetings and research journal.</td>
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Table 2-4. Researcher Demographics

<table>
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<tr>
<td>Age range</td>
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<td>Prior administrative experience</td>
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<td>experience at FAB</td>
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<tr>
<td>School psychology internship experience</td>
<td>1 year – grades K – 12</td>
</tr>
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<td>at FAB</td>
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CHAPTER 3
RESULTS

FAB is a public school that serves approximately 1200 students in grades K to 12. As stated in the previous chapter, FAB first implemented an RtI model in the 2006-2007 academic school year in grades K to 2. With continued guidance and expertise provided by the RtI leadership team, RtI was extended through the 3rd, 4th, and 5th grades in the school’s second year of implementation. Through a series of interviews, observations, and document review, this study was designed to investigate a set of research questions exploring teacher use of assessment data within a school that has adopted an RtI problem-solving model. The purpose of the study was to gain understanding of the impact of data on teacher understanding and decision making with regard to instruction, intervention, and the RtI problem-solving model. In addition, the inquiry included examining the role of the school psychologist, as well as other support personnel in the process of data collection, analysis, and service delivery.

Three teachers that comprise the first grade team at FAB were asked to participate in this study. In accordance with the goals of the research study, it was determined that collecting data from the first grade teaching team would render rich information about teacher understanding of the data, the impact it has on student decision making, the link between assessment and intervention, and the RtI model. Although the teachers have specialized expertise and knowledge, the implementation of RtI requires teachers to enhance core reading instruction, establish consistency with the scope and sequence of the curriculum, assume responsibility for delivery of Tier II reading intervention, and document delivery of instruction as well as intervention plans.

Data analysis resulted in three overarching themes that contributed to the understanding of factors that impact a teacher’s understanding and use of student assessment data, and how a
school psychologist can facilitate the data process within a school implementing an RtI approach. The three themes identified were: (1) making sense of the data through interpersonal interaction; (2) challenging personal assumptions and thinking about practice; and (3) promoting a dynamic and collaborative learning community. The following sections of this chapter provide a discussion of each of the themes.

**Making Sense of the Data through Interpersonal Interaction**

In this section, three subcategories of making sense of the data through interpersonal interaction will be described: a structure for collaboration and problem solving, talking to develop shared understanding of reading data, and joint examination of the data. At FAB, how teachers make sense of the data is shaped by opportunities for conversation and collaboration, the conversations they have with colleagues, as well as who they are working with. Having opportunities to talk about the data and their practice is crucial because without prospects for deep engagement, and the provision of time and structure to explore and construct understanding of messages about RtI, assessment, data, and practice, many or most of these messages may not find their way into the classroom at all (Coburn, 2001).

**A Structure for Collaboration and Problem Solving**

FAB utilizes a problem-solving model that is collaborative and uses the knowledge and expertise of their faculty and staff to develop and evaluate intervention plans that substantially improve outcomes for all students (Waldron & Hayes, 2007). Benchmark assessment of reading for all students was already in place, so the school was able to use and build upon data that was readily available to teachers. The hope was that this would foster buy-in from the teachers and other professionals involved, as they were all stakeholders and agents of change with regard to effective reading instruction and intervention. As stated in the literature review, intensive and
ongoing training is required, and collaborative relationships among school personnel are critical for successful school reform (Fuchs, Mock, Morgan, & Young, 2003).

Problem solving requires that schools actively foster a culture of collegiality and collaboration. According to part of the Colorado RtI definition, “collaborative educational decisions are based on data derived from frequent monitoring of student performance and rate of learning” (Colorado RtI Task Force, July, 2007). Essentially, good problem solving should be utilized instead of good “testing,” as it results in effective interventions and improved outcomes for children (Waldron & Hayes, 2007). According to Englert and Rozendal (2004), teaching and learning networks, teams, and partnerships flourish in school communities that view collaboration as the norm. FAB has focused on developing the powerful potential of teamwork starting with grade level teams in order to harness this energy to accomplish school goals.

In order to encourage a collaborative school culture, and to facilitate the kind of sensemaking that will promote learning and growth, FAB supports both formal and informal networks (Coburn, 2001). As a result, the Student Success Team (SST) meetings illustrate the heart of the problem-solving and collaboration theme, so the focus in this section will highlight this formal approach. At FAB, SST meetings were formerly known as Child Study Team (CST) meetings. In an RtI Leadership Team meeting held at the end of the 2006-2007 academic school year, participants determined “CST has a connotation of ‘Referral for Exceptional Student Services’ (ESE) and should be changed to Problem Solving Team (PST) meeting” (personal communication, May 23, 2007). Shortly thereafter, some RtI Leadership Team members reported having a problem with the word “problem” included in the PST meeting title as it continued to imply a focus on within child problems. Student success seemed more in line with the goals of RtI. The point of this seemingly minor name change is that this kind of framing,
reframing, and elaboration is prevalent at FAB, and illustrates the process that goes on in SST meetings as well.

Monthly SST meetings emphasize team collaboration as no single person or group can adequately and effectively address the academic and mental health needs of all students (Ehrhardt-Padgett, Hatsichristou, Kitson, & Meyers, 2004). Thus, collaboration is essential to meet the needs of each student and to achieve mutual goals. Everyone in this endeavor has an important role to play. Participants in SST meetings include the grade level teachers, reading support teachers, the Reading Coach, the guidance counselor, the Director of Special Services, the Assistant Principal, and School Psychology. According to L. Grant, the former Reading Coach and an RtI leader, “It’s important for all the contributors to have different roles and perspectives when coming to the table” (RtI Leadership Team Meeting, September 18, 2007). The fact that there are different roles at the meeting, all coming with a different purpose and lens, provides consistency in the meetings, which is not something that was done in the past (RtI Leadership Team Meeting, May 23, 2007). The first grade teachers agree with this view. When two first grade teachers were asked to speak at an RtI District Team Workshop, one of the facilitators, asked, “If this were a room full of teachers, what would you tell them about RtI and recent work?” Teacher B responded, “SST is the reason it [RtI] has been so successful, with other people’s input” (December 7, 2007).

Just as the name of the SST meeting has evolved, so has its’ nature, focus and structure. The meetings were previously held during a 40-minute period when special area classes occurred for each grade level team. RtI Leadership Team members reevaluated previous SST meetings and determined that conditions did not adequately promote collaboration, deep engagement, and productive work and conversations. A new schedule was subsequently drawn up that relied on
the use of floating substitute teachers hired three times a year to enable grade level teams to attend SST meetings for a two-hour period. These extended meetings coincided with elementary school-wide benchmark assessment and allowed participants to systematically consider data for all students at each grade level. SST meetings were held in between these times that retained the original 40-minute format focusing on additional individual student progress monitoring data and reviewing intervention effectiveness (Hayes, Ramirez, & Waldron, 2007).

After the first two-hour SST meetings were held in October 2007, feedback from participating teachers and staff was mixed. Some faculty reported that they thought the short meeting format was actually better than a longer meeting. From the RtI committee facilitator’s perspective, the extended meeting still felt rushed (RtI Leadership Team Meeting, January 10, 2008). In contrast, all of the first grade teachers expressed how happy they were with the extended time format and what a great process the SST meetings constituted. According to Teacher A:

Yes, and again I think we have gotten to do it one-step better this year because I think that we realized that we weren’t collaborating as much. Last year, when we had those CST meetings, it was like, “Okay, they’re going to start at this time and finish at this time, and oh, we better make sure we talk about each kid!” Then, we were running out of time for some of that collaboration. So again, here we are, and instead of just saying, “Well, that’s just the way it is,” and keep chugging on along, to be able to analyze the system, and this is how to apply what you’re doing school-wide, you know, the school as a whole. Is this really working? Let’s set aside a bigger amount of time even if it’s less frequent, so that we can do this better. So now, I do think we are collaborating.

Despite the mixed feedback overall, RtI Leadership Team members were in agreement that having meetings with all three teachers at each grade level team in attendance was beneficial and in line with the RtI model. In addition, through changes to science instruction this year, teachers now worked with all students in their assigned grade level, and thus were better able to add their own observations to conversations about particular students. Finally, having the three teachers at
the table was important to build cohesiveness in a grade level (RtI Leadership Team Meeting, January 10, 2008).

Each of the first grade teachers reported appreciation for the opportunity to collaborate, problem-solve, and be part of a team. Teacher A stated, “I think there’s so much strength in having other teachers there when you’re talking about your kids because it really makes you feel like you’re a team.” According to Teacher B, “It’s nice to have lots of sets of eyes looking at the same thing to determine if something really is troubling this child, or it’s just something else that’s going on. So I think there definitely is collaboration at the SST meetings.” Teacher C reported, “So it’s fun for me to be collaborating with others, and then to be able to look at it in a more concrete sense . . . there is a sense of being on a team. That is not how it was for a lot of my teaching career” (personal communications, January 13, 2008; January 18, 2008; January 10, 2008).

Not only do SST participants support and push each other’s thinking, data is the centerpiece of the meetings as the goal is to make decisions resulting in measurable improvement with regard to academic outcomes. Teacher A reported the following:

I definitely think that having a team helps make sense of the data. They can help me think of something that I can implement, or they can help me feel like, I don’t want to say relax, but just feel like companionship, you know, feel like I’m in the company of other people who are experiencing similar feelings. I think there’s comfort in that. And I think it helps you to reflect very honestly when you’re in that kind of company. (personal communication, January 13, 2008)

Some of the decisions made by the first grade team in SST meetings include: which students need to receive Tier II or Tier III services; moving students from Tier II to Tier III earlier this academic school year than they did last year; conducting benchmark assessment with all students at the first grade level four times a year instead of three; problem-solving core curriculum and intervention to address lower than expected scores in sights words and nonsense word fluency;
and deciding not to administer Fox in a Box (CTB/McGraw-Hill, 2005) benchmark assessment so early in the next (2008-09) academic school year. Clearly, one of the keys to effective collaboration and problem solving is talking to others to gain insight and understanding. This will be addressed in the following section.

**Talking to Develop Shared Understanding of Reading Data**

Implementing an RtI approach promoted new messages about core reading instruction, tiers of intervention, differentiation of instruction, problem-solving, data-based decisions, and linking data to practice. Processing these new messages involved more in-depth conversations between those with deep knowledge (e.g., reading coach, school psychologist) and teachers, as well as between teachers and other support members of the first grade team. In addition, this was a unique opportunity to promote and facilitate a collaborative culture in the school. Consistent promotion eventually leads to the establishment of a common language, and common experiences to help stimulate ongoing conversations. Conversations should cut across diverse settings and provide opportunities to learn from one another. The goal is to learn from each other and to push thinking instead of having stakeholders disengage and avoid conflict (Coburn, 2001).

As stated earlier, promoting opportunities for teachers to talk about the data and their practice is important, because without prospects for deep engagement, teachers may dismiss new messages rather than engage with and explore them (Coburn, 2001). As referred to earlier, two of the first grade teachers were asked to speak to participants attending an RtI District Team Workshop. Part of the presentation is as follows:

L. Grant: “How have conversations changed in team meetings?”

Teacher B: “Previously, the view has been this student is failing, help me, what can we do next? This approach results in a hand off. Now, the conversation is about needing
additional strategies to deal with students. Instead of handing off, teachers ask for help and support to deal with students.”

Teacher A: “I like that it is a team effort where teachers can think about similar students and issues, as well as share strategies and ideas.” (December 7, 2007)

At FAB, elementary grade level teams are comprised of three classrooms. According to a study conducted by Coburn (2001), “Whom teachers talked with in what setting mattered because teachers in different groups often made different sense of the same messages” (p. 156). With regard to the first grade team’s pattern of interaction, interviews and observations indicate a group with a common language and goals. At a grade level team meeting to go over Dynamic Indicators of Basic Early Literacy Skills (DIBELS) data results, Teacher B observed, “It’s nice to sit and hear the same language being spoken” (personal communication, March 5, 2008). At the same meeting, the reading coach told the teachers, “First grade is the model for RtI.” When the teachers were asked why they thought first grade was so successful in implementing RtI, Teacher B stated, “I think we had a lot of enthusiasm, at least in my case, to try it out. It just seemed simple to me to do the interventions, especially with my background in special education, and the other teachers were willing to try it out” (personal communication, May 1, 2008). Teacher C reported that RtI was a good match for her “natural intuitive style of teaching” in that the primary change she had to make was to be even more deliberate than ever in what she did. With regard to the members of her first grade team, she added the following:

I know Teacher B is very methodical at what she does, and she seems very organized and on top of things. Teacher A is just a very experienced reading teacher who really connects individually with her kids and wants success for all her kids, so she’s going to find a way to get it, and I think that’s part of what this model is all about, making sure they are all successful. (personal communication, April 24, 2008)

Teacher A talked about how seriously the teachers took their job and observed, “So I think that we’ve gotten pretty good at communicating with our parents, communicating as a team, and I
think it’s really great that we have an assistant in kindergarten and first grade, and so I think all of those pieces really help” (April 29, 2008).

In addition to the core first grade teaching team, there is an extensive support system consisting of extended team members. When queried about people they talk things over with, Teacher A summarized:

Certainly with my assistant, we talk about things that we see, we talk about things that the children can work on. I talk with my interns and pre-interns. I talk to them about things they can include in their groups, and I talk to them about the rationale behind why we do certain things. Then, with parents, I talk to parents about things I’m noticing in the classroom, and things I think they could work on a little bit more at home, so they can fine tune things that they’re doing at home based on what their child needs. Certainly my reading coach is there for me, and again, it can be a more formal question, or just an informal observation that I can share, something that I’ve noticed in the classroom. I talk to my support teachers, the people on the school psych team doing the DIBELS testing, so I can ask about what you notice when you’re working with this child. So I feel like there are different layers of people that I consider part of my support team. Definitely my first grade team, again, it can be very informal or it can be little bit more formal, but definitely the first grade team as well. I feel like we pick each other’s brains to find out what’s working, you know, “What are you doing for this? Can I have a copy of that?” (April 29, 2008)

Conversations are ongoing and happen on a daily basis, and the first grade teachers indicate they find them helpful. Making sense of the data in both formal and informal settings is an iterative process as teachers and teams repeatedly revisit issues throughout the year. Examples of issues include elements of core instruction, specifying the reading scope and sequence to match Tier II intervention, how to effectively address fluency in Tiers II and III, being conscious about defining core vocabulary and spelling words for grade levels, and the articulation of specific instructional materials and strategies that are being used (Grade Level DIBELS Data Meeting, March 5, 2008). Again, Teacher A summarizes the benefits of ongoing conversations with the following:

What I love about our talking is that it’s very real, it’s data based, and we talk about what we see, what we notice, what does it mean? I really like that there’s no hedging and it’s very concrete. I also like that there’s some reinforcement, and then there’s also some
suggestion time to talk about. “Okay, have you thought about this, have you thought about that?” And for people to acknowledge that it’s a lot of hard work, but to know that hard work pays off, and gosh, that’s really motivating. So I guess when you talk things over with others, you’re confirming things, and it’s all part of what helps it work. (personal communication, April 29, 2008)

As stated above, many ongoing conversations are about data, and this will be explored in the next section.

**Joint Examination of the Data**

FAB attempts to utilize benchmark assessment and progress monitoring data to make decisions that promote student growth and development. This is done through joint examination of the data and explicit attempts to link change with student performance. It also includes not letting students slip through the cracks, constantly evaluating student growth by utilizing a holistic approach, and obtaining feedback from all involved, including the students. According to Englert and Rozendal (2004), “Learning to use data for collaborative decision making is thus both a cause and consequence for changing school culture” (p. 39).

Joint examination of the reading data and explicit attempts to link change with student performance happens formally and informally every day. At the classroom level, the previous category illustrates that the first grade teachers frequently evaluate a problem area through interpersonal interaction with others. According to Teacher B, common questions include “Have you tried this yet? What do you think about this?” She goes on to add, “If something big is bothering me where a team member can’t answer that question, I’ll go to our reading coach to pick her brain about something” (personal communication, May 1, 2008). As stated earlier, teachers have discussions with their extended team members including school psychologists, reading support teachers, assistants, and parents.

On another level, there is also more formal, programmatic evaluation going on at the same time. On-going benchmark assessments happen four times a year for all first grade students.
More frequent progress-monitoring data (at least once a month, sometimes twice) is collected for students receiving Tier II or Tier III intervention. Joint examination of the benchmark and progress-monitoring data happens at the monthly problem solving meetings. Common questions include, “As a whole, as a class, as a grade level, what are we seeing? What do we need to consider for core instruction or for intervention that might have an impact on progress? Can you tell me about your individual kids?” (SST Meeting, October 18, 2007). Decisions about when to move students in or out of Tier II or III intervention are made by the SST team members. In addition, when talking about adding to or changing the core curriculum and/or intervention, emphasis is always placed on utilizing evidence-based practices. According to Teacher B, “For SST meetings, data are used to see if there are trends, to monitor how someone is doing over a period of time. It’s really just used to make sure we’re doing what we’re supposed to be doing with each individual child” (personal communication, January 18, 2008).

There appears to be consensus among the first grade teachers in that they appreciate and have learned from jointly examining the data with others. With regard to this year, Teacher A states, “We saw that the sight words were lower than we expected, so . . . I have the sight words in the back of my mind knowing they needed some work, but I think it was more of a curricular influence like I need to teach more about sight words” (personal communication, January 13, 2008). At the same time, the data did not affect her expectations as she still expected her class to meet the targets. Teacher A goes on to add, “I still think that the data for individuals is a similar sort of thing. I feel that the targets are reasonable and it would make sense to me that each child would hit the target, and that they would be able to.”
The SST meeting appears to provide a unique opportunity to promote collaborative evaluation of the reading data. Team members come from different perspectives, which lay the groundwork for valuable evaluation and brainstorming. According to Teacher B:

I think just having someone else point out something that I might have missed when I look at the data is helpful. Hearing different points of views has been very helpful, like maybe I didn’t think about so and so’s scores in such a way. I think it’s made me realize what to focus on too, like talking about scores, okay, this is where I really need to have my focus be in, and maybe not pay attention to other things I was working on. Because maybe what I was working on wasn’t necessarily helping them become better readers, it was just something that I thought I should have worked on. (personal communication, May 1, 2008)

Teacher C would agree. In a problem solving meeting held on April 24, 2008, N. Mentor, the school psychologist, specifically asked about one of Teacher C’s student’s relatively flat trend line in oral reading fluency (ORF) data obtained through DIBELS. After the meeting, Teacher C reflected:

For one thing, coming from the meeting [SST] today and having multiple sets of eyes look at the materials together and comparing kids . . . I look at kids so much as individuals, I don’t do a whole lot of looking at how this child looks compared to this child, so it brings out that kind of comparative thinking for me. I’m so much looking at where so and so is here, then they’ve moved to here, and they have this skill, and I’m so focused on the individual, that it really helps me obtain, not only a broader perspective with my kids, but just with first grade level. Just to have multiple sets of eyes, it seems like it would have been simple, but with Jenny, for example, I hadn’t really gotten how straight her line [in ORF] was, because to me, she’s picked up so dramatically in day to day life in the classroom. She’s such a confident reader, but she does rely on tons of picture cues in most of her text. I’m not providing text. The only time she’s getting text without cues, are DIBELS passages. (personal communication, April 24, 2008)

At FAB, joint examination of the data engages the first grade teachers, and they are able to appreciate the connection between what they do in problem solving meetings to the work they do in their classrooms. Finally, the SST members constitute a multidisciplinary team where each person contributes their knowledge, experience, and expertise to focus on positive outcomes for children.
Conclusions about Making Sense of the Data through Interpersonal Interaction

With the implementation of an RtI model, FAB is attempting to pull all the pieces of benchmark assessment and progress monitoring, and core reading curriculum and intervention together to promote positive outcomes for all students, while acknowledging that student achievement is a systems problem that can be addressed (Waldron & Hayes, 2007). As stated earlier, two of the first grade teachers were asked to speak to participants attending an RtI District Team Workshop. When asked about what shifts they have seen over the past five years, Teacher B replied, “In the past, if the students weren’t doing well, teachers would refer and hand them off. With RtI, I can take a breath of relief, as it is a more focused approach that makes sense. It entails looking at the data, looking at the student, and asking what we can do. The shift is awesome” (December 7, 2007). As a result, the SST meetings, a focal point of this process utilizing the problem solving and collaboration inherent in an RtI approach, have undergone a shift as well.

RtI has necessitated moving away from old notions about problem solving meetings. Outdated ideas included participants who tried to get along with each other as they shared thoughts informally. Data was optional, and plans were formulated, however, there was no guarantee they would be implemented, monitored or evaluated. Current and more relevant views of problem solving meetings include making data the centerpiece, and providing a forum for participants to push and challenge each other’s thinking, while providing support to one another. In contrast to the old ways of doing things, plans are developed to be implemented, monitored, and evaluated. The goal must be for students to demonstrate measurable improvements, both academically and behaviorally (Waldron & Hayes, 2007).

As stated earlier, the problem-solving process is collaborative and uses the knowledge and expertise of faculty and staff. It also uses data that is readily available and tends to foster buy-in
from the teachers and other professionals involved, as they are all stakeholders in the process. It
is iterative; as the systematic process includes problem identification, problem analysis, plan
implementation, and plan evaluation (Allen & Graden, 2002; Kratochwill, Elliott, & Callan-
Stoiber, 2002). The goal in this process is to accurately define a problem using specific,
operational terms, utilizing data collection to focus on the variables and conditions that are
hypothesized to influence the student’s difficulty, to develop an intervention plan and implement
it with integrity, and to evaluate the effectiveness of the intervention (Bergan & Kratochwill,
1990). As a result, there should be a continuous cycle of improvement.

Like the problem solving process, teachers making sense of the reading assessment data
through interpersonal interaction in both formal and informal settings is extremely iterative and
recursive. The first grade teachers repeatedly returned to a set of issues throughout the school
year. Thus resulting in constant modifications about what they were interpreting, addressing
technical and practical concerns, challenging personal assumptions, thinking about their practice,
and linking the assessment data to practice. This kind of sensemaking is shaped by opportunities
for conversation and collaboration, the conversations they have with colleagues, as well as who
they are working with. In her study, Coburn (2001) argued that, “patterns of interaction and the
conditions of conversation in formal and informal settings influence the process by which
teachers adopt, adapt, combine, and ignore messages from the environment, mediating the way
messages from the environment shape classroom practice” (p. 162). This is applicable to the
first grade team, as they truly believed they were a team, and recognized that the RtI problem
solving process provided opportunities to learn and grow. In addition, the teachers valued the
provision of professional development, an extensive support system, access to expertise and deep
knowledge, and the use of data as an important tool. According to Teacher A:
Well, definitely when it comes to the analysis part, I feel like it is supportive to know that the scores are looked as an indication. It’s like a combination of real seriousness, but also understanding. Because the program has been in place for a number of years, and we know how to trust, well the scores in January are generally a little bit lower, but that’s when we know that we step it up and then we know by looking back at different things that have happened over the years that we’re going to still make it. So with what’s in place at FAB, we have people that have a history and are really motivated by analyzing data that can say let’s trust the trends that we see, let’s make sure these things are in place, and know that it’s going to be okay. So there’s a nice balance between understanding the seriousness of the whole thing and trusting that things are going to work out. So you know if something kind of takes your breath away, you know you are going to be supported. (January 13, 2008)

Maintaining one’s balance is not always easy in a school that never seems to stop moving, and it can sometimes be a barrier. Examples of what one might need to consider balancing includes the autonomy and support of teachers, challenging and supporting each other, core curriculum and intervention, as well as RtI messages to emphasize and/or defer for the time being. Another barrier the first grade team faces is that of time. Teacher C states:

There’s not as much time for connection as I was hoping there would be. There’s desire for more connection. We build in these times sometimes, but it seems like it’s under a lot of pressure. So, that’s probably the biggest downside for me. It’s just a little bit too much pressure. I’m going to work hard with or without pressure, but I would like to feel a little freer to collaborate in areas of both need and interest with the first grade team, and just the elementary level. Everyone is spread so thin that I feel like at this point in time, there’s nobody that can, as hard as everybody’s working, completely cover all the bases all the time. For somebody who wants to be real competent and on top of things, it’s not a real comfortable place to be. I would like to have a lot more feedback from different people on teaching reading and at higher levels. I’m working on it and figuring it out, but I would rather have more time visiting in other classrooms. We talk about that, but that means then leaving my classroom and I don’t want to leave my classroom. So, it would be logistics, timing, and having enough time. (personal communication, January 10, 2008)

While the first grade teachers generally appreciate the shared planning time FAB had scheduled for them, Teacher C reports she would have benefited more from being shown how to implement certain strategies in the classroom. One example brought up was curriculum mapping. According to Teacher C, “it’s nice they’re so organized, and it’s nice that we have an agenda . . . rather than looking at some of the mapping things we’re doing, I still feel my needs
are the how to. Just because it’s on paper doesn’t mean we’ve actually gotten around to it or it’s actually in place.” Despite the consensus that there appears to be more tasks to do than there is time to accomplish them, Teacher C and the other teachers acknowledge it is rewarding to see the students do well.

In follow up interviews, the teachers were told that many people described first grade as the role model for RtI. When the teachers were asked why they thought first grade had been so successful in implementing this model, Teacher A said she thought the teachers took their jobs very seriously. She explained, “Hearing the statistics, hearing that if a child leaves first grade below grade level, the chances of them being on grade level in the fifth grade year are slim, really got my attention. When I heard that a number of years ago, I just realized we have to really work hard.” Teacher A concluded, “I think its dig in, get the job done, look at the assessments, and figure out how to give it to them. I think too, understanding the children and their developmental needs is important” (April 29, 2008). In the end, the teachers realize how critically important it is not to leave first grade behind, prompting them to challenge their own assumptions, think about their practice, and connect the assessment data to the classroom.

**Challenging Personal Assumptions and Thinking about Practice**

FAB’s decision to implement an RtI approach required a substantive change and paradigm shift in how stakeholders thought about general and special education, student learning needs, assessment and evaluation, as well as decision-making processes (Knotek, 2007; Waldron & Hayes, 2007). The emphasis placed on multiple-level problem solving, curriculum based measurement (CBM), as well as intervention in general education, has resulted in significant changes in how teachers and stakeholders cooperatively conduct their professional duties (Hoagwood & Johnson, 2002). For example, how well will teachers integrate what they have traditionally understood as within child variables with regard to learning disabilities, and
transition to an ecologically focused instructional model? (Knotek, 2007; Waldron & Hayes, 2007).

In this section, five subcategories of challenging personal assumptions and thinking about practice, which emerged from the data, will be described: history of curriculum based measurement data, buy in and the value of assessment and data, integrating data into one’s own instructional framework, using data to impact curriculum and intervention, and the validity and consistency of the data.

**History of Curriculum Based Measurement**

Benchmark assessment was already in place at FAB, therefore when adopting an RtI approach, the school planned to use and build upon data that was readily available. The hope was that having this solid foundation would facilitate the RtI implementation process, and foster buy-in from the teachers and other professionals involved. The first grade teachers have been teaching at FAB for different lengths of time. Teacher A has been at FAB for twenty years, Teacher C has been there for eleven years, and Teacher B for ten years. When asked about the history of CBM at FAB, a range of responses was provided. The following paragraphs explore teacher’s perceptions of how CBM developed at FAB over time.

Teacher A recalls working with a professor at the University of Florida about twenty years ago. According to Teacher A, this project focused on CBM, and “it was really a grass roots project because she didn’t come in and tell us we needed to be doing this. We really went through this whole philosophical basis for thinking about why you have to take assessment beyond something that’s just gut level.” She continues, “I think the thought behind having targets or benchmarks was that these were the indicator scores that showed whether the kids were at risk or not” (January 13, 2008, April 29, 2008).
Teacher C believes FAB was just starting to develop CBM when she came to the school eleven years ago as she remembers “being at meetings and we were determining what our targets were – looking at what most of our kids got, where the numbers of kids that we were iffy about were, and then the kids we were really sure needed extra work.” Teacher C does not recall having CBM’s in place in her first year at FAB. She states:

We had the report card and we had a pretty standardized set of assessments, you know, the alphabet sounds, we had these little assessment books, and they took bits and pieces of other assessment kinds of tools or screening tools. So what we did across kindergarten was fairly consistent. We had little check sheets, but . . . we didn’t have targets to go on. We just checked numbers and wrote them on the report cards, rather than having separate progress monitoring sheets. To me, it was just the very beginning stages and still very formative because we were designating our own numbers, and making up our own targets. And then as we would see a lot of kids start getting to certain levels, we thought maybe those targets really should be higher. (personal communication, January 10, 2008)

Teacher B attributes the most recent and valid development of CBM to the implementation of DIBELS assessment. According to Teacher B:

When I first started here ten years ago, we always had, every marking period, I wasn’t in primary then, I was in upper elementary, and we did comprehension passages, we did fluency, and that was about it. Then DIBELS came along, and we started getting all this brand new information that we hadn’t focused on before, and that was four times a year. This was 2001, possibly 2002; I know it was when I first started as an exceptional student education (ESE) teacher. Then L. Grant [the former reading coach] just started recognizing, okay, what assessments do we need to get better information. She was able to get us better assessments like the Gates-McGinitie, and other assessments, to really get norm-referenced information on our students. I think that’s done four times a year also. So it’s definitely increased dramatically over my time here, which has been good. I like data, you know that. (personal communication, May 1, 2008).

Teacher C agrees with Teacher B’s perspective as she states:

I don’t know how long we’ve been doing DIBELS here, do you know how long we have been doing DIBELS here? That’s when I felt like we got a better grip on our CBM’s, when our CBM’s became more validated. We could talk our heads off to parents about how we felt children were doing, and what we had observed children doing, but validity increased when we had these targets, and these quarterly numbers for where their children needed to be, to be at grade level. If they’re below that, they’re below grade level, which I like to emphasize to parents. We’re not out of the woods just because you’re at that number. If you’re at that number, that means you’re barely hanging in there to be considered on grade level. Once DIBELS got on there and we could say this is the number
that they’re [the school] setting for this standardized kind of testing, parents questioned a lot less. Parents can always interpret information however they choose, but it seems like we have something concrete on a CBM form, both formally and informally, numbers of where their child specifically is, and where they need to be at specific periods of time. This made communicating to parents much more efficient. It seemed it took away a lot of ambiguity. If parents were going to get on the ball, they did once they saw those numbers. You could have all kinds of tactful, supportive, deliberate conversations, and they would take away, “Oh, so they’re doing fine.” Well, fine in some ways, but what about these numbers in these areas. So having CBM inform the conversations have really supported communicating and conferencing with parents. (April 24, 2008)

According to the first grade teachers, current first grade CBM measures include Fox in a Box (CTB/McGraw-Hill, 2005) sight words, decoding, both real and nonsense words, spelling, the Rigby (Nelly & Smith, 2000), which is reading in context with comprehension questions, as well as DIBELS (Good & Kaminski, 2002), which includes phoneme segmentation, nonsense word fluency, and oral reading fluency (January 13, 2008, January 18, 2008). The evolution of CBM at FAB has culminated in the implementation of an RtI approach. Teacher A summarizes this idea with the following statement:

I do like knowing that the target scores are indicators, and I feel like then that’s a justification, not just for me as a teacher, but for explaining to parents and whomever. I feel like as a school, we have become pretty solidly committed in trusting that. So when we make recommendations to parents. . . and I don’t know that that was always there. Sometimes I think our administration could be swayed by parents, and that wasn’t always the best thing for the child. So I think that we can see in cases where maybe we have said, okay, let’s let the child go, then we find out that sure enough those scores are indicators, and maybe we should have paid closer attention. (personal communication, January 13, 2008)

As CBM’s have evolved and changed over the years, so have the first grade teachers. These changes will be addressed in the following sections.

**Buy in and the Value of Assessment and Data**

Within an RtI approach, there is a need for stakeholders to think differently about general and special education, student learning needs, assessment and evaluation, as well as decision-making processes, and alter thinking about student achievement problems. In a discrepancy
model, emphasis has most often been placed on within child variables rather than framing achievement problems as based on instructional variables. Correlating lack of proficiency in basic skills with within child variables implies a situation beyond a teacher’s control. If the goal is to improve student achievement outcomes, and move to basic skill proficiency for all, then the most critical change may require stakeholders to reframe achievement problems in ways that teachers and schools can control (Knotek, 2007; Waldron & Hayes, 2007).

According to Coburn, “Sensemaking in communities has the potential to provide conditions for teachers to engage with messages from the environment in ways that encourage them to question their assumptions, challenge their frames, and continue to improve their practice over time” (p. 163). Although the three first grade teachers have a considerable amount of training in common since coming to FAB, initial teacher preparation at their respective universities differed. In her early thirties, Teacher B has the most recent university training. She stated, “I graduated with my bachelors in speech pathology and audiology, and then I got my masters in special education. I am dual certified in special education and elementary education.” Teacher B described her master’s program as a “combination of strategies on teaching intervention kids with disabilities, and an overview of special education. I took several specific reading classes – that was my main focus, and also math and behavior. It was a wide mix of classes focusing on helping diverse learners.” In addition, Teacher B reports getting a “huge inclusion message, especially from a few of my instructors who are nationally recognized on inclusion.” All of Teacher B’s teaching experience has been at FAB where she has taught first grade for two years now, and provided intervention support in grades K through 6 for six years (personal communication, January 18, 2008).
In her late forties, Teacher A has been teaching for twenty-three years, with twenty of those years at FAB. Although her university training was not as recent as Teacher B’s, Teacher A states:

I got my undergraduate degree in elementary education, and I taught three years in another county. Then I got my master’s degree in elementary education with an emphasis in math. My undergraduate experience at the university was pass/fail and very project oriented. I found my master’s work to be so much more helpful due to having been in the classroom for three years. The master’s program felt so much more applicable, and I felt that I had more experiences to connect with in my own classroom. (January 13, 2008)

Further description of her undergraduate experience included emphasis on self-evaluation, evaluation by professors, and self-motivation. With regard to her overall assessment of her university training, Teacher A reports, “I didn’t feel like I learned quite as much about reading. I know the reading classes have changed a great deal since I was there, which I think is good because it was a lot of theory and not a lot of practice, not a lot of here’s what you can do.” She goes on to state, “The thing I really think was sorely missing were classes about management, because you know the bottom line is, if you can’t get them to sit down in their chairs, there’s not a whole lot you can do. In my first year of teaching, management was a huge issue for me.”

Teaching experience included three years in first grade at a county public school, third grade for one year at FAB, then moving down to first grade for about eight years, a Title One position for about three years, a third and fourth grade looping model for six years, then back to first grade with this year being her fourth (January 13, 2008).

Teacher C is in her early fifties and has been teaching for over thirty years, with eleven of those years at FAB. She graduated from a liberal arts college. Back then, if one wanted to specialize in early childhood, one would choose to be an elementary major with an early childhood focus. As a result, “You ended up with a Bachelor of Liberal Studies degree (BLS) and you had to have a triple minor with that, so early childhood was considered a minor, art was
a minor, and so was English.” Teacher C reports choosing this college because it housed a preschool on campus. Her undergraduate experience provided “a broad background, but it was lacking in more specific methods.” In addition, there was not much interning as one basically had an internship in the final semester. Teacher C did have a work-study position in the preschool and was there for four years, so she got a lot of hands-on experience, but little classroom experience. According to Teacher C, “There wasn’t a clear focus at that time, there was no inclusion happening, and there were no special education classes offered at the school.”

With certifications in elementary education, art, and early education, she has taught sixteen years in kindergarten, two years of kindergarten and first grade combined levels, and two years of art in both elementary and elementary/middle school. Furthermore, Teacher C taught three years in a pre-K parent cooperative school, did two years with pre-K special needs students, two years in second grade, and three years of curriculum based assessment (CBA) training for a child development credentialing program (personal communication, January 10, 2008).

Factors such as training programs, credentialing, and teaching experiences have impacted the first grade teachers in different ways. At the same time, all of the first grade teachers agree that FAB has provided ample opportunities to attend workshops and conferences, as well other ongoing professional development. For example, all of the teachers have been involved in the Florida Reading Initiative (FRI) as trainees and trainers of teachers. Teacher C and Teacher A are National Board Certified Teachers in Early and Middle Childhood, and have gone on to mentor other teachers pursuing national certification. Teacher B has recently submitted her application and materials in her quest to become a National Board Certified Teacher. Both Teacher A and Teacher B talked about participating in inquiry projects involving research (personal communication, January 10, 2008, January 13, 2008, & January 18, 2008).
According to the teachers, it is these kinds of experiences, training, certifications, and ongoing professional development that have been helpful to them in their roles as teachers, and has impacted their thinking about their own practice. While talking about her experience with FRI, Teacher A reports, “after I was trained using different techniques in my classroom, I was trained on how to be a trainer of teachers. So, it’s just a whole other level as far as how to put strategies into practice. As a trainer, you really have to understand it even more.” With regard to National Board Certification, Teacher A states:

What I found with that, which was so interesting, was there’s a great deal of writing that you do. And when you’re writing, you’re reflecting on your practice, and you’re reflecting on your choices. You know, why do you choose the things that you choose? Why are things you are impassioned about important to you? So it really causes you to reflect, and that was a very broadening kind of experience. I think that once you go through it, you can’t help but to continue to think that way. So even though the National Boards are over, I still find myself reflecting in a similar way as I did then. (January 13, 2008)

Teacher C agreed that it was great, reflective process, however, she adds, “The irony of it is that you’re spending so much time reflecting on your practice and getting your portfolio together, it takes away from your classroom. You’re proving you’re a good teacher by putting your attention on things away from your children” (personal communication, January 10, 2008).

As referred to earlier, Teacher A and Teacher B found the inquiry process quite valuable. According to Teacher A:

I found the inquiry process so valuable, formal inquiry. It was exciting the first time I ever did it. What I thought was really neat was that you think in your mind that you know where something is going, but if you really do follow the inquiry, then you find out that there’s something there that you didn’t really understand, that you couldn’t have predicted, or that it was not all direct cause and effect. At times, you think you have it all figured out. Sometimes there are other factors, and I just thought that was a fascinating process to go through. (January 13, 2008)

Teacher B agrees as she states, “I’ve taken two inquiry classes as a non-degree seeking student, so that’s been a huge help with my teacher training . . . I’m constantly reading professional literature about what I can do better, searching for something that I want to learn, or for that
learner who learns differently.” She also goes on to talk about the value of reading conferences as she focuses on the areas she has been struggling with. According to Teacher B, “Probably the most helpful is going to the conferences and actually listening to speakers who have published teaching materials. Just hearing their philosophy and their rationale on why they chose to write their books has helped me to see how I can use that in my teaching practice” (January 18, 2008).

It may be that the culmination of these initial preparation and professional development experiences helped each of the first grade teachers to challenge their own personal assumptions, facilitate buy in with the RtI approach, and thus helped them acknowledge the value of ongoing assessment and resulting data. Of the three first grade teachers, Teacher B appeared to need little convincing. This is not surprising due to her past involvement with speech and language, service in exceptional student education and reading intervention, and experience as an assessor who utilized DIBELS and other progress monitoring assessments. According to Teacher B:

Well, I’ve always been a fan of data. I saw how it could really guide what I wanted to do. I think I’ve just grown more dependent on it over time. I’m just really counting on it to not be the entire thing that I guide my instruction on, but at least a solid starting point. I can use my own intuition, and other observations, as well as other things to continue guiding me, but as a progressive teacher, it’s definitely a consistent factor. (personal communication, January 18, 2008)

Teacher A and Teacher C needed a little more convincing. With regard to assessment and data, Teacher A acknowledges that she “used to be a little more gut level.” In addition, when first told about the RtI model and the plan for teachers to assume responsibility to Tier II interventions, Teacher A admits:

At first, I was nervous, and all I could think about was that I was not going to have a support teacher in the classroom. After looking at strategies, I eventually realized this gave me ownership and power. This approach made me aware of each student in the classroom, rather than the support teacher being responsible for certain students. In addition, I was pleased to see my first graders rise to the occasion and actually become more independent. I realized that perhaps always having teacher support made students more dependent. This constituted a shift in thinking for me. (personal communication, December 7, 2007)
According to Teacher C:

I was here before DIBELS started, and the general consensus was why are they going to time these young children? From an early childhood background and really having more of a developmental approach, we wanted to give kids time, we wanted to nurture as much as we can, and push them as much as we can, but not rush them. So the idea of timing was really contrary to my personal approach and pretty much the consensus of others. What I found was that I felt it really filled in the gap for us to pick out kids that would go on have reading issues after kindergarten. These were the kids who were showing an okay or an above okay mastery of all our kindergarten expectations. But then they go to first grade, and we find out they are in reading intervention. As kindergarten teachers, we wonder why. And the DIBELS showed us that there is a processing speed issue. There are kids who have obvious speed issues, so it’s not those kids; those are the kids who clearly need extra support anyway. It’s the borderline kids that get picked up by the DIBELS. So that’s what I really appreciated. Those are the same kids that when I do assess them, I might see some differences or some gaps in their learning, and mostly inconsistencies where they can show me they know something sometimes and not others. But since that’s such a common learning pattern as kids go through different stages of growth, it wouldn’t be such a red flag, but clearly, the DIBELS has been very interesting for me to have as an additional measure. (January 10, 2008)

Although the teachers started out in different places, they seem to have bought into the RtI model, and the first grade data appears to reflect the team’s commitment. Teacher B acknowledges the team’s success as she states, “I think it was that willingness to say, ‘Okay, this is different from what I’ve done before, but they say it’s supposed to be awesome – it’s supposed to work, so let’s go ahead and try it.’ So I think just the willingness to buy into it was a huge factor” (personal communication, May 1, 2008).

Finally, the teacher’s willingness to challenge their own assumptions, and buy into the RtI model has culminated in a deeper appreciation for assessment and data. The teachers found all of the assessments helpful; however, when asked which one was most helpful, Teacher C states, “Clearly, what has been the most helpful for me over the years is the DIBELS” (January 10, 2008). She had reported earlier that timing students seemed to pick up the borderline functioning students as well as the students who were obviously struggling. Teacher A adds, “I like the Rigby in that, to me, if feels like authentic reading. So, to me, that’s very important. But what I
like about some of the other measures is that I think it’s a little bit easier to follow growth” (January 13, 2008). According to Teacher B:

I think all of it is useful because you see which areas they’re progressing and which areas they’re still struggling. Some of it just makes me wonder why are they doing so good here, but still struggling so much here? It really just challenges me to try and figure out what their need is and so you get to see a couple times a year if what I changed, or what I tried to have them do really is affecting them. So I’m a big fan of data. (January 18, 2008)

It should be noted none of the teachers were able to designate one assessment as the least helpful. Teacher A states, “I really was having a hard time figuring out what would be the least . . . I already think that there has been careful thought that went into the selection of measures, so I don’t think a least exists any more. I think they all have a reason” (January 13, 2008). This section indicates the first grade teachers have been able to challenge their own assumptions to facilitate buy in to an RtI model, thus leading to acknowledgement of the value of assessment and data. The next section addresses teachers integrating this data into their own frameworks.

**Integrating data into one’s own Instructional Framework**

Integrating new information into one’s own framework is an iterative and recursive process. Teachers will frame, reframe, elaborate and flesh out details of their conceptions until reaching a rendition with conceptual “hooks,” enabling teachers to link new ideas and information to what they know and believe about teaching and their practice. This process is known as “frame alignment” (Coburn, 2001; Snow, et al., 1986). According to Snow, et al., (1986), “By rendering events or occurrences meaningful, frames function to organize experience and guide action, whether individual or collective . . . it follows that frame alignment is a necessary condition for movement participation, whatever its nature or intensity” (p. 464).

With the implementation of RtI, the first grade teachers were arranged along a continuum when it comes to how they viewed data. As stated earlier, Teacher B’s background and training predisposed her to look favorably upon data. Teacher A seemed to be somewhere in the middle,
due in part, to her extensive experience teaching first grade. With her background in early childhood, and most of her teaching experience in kindergarten, Teacher C has had to come the furthest. The ability to figure out how to teach first grade is a significant factor impacting effective integration of new ideas about problem solving and collaboration, evaluating data, decision making, and how data impacts reading instruction and intervention. According to Teacher A, “when a fifteen year old child walks into a classroom, developmentally, they’re going to be kind of the same when they walk out. A six year old that walks into a classroom at the beginning of the first grade, developmentally, is so different at the end of the year.” She goes on to state, “kids are ready for some things at different times of the year, and they’re not developmentally ready for those things at others. You have to know how to pace your year, and know how to give them more when they need it” (April 29, 2008).

Teacher B and Teacher C agree with this assessment. The 2006-2007 academic school year was the first year RtI was implemented. This implementation coincided with Teacher B’s first year teaching first grade as she confirms, “it was my first year in first grade. I had never been at that point before, so I didn’t know exactly where I was supposed to be [with regard to the benchmarks and data]. So that was a big hurdle to jump over” (May 1, 2008). With regard to the 2007-2008 academic school year, it is Teacher C’s first year teaching in first grade. She states, “The biggest thing, I think, for me, is not feeling like I had a big picture of first grade . . . now, I know more what a first grader looks like when they have these kind of scores at this time of the year, but I didn’t really know that earlier” (April 24, 2008).

Other factors that may have impacted Teacher C’s adjustment include her experience at kindergarten, which she admits, is very different than first grade. In addition, the reading coach reports the kindergarten teachers are not necessarily consistent with core instruction or
intervention. Furthermore, when Teacher C changed teaching positions, she did not change her classroom location. As a result, she remained in the kindergarten wing rather than the first grade wing. This set her apart as Teacher C did not get as much informal interpersonal interaction with the other first grade teachers, as well as the reading coach, and the reading intervention teacher. Thus, one does not have as many casual encounters in the hallway, or the convenience of briefly popping by another’s classroom due to location. Teacher C has voiced her desire for more time to connect and this may be one of the reasons for her difficulty adjusting to teaching a new grade level.

Coburn (2001) found in her research that, “Over time, as teachers worked closely with one another informally, their practice and worldviews became increasingly similar within each group through a process of reciprocal influence” (p. 157). Despite the fact that the first grade teachers started in different places along a continuum, they have worked as a team and have actively participated in collaboration and problem solving. They appear to have established a measure of consistency and consensus with regard to core reading instruction and intervention, and they all try to incorporate student assessment data into what they observe in the classroom. With regard to assessment and data, Teacher C states:

I think it’s great. Even though my first take on it was, “Timing kids! No!” There were some pretty big reactions to it initially. I think it makes a huge difference. Even with the first grade kids that would surprise me, “How could they have scored that low?” And then when I start working with them, it reshaped the way I viewed children and their learning. It started helping me look at the whole process, and all of the steps along the way, not just having the information, but how it all connects. The processing issues show up in the timing when scores are low, even if they have the knowledge, they can’t retrieve that knowledge, and that’s a problem. (April 24, 2008)

According to Teacher C, the data “gives some real important information. It validates what I do.” In addition, she is able to add her “own personal observations, and a lot of problem solving behavior to see what works with kids” (January 10, 2008). The bottom line is Teacher C
has decided that RtI is a good fit with her own personal style of teaching. It was clear that teacher B thought RtI was a good fit from the very beginning. For Teacher A, “RtI added a new curriculum component. I can see it is working, and students are benefiting. As a result, I learned to do this” (personal communication, December 7, 2007). As referred to earlier, Teacher A and Teacher B were asked to speak to participants attending an RtI District Team Workshop. The workshop leader asked the teachers, “If this was a room full of teachers, what would you tell them about RtI and recent work? Teacher A replied, “I would tell them to trust the system, but not lose your voice. Air your questions and be advocates for children. At the same time, trust that this has been thought out” (December 7, 2007). This section on integrating data into previous views of reading instruction and intervention leads into how data has impacted practice.

**Using Data to Impact Curriculum and Intervention**

This category is most closely linked with the core principles of RtI and tiers of intervention. Core principles include the following: intervene early; use a multi-tier model of intervention services; provide evidence-based instruction/intervention; use a problem-solving method to make decisions; all decisions should be data-based; monitor student progress; and if it’s not working, reevaluate, and change (Fuchs et al., 1992; Marston, Muyskens, Lau, & Canter, 2003; Waldron & Hayes, 2007).

At FAB, four tiers of service are utilized to promote efficient resource allocation. This system puts increasingly intense levels of reading instruction in place that corresponds in direct proportion to students’ individual needs. Each tier contains support structures to help teachers and interventionists deliver research-based instruction to improve student responsiveness and achievement, and decrease at risk status (Batsche et al., 2006). The first grade teachers are responsible for implementing Tiers I and II. Tier I is comprised of the core reading curriculum using evidence-based instruction and provided for all students in the general education
classroom. There is a standardized scope and sequence for the curriculum that provides connection and common terminology throughout the first grade level. The teachers provide additional targeted instruction in small groups in Tier II utilizing a standard protocol program. The reading intervention support teacher is responsible for Tier III. Tier IV indicates the child is referred for an eligibility evaluation (Waldron & Hayes, 2007).

The first grade teachers strongly agreed on several things. The first was that the data collected was appropriate with regard to intervention due to the different forms of data they looked at. According to Teacher A, “we’ve got the timing, we’ve got the decoding, the real and the nonsense, we have the sight, and then the Rigby, which is reading in context and answering some questions. I feel like the data we collect is different enough that it really does give us the whole picture” (January 13, 2008).

Second, the teachers believe that the use of student assessment data impacts their curriculum in a positive and comprehensive way. There’s a funnel effect as the impact starts off broadly and gets more specific as the teachers deal with the entire class, small groups, and individuals. Teacher A provided an overall summary of how the data impacts practice when she stated:

I think there are a few different things that we do with it. I think that you reflect on it because there’s impact as far as our curriculum goes. So we want to think about decisions that a teacher makes as far as the whole class. We want to look at trends in learning, or particular things we notice with the class. We also want to think about interest in individuals – thinking about what we are doing for the individuals. And of course, we want to think about progress monitoring and whether what we’re doing working, and reflecting on that. Then change it if we need to change it, changing our practice. I think we’re looking for trends over time like does the school put the emphasis on the right things? I think that’s one of the things you look at too. When we’re planning our day, are we putting enough time into what is needed and particular areas? (January 13, 2008)

With regard to how the data directly impacts their curriculum and lesson plans – either class wide, small group or individually, Teacher B provides the following example:
Class wide, maybe, I might change something we do in word work as an entire class. Small group, definitely, I might move people in groups around to have a more specific focus. Like if I have a reading group that is quite large, I might divide that group and only have a few of them with me more often than everyone else to focus on something that I notice with just those few. Then individually, I know it definitely does because I might need more help from the parent, or I might have to send extra stuff home with home reading, or just meet with them. I make sure I check in with them more one on one when they’re working in the classroom. (personal communication, January 18, 2008)

Third, the teachers attempt to build upon the data throughout the year, and use it as a guide to focus their instruction. Teacher A explains that looking at assessment scores help the teachers adjust where they are going and compares this process to utilizing a global positioning system (GPS). Common questions include: where are we, where do we need to go, and are we doing what we need to do to get there? She states, “As the school year progresses, especially in first grade, we do know that kids are ready for a little bit more structure. As the year goes on, they are maturing with greater depth, so they are more ready for things like fluency building in the second half of the year.” Teacher A also provides an example of focused instruction with regard to fluency building as she started timed reading with her students and had them graph the results:

That was really more after our mid-year assessments, because looking at those mid-year assessments, I could tell that they were ready for more direct practice of oral reading fluency, and that’s what’s really helped the more recent progress monitoring results. Students have a fluency buddy . . . a good reading match for them. They have a passage that’s at their level, it’s in their folder and they have a graph. So you’re getting ready for the first reader. I’m standing in front of the class with my timer, and the kids are getting ready, they’re rehearsing. I tell them, “Okay, we’re going to have 5 seconds of silence and then I’ll start the timer.” Then I’ll start the timer and everybody’s reading at the same time, and their partners are monitoring. Then we switch to the other partner, and they mark on the graph. And I’ve showed them that a good looking graph has dots both under the target and over the target because I had some kids that were really worried – they thought every dot had to be over the target. So, I told them if they’re really doing a good job, it builds. (April 29, 2008)

Teacher A shared this with Teacher B and Teacher C, and it wasn’t long before all the first grade classes were conducting timed oral reading fluency passages and graphing their results.
Teacher C reports wanting to move kids ahead as fast as possible. She wants them “to use the skills that they’ve learned and be challenged.” According to Teacher C, “When I first heard intervention students needed differentiated instruction, I thought, ‘we’re watching them as much as we can!’ But they really do need a lot of fast paced instruction, it’s the only way to fit it all in. They need so much repetition, that’s the other thing that’s become clear.”

It should be noted that last year’s mid-year progress monitoring data was very different from this year’s mid-year data. Last year, the first grade data dipped and took a downturn and the reading intervention teacher recalls everyone sitting around SST taking a close hard look at core instruction and intervention to address issues. Teacher B remembers being disappointed last year over the oral reading fluency scores. At the same time, the data focused her instruction as can be seen in the following example:

I added extra daily practice for their fluency, which included the show me five. I pushed those a little bit more. Those were always available during independent time, but I just really kind of nudged them a bit more to be practicing that. As part of our word work, I have four centers, but only three were word related. The fourth one was fluency related, and those were either partner, or trio poems or stories. We really bumped up the computer program I use called Read Naturally, their use of it, and making sure their goals and their instruction on that was where it needed to be. I think I just really reinforced reading as much as could be done, and made sure they just weren’t silent reading in their head, that they were doing it out loud.

Finally, the teachers think the data affects high achievers as well as students who are struggling. According to Teacher B, “It’s important to still see that they’re growing even though they’re high achievers . . . I want to make sure that they’re motivated through what they are doing, so you have to provide the appropriate challenges for them to still progress.” Teacher A agrees with providing appropriate materials and new challenges, and adds, “I think a lot of times, there’s this broadening out and not just going up.” She also finds it interesting that, at times, she has had to explain to parents “there’s actually a range on target scores. So, if the target is 50 and the child scores a 55, some parents will say that’s above target. Well, let me tell you that there
are some kids who scored over a 155. Still, within those ranges, there is definitely growth.”

According to Teacher C, “When you’re looking at their skills on a regular basis, I feel like kids feel more accountable and that you know them. That helps with one on one time. They want to have their turn, they’re hovering for their turn” (January 10, 2008).

Although there was consensus about the positive impact data made, it should be noted that answers were decidedly mixed when teachers were asked if they thought the core reading curriculum was as well developed as the intervention programs used in Tier II and Tier III. Teacher A said yes and felt that core instruction had been strengthened. That made her comfortable because she had taught upper grades, and saw some kids in third or fourth grade who had “broken the code very early in their lives, but they didn’t know how to decode.”

According to Teacher A, “So even my kids who seem to be able to read in first grade, I feel like they need direct instruction in decoding, so when they get to a bigger word, they still know how to apply decoding skills.”

On the other hand, Teacher C said core instruction was not as well developed as intervention because, although she has been presented with a lot of information and tools with regard to core instruction, she does not feel as strong and comprehensive in presenting some of the reading strategies as she would like to be. She concludes, “Not that the kids aren’t doing well, but I feel like they could be better, and I could be stronger with that. In addition, my attention does go first to my struggling kids.” Finally, Teacher B believes, “we definitely look harder at intervention because we’re so worried about those guys, and we probably leave core alone if the rest of the class is making sufficient progress, so I don’t know if they’re equally developed . . .” She concluded adjustments were made where they were most needed, and the
teachers “probably spend more time focused on intervention.” The last category looks at the validity and consistency of the data collected.

**The Validity and Consistency of the Data**

Important factors in the success of an RtI model include the validity and consistency of the data, and teachers responding to the data by improving practice and intervention. At FAB, the teachers collect a substantial amount of benchmark assessment data; however, outside parties are responsible for collecting DIBELS data three times a year, as well as the more frequent ongoing progress monitoring data for students receiving intervention. What are the issues associated with various people collecting the data, their connectedness to the data, and what factors impact the validity and consistency of data in first grade?

As stated earlier, benchmark assessment happens four times a year for all first graders. It happens three times a year in the other elementary grades. More frequent progress-monitoring data (at least once a month, sometimes twice) is collected on students receiving Tier II or Tier III intervention. The first grade team decided to collect data on all students to coincide with parent reporting meetings. The first reporting meeting is scheduled after the first nine weeks of school, and then every nine weeks after that. Teachers go over a curriculum-based assessment sheet that accompanies the formal report card. According to Teacher A, last year was “the first time we did it four times during the year. Before that, we did it three times during the year, but there was that one grading period, the nine weeks they didn’t have a progress monitoring, so . . . what is it that you were reporting?”

At FAB, the school psychology (SP) team is responsible for collecting ongoing progress monitoring data on students receiving Tier II or Tier III intervention in grades K through 3. This year, one person was assigned to kindergarten, two people to second grade, two to third grade, and this researcher was attached to the first grade. It should be noted that a SP graduate student
assisted this researcher during Fall 2007, and this student was responsible for ongoing progress monitoring of four students in Teacher C’s class. First year graduate students in school psychology were assigned to a class at a designated grade level at the beginning of the year, and they collected DIBELS data from that class (with the exception of students being progress monitored on a regular basis) three times in the academic school year. A member of the SP team at their designated grade level supervised these graduate students. Thus, in addition to overall supervision of DIBELS three times a year, this researcher was directly responsible for the three graduate students assigned to conduct DIBELS benchmark assessments in first grade.

With regard to consistency and validity of the data, the first grade teachers reported that DIBELS data was consistent with their own progress monitoring results and classroom observations. Teacher A observed that the DIBELS scores reflected what she saw in her scores, and deemed it a “good measure to show overall first grade growth and development, even though it’s just this little one minute timing.” She goes on to add, “I feel the climbs in the graph you show me with DIBELS really mirror the climb that I’ve seen in the assessments we’ve done in the classroom too. I can tell when a child started making a leap, and then sure enough, it shows up on the DIBELS.” Teacher C also feels the different data scores are generally aligned to indicate similar outcomes. There have been times when the alignment has been questionable; however, she attributes this to particular students who perform inconsistently on tests and in the classroom as well. She concludes, “I value it, and I feel like it’s important. It’s validating my classroom experience and my intuitive experience. Because I have mostly been an intuitive teacher, it’s been really helpful for me seeing how different kinds of measures can come together” (personal communication, April 24, 2008).
Although the teachers think the data matches up fairly well, when it comes to more frequent ongoing data collection, Teacher B states, “I think it helps also having the outside person being a consistent person. If it changed, I think the data would be very skewed” (personal communication, May 1, 2008). Teacher A adds, “You want the child to feel comfortable, but also the assessor. If the assessor is familiar with the child, then the assessor can give me insights about the child as well. So it works in both directions.” The teachers acknowledge that standardized testing must follow certain procedures. At the same time, something as simple as “making sure the child is ready to begin is important” (Teacher A, personal communication, April 29, 2008). As stated earlier, this researcher was supervising a graduate student on the SP team who was conducting ongoing progress monitoring with four of Teacher C’s students. At an SST meeting in December 2007, Teacher C requested that this researcher take over those students. According to Teacher C, “It really helped me out when you ended up doing the consistent progress monitoring with all my kids because then the feedback could be quantitative and qualitative.” It should be noted that these particular students had previously exhibited inconsistent data. This researcher made it a point to develop a relationship with these students, and this seemed to help reduce the variability in the data.

There can be additional benefits to having a consistent person conducting ongoing progress monitoring. Ideally, this person is part of the grade level team, attending SST meetings, participating in collaboration and problem solving, interacting and talking with the teachers, sharing information, providing consultation, and building relationships with the teachers and students. According to Teacher B:

With collecting the data and from my history of being a special ed teacher, the rapport you establish with the child is incredibly important, so I’m just always so happy to see that you make that a point when you take my kids. Whenever I come and see you, you instantly know who did better, what’s going on with them, how they’ve changed maybe from last
time, so that goes along with consulting too. You’re always willing to let me barge into your room to ask, “Tanya, how did they do?” Further assessment, I don’t know if we’ve gotten there yet as far as our little first grader guys, but I’m sure as they progress through the grades, that is definitely something that happens. Facilitating the use of the data, definitely, just relaying the data to me, and if I ever have any extra questions, you’re always right there to help me out with it, so everything’s useful.

The first grade teachers were always eager to get their progress monitoring results, so the researcher made an effort to score the protocols as soon as possible, graph the results, and Xerox copies for them. In addition, there were post collection conversations, as well as ongoing interaction, with each of the teachers. Topics of conversation have included concerns about a particular student, getting students to blend in nonsense word fluency (NWF), blending strategies attempted including focusing on subvocalization or more audible verbalization, students attempting longer multisyllable words and being successful, as well as other qualitative observations made during progress monitoring.

One incident in particular seemed to highlight the importance of having someone consistent collecting data. During the week of January 14, 2008, the first year SP graduate students were conducting the majority of DIBELS benchmark assessments. The researcher was only assigned to progress monitor the Tier III students, which comprised about 13 students instead of the 27 Tier II and Tier III students, usually done on a regular basis. It should be noted that the 27 students also included students who had been moved out of tiered intervention and were being progress monitored to ensure there was continued progress. The incident was recorded in this researcher’s journal and is as follows:

When I came in this morning, the reading coach, came to talk to me about many of the assessments done in Teacher A’s room by the first year graduate student assigned to her class. She said Teacher A had come to her because she was alarmed over the DIBELS scores of several of her students (both receiving intervention or just in general ed). Looking at the results, they were clearly discrepant from previous results. The reading coach asked me if I could redo about 7 students in Teacher A’s class. I did, and the resulting scores were consistent with previous results. I gave Teacher A the results and she was grateful and relieved. She told me she had thought about calling me the night before,
but didn’t. I told her she should have, and I would have tried to put her mind at ease. Teacher A reported that she had a long and sleepless night worrying about her student’s apparent regression. She thanked me repeatedly and told me that we were really a team. I also redid two assessments in Teacher B’s room because scores were so out of line. Teacher B told me it was great that I was able to redo some of the students in Teacher A’s room. Teacher A had come to talk to her and was quite upset over the situation before it was resolved.

The next section explores conclusions about substantive change an RtI approach has brought about including buy in, student learning needs, assessment and evaluation, the impact data has had on reading curriculum and intervention, as well as decision-making processes.

**Conclusions about Challenging Personal Assumptions and Thinking about Practice**

With the implementation of an RtI model, FAB made a commitment to intervene early utilizing direct assessment measures focusing on specific reading skills. From there, grade level SST members with multiple perspectives, make decisions about intervention based on ongoing, multiple data points and the needs of the children. Using tiered intervention, collaboration and problem solving revolves around teaching and learning interaction to promote positive outcomes for children (Waldron & Hayes, 2007). Knowing they cannot leave first grade behind, the teachers have responded to RtI by accepting the paradigm shifts that accompany the model. As a result, they have seen their students benefit and grow; thereby validating the hard work it took to get there. Although the teachers started out in different places with regard to how they viewed student assessment data and other core components of RtI, they have all challenged their assumptions, bought in, and eventually come to similar conclusions about the value of data, and how it connects to their instructional practice in reading. Teacher C provides an example of how her thinking has changed:

> Consistently, at the end of Kindergarten, kids who we felt had mastered what we were expecting them to master were going to first grade. When they got to first grade, we were consistently being surprised by some, not by a lot, but there were always a handful of kindergarteners that caused us to say, “What are they doing in intervention? Why did those kids end up needing extra support? What’s the difference, what’s missing here?
When we looked at these kids and asked them to do these things, they were doing them fine. Where’s the gap happening?” Two things have happened to me personally. One mainly is that I see there is loss over the summer. I was shocked at that, and fortunately, they do pick up rather quickly. The other thing is that without a timed test, which I never would have dreamed of giving as an early childhood teacher, we might not pick up certain kids at risk. We don’t time kids, we haven’t historically. You want to encourage kids, you want to give them think time, you want to give them wait time, you want to see how they can generate answers, and you don’t rush them. Rushing them usually meant you weren’t getting results, but it’s that fluency factor, that retrieval time, that translated into a fluency factor that we were not looking at, and that’s where the gap was. That’s where kids fell through the cracks. Had we known that timing was so important; we would have looked at that more closely. Those kids could have gotten more intervention support in kindergarten, but we weren’t looking at anything that was time based.

As stated above, the first grade teachers understand “one of the biggest benefits of this process is that kids that used to fall through the cracks, don’t any more. They can’t because we’re keeping tabs on them.” Teacher C goes on to add, “We definitely, every year, had kids that fell through the cracks. Those handful of kids are our intervention kids who are getting really close to grade level” (personal communication, April 24, 2008). This understanding is critical as there are teachers at other grade levels that do not understand this factor. It is the missing link connecting data to practice.

Another conclusion the teachers have reached is that using the data to make decisions is an iterative process. Utilizing ongoing assessment of needs, planning, implementation, and evaluation, the goal is a cycle of continuous improvement (Waldron & Hayes, 2007). Because the teachers recognize the purpose of this process, they also understand the value of data as an important tool. Unexpected results or dips in data constitute red flags indicating areas that teachers must pay attention to. It also allows teachers to focus their instruction to better meet the needs of their students. Again, Teacher C provides an example in the following excerpt:

So, I think whatever the data looks like, if it’s not where it needs to be, it’s a red flag of some sort, so just keep on top of it. I can’t tell you how often in settings either familiar or unfamiliar, when people hear I’m a teacher, the conversation goes, “Well, what do you feel about all that testing – all that testing that interferes?” You know, I don’t see it like that, I see it as a tool. I feel like the consensus out there is, “Oh, all they do is test!” I’m like,
“No, that’s not all we do is test!” But it seems like the public opinion I tend to come across is that it [testing] interferes so much with curriculum. I do feel fortunate that I have other people supporting me in my testing, but I used to also ask for some support in some of my own curriculum-based measurements, and realized, if I didn’t do it myself, I didn’t have a lot of my own information. I didn’t know when they were spelling that word and they got all these wrong, the steps they went through and how close they were, or what their consistent error pattern was, if I gave that task to somebody else. The DIBELS I’m comfortable with because it’s standardized, but again, getting the feedback that is qualitative is really helpful. So, I do really feel like we look at it as support and as a tool that we use, not that it takes away, but it contributes to an increasing level of success for an increasing number of children.

Teacher A adds that one has, “to trust that even when you get news that you might be – I don’t want to say alarming – but you feel like you have to pay attention to – that to trust if you pay attention to an area, then you are going to get some results.” In the end, “it’s almost like the indicator, even when it shows red on the DIBELS, it means okay, let’s go green, and let’s turn it on.”

Thus, one of the most critical factors impacting the successful implementation of an RtI model is that the school has teachers who understand and respond to the data. The first grade teachers have repeatedly responded to the data when the results were not what they expected. They believe the data is a guide for their teaching. In a grade level team meeting to look at mid-year DIBELS scores, the reading coach brought up the 2006-2007 data because it indicated how first grade teachers were responsive to their data starting in the first year of RtI implementation. The intervention support teacher recalled everyone sitting around a SST meeting taking a close, hard look at core reading instruction and intervention to try and address issues. According to the reading coach, “last year, first grade moved mountains in response to the needs of students.” This 2007-2008 academic school year has been no different, as the first grade teachers have continued to learn and grow as they respond to the needs of their students. With regard to this year, Teacher B stated:
Well, I’ve had a lot less of it [data] not being what I expected, which has been nice. I think I learned last year how to really focus my instruction. The three or four kids who are still standing out to me [this year], I was able to pinpoint, using the assessments, their exact difficulty. There was one little boy, his mom just didn’t do home reading with him, and so I started doing home reading with him after school, and all of a sudden, he took right off. With another little girl, I added a tutoring component after school, just little tiny things that I did, but in addition to what they already had in the classroom, that seemed to help push them along. Also, pushing to make sure those kids got into Tier III, it was pretty important to me too.

Despite what the teachers have come to understand about the RtI process and the value of data, the teachers still have questions and face barriers. With regard to the consistency and validity of the data, Teacher A acknowledges it has been a great year for first grade data wise, and she hopes things have been put in place, so next year’s data will look similar. At the same time, since the data is based on individuals, she wonders if “maybe this was just a year where the data was kind of flukey and really strong.” She continues, “before I can make any profound statements about my practice, I want to see the data look like this over a number of years. Certainly I’m hopeful it’s because we’ve had strengthening in core instruction and so on, but we can’t just relax and say we’ve figured it out.”

Several barriers are related to issues of time and/or assessment. As stated earlier, with the exception of DIBELS, the first grade teachers are responsible for their own curriculum based assessments. Except for a whole class spelling test, these assessments are all one on one. According to Teacher C, “It’s hard to set aside time that’s just assessment time, especially when you’re doing it individually, and still keep the rest of the class flowing. So, I am literally grabbing kids when I can.” At the same time, Teacher A would rather conduct benchmark assessments herself rather than assign them to her assistant. She goes on to state her assistant “doesn’t have as much training as I do, she doesn’t understand philosophically how important it is to just get the data. I feel like she could easily be swayed to thinking so much of it is a reflection upon what we’re doing and scores could be inflated.” In addition, the teachers do see
a downside to outside people with little connection to the students administering DIBELS.

Finally, Teacher A speaks for the first grade team as she wishes there was more “planning time, this is always something that I wish I had more of. So, just time to take the knowledge that we have, take the data that we have, and really think about how to plan very purposefully, meaningful planning time.” Finally, Teacher A states the following:

Now what’s a possible disadvantage would be that I would want to continue to be sure we were looking at the whole child. You were mentioning before like on DIBELS that you had seen Julian’s score go down [on NWF due to blending], and if I didn’t have someone like you who is wise enough to know Julian, then maybe I might be thinking about a different interpretation to that. So that’s my only fear is that it turn into this machine that just, you know, pop a kid in and you pop out the answer, and then I hope it never becomes that.

Additional concerns include trying to get students additional instruction outside the 90-minute reading block, and making sure children feel good about themselves despite being watched and monitored. Teacher B states, “I think one thing that stood out to me is it’s obvious what the Tier II kids are doing is much different than what the rest of the kids are doing. I try to alleviate it by saying, ‘You’re getting what you need right now.’ That seems to help them . . . ”

According to Teacher A, working with six-year-old children developmentally is both a blessing and a barrier, as it is hard for young children to comprehend “why the work ethic is so important, and it’s hard for us to understand how to balance work so to the children, it doesn’t really seem like work.” She concludes, “You know, play is the work of children, so how do you set it up in a way that it can be inviting and engaging, and not just drudgery. So, I think that’s a bit of a barrier at times.” With regard to a barrier that cannot be adequately addressed, Teacher A states, “That is the only hard thing about being in a place that never stands still is that because we are learning and growing all the time, I wish sometimes, I wish I could have them back. I think if I knew then what I know now. . .” FAB strives to develop lifelong learners; however, in order to
achieve this goal, teachers must be lifelong learners to be able to instill it in others. This topic will be explored further in the next section.

Promoting a Dynamic and Collaborative Learning Community

At FAB, the RtI leadership team is the glue that holds everything and everybody together and the engine that drives the RtI initiative forward. There is an atmosphere of interdependence as all involved must learn and grow in order to improve the prospects for a child at school. The view is that a collaborative community cannot afford to let any child be a failure in school. In order to accomplish this goal, everyone has an important role to play. If one component is dysfunctional, it affects the whole. An example includes teachers on a given grade level team each teaching their own curriculum. Those involved at FAB must walk the walk rather than just talk the talk. Ideally, all must participate, contribute, and reflect. Inevitably, many previously held assumptions must be challenged.

Groups become communities when they interact with each other and stay together long enough to form a set of habits and conventions, and when they come to depend upon each other for the accomplishment of certain ends (Wilson & Ryder, 2003). Learning cannot be separated from action so a community shares a consensual goal to support each other in learning. Everybody expects to learn and is prepared to engage in activities at least partly for that reason. The term *dynamic* is added to distinguish the construct from traditional, centralized groups of learners found in many classrooms. In a dynamic community, all members share control, and everyone learns, including the *teacher* or group leader (Wilson & Cole, 1997). Transformative communication is the norm, with both sender and receiver of messages changed by the interaction (Coburn, 2001; Ryder, 1995). In a classroom where the teacher assigns a project, expecting the students to learn something but not expecting him or herself to learn, such a classroom would not yet be a dynamic learning community because all participants are not
engaged in the learning experience. Dynamic learning communities are generally characterized by things like distributed control, commitment to the generation and sharing of new knowledge, flexible learning activities, and community members having autonomy. In addition, there are high levels of dialogue, interaction, and collaboration, and problems and/or goals play a role in the constructive process (Wilson & Ryder, 2003).

In this section, three categories of promoting a dynamic and collaborative learning community, as well as teacher learning will be described. They include Response to Intervention leadership: Providing support and resources, a deliberate plan for professional development, and empowerment and expanding roles.

**Response to Intervention Leadership: Providing Support and Resources**

RtI leadership team members have key roles in determining school culture and climate, so each member has unique functions and responsibilities as they provide systematic supports, and endeavor to implement and facilitate the RtI model. Those in leadership positions can be strong voices in constructing understanding through structuring collaboration in formal settings. Formal SST and grade level team meetings can be productive places as time is provided for teachers to revisit and rethink new practice. In addition, facilitators make decisions about which RtI messages to emphasize, and which messages to filter out. Professional development in schools, and designed meeting activities, can be structured in ways that privilege certain messages over others. RtI leaders can help teachers construct the “practical knowledge” necessary to turn abstract ideas into something that works in their classrooms (Cochran-Smith & Lytle, 1999; Coburn, 2001; Spillane, 1999; McLeskey & Waldron, 2004).

A frequent mistake made by researchers and other facilitators of change is the collection, organization and documentation of student outcome data without working with teachers to help them understand how to use this data to benefit students and their own teaching (Cochran-Smith
& Lyle, 1999). If teachers are not taught how to use this data, they will continue to rely on observable student behavior instead of more effective assessment data. In addition, the research literature indicates that merely exposing teachers to effective practices via inservices or one-day workshops is insufficient to evoke sustained change in teaching practices (Boardman et al., 2005; Fuchs & Fuchs, 2001). Providing opportunities for teachers to attain mastery of effective practices increases the likelihood of continued use over time (Huberman & Miles, 1984). Conceptually, teacher’s benefit from opportunities to construct understanding of interventions, and link research ideas to classroom situations and problem-solving through discussion with colleagues, consultants, and other professionals (Englert & Rozendal, 2004).

The implementation of RtI creates an opportunity to encourage teachers to engage with information that at times, challenges pre-existing ways of doing things. Leaders in schools can also find ways to provide greater access to knowledge resources. The provision of sufficient resources is critical to help teachers understand new approaches or materials in sufficient depth to be able to make the kinds of principled professional judgments necessary to bring them into their classrooms (Coburn, 2001; Cohen & Hill, 2000; Spillane & Jennings, 1997). Furthermore, connections to individuals with deep knowledge of reform practice may be a key attribute of collective settings that encourage teachers to move beyond incremental changes in practice (Coburn, 2001; Spillane & Jennings, 1997). Teachers need access to greater knowledge resources at the school site on an ongoing basis (Coburn, 2001).

RtI leadership team members made it a point to sit down and define the leadership team, as well as the purposes of it. Participants include the Reading Coach, Director of Special Services, School Psychologist and Professor in Residence, Assistant Principal, Guidance Counselor, and the Intervention Support Teachers. It should be noted that the RtI leadership team members also
participate in the SST problem solving meetings. It was determined the RtI team would meet frequently, though not as often as the SST, and the intervention support teachers needed to be a part of the leadership team to bring the concerns of the teachers to the table.

Like the SST, the RtI Leadership Team would be responsible for overall monitoring, and making decisions with the teachers about students with regard to curriculum and tiers of intervention. Other major responsibilities include constantly thinking about how the RtI program is evolving (e.g., structure and processes), monitoring how things are playing out in a general sense, and supporting the general education teachers, especially the new teachers. With regard to reading curriculum and tiered intervention, the RtI team would oversee treatment fidelity, and define and coordinate intervention while planning for the support needed. In addition, the RtI team would make sure that parent communication was happening and establish how that would be accomplished, along with monitoring program data and student progress to demonstrate to teachers that students were getting the needed intervention. Finally, the RtI team would be responsible for coordinating services between different support teachers (e.g., Speech and Language, Occupational Therapist, and ESE), and finalize decisions regarding student placement and scheduling decisions.

FAB has a history of placing a premium on encouraging everyone to work together to establish a culture of collegiality and collaboration. The members of the RtI leadership team possess a wealth of knowledge and expertise, and they make themselves readily available to each teacher. This is important because according to Spillane (1999), having connections to those with extensive knowledge of reform practice may be a critical feature of settings that want to support teachers moving beyond small changes in practice. Not only can teachers talk to each other, they can talk to RtI and SST members to work through technical and practical details in
order to decide on RtI components such as Tier II reading intervention being provided by
teachers in the classroom.

As stated in an earlier section, the RtI Leadership Team is constantly evaluating how
things are going, which has resulted in changes. The primary example explored under
collaboration and problem solving was highlighted when two first grade teachers addressed RtI
District Workshop participants. One of the RtI facilitators asked the first grade teachers what
they thought about the use of data in the RtI process. Teacher A responded, “with regard to SST
meetings, FAB had a good aha moment recently. The meetings during planning periods seemed
rushed, so the time was expanded and that helped.”

Other changes implemented by the RtI Leadership Team included providing teachers with
the progress monitoring data before SST problem solving meetings, having intervention teachers
work with all of the students in a classroom, not just the ones who are struggling, and better
coordination between what was happening in intervention and the classroom. In addition,
emphasis was placed on better communication to parents about instructional changes (e.g.,
moving from Tier II to Tier III), increased continuity between Tier III students and language
intervention students, and ensuring intervention support teachers were included in parent/teacher
conferences for Tier II and Tier III students.

The first grade teachers feel supported, which is “essential in a learning community. You
know, FAB has lots and lots of supports. There are a lot of demands on our time, but lots of
supports” (Teacher C). Teacher B appreciates how data collection has been organized for
teachers. She states, “The reading coach has done a lot of work researching the data, and sharing
with us how, historically, it is going. We have lots of support as far as our data collection is
concerned.” With RtI, the teachers appreciate having a “fuller, more complete picture of every
child, and you are doing it at definite intervals . . . I just think there are a lot of advantages for having support and having that information – to be able to be thinking and planning more in depth about your kids” (Teacher C). The next section looks at professional development, which is necessary in order to prepare teachers to implement critical components of an RtI model.

**Deliberate Plan for Professional Development**

There is a spectrum of professional development experiences that range from basic training to facilitating, sustaining, and improving a new innovation such as the RtI model. This includes a deliberate plan to promote use of evidence based practices, and sufficient administrative support to promote sustained practice (Kratochwill, Volpiansky, Clements, & Ball, 2007; McLeskey & Waldron, 2004). Learning communities and collaboration are considered essential factors in meeting the needs of each student and achieving mutual goals. Everyone at FAB is expected to develop, contribute, reflect, and challenge their own assumptions. Each has an important role to play given that simply possessing student outcome data and increasing knowledge of effective practices is often not enough to adopt and sustain evidence-based practices. Teaching practices utilized with students with a wide variety of learning needs are critically important, thus the culture at FAB must ensure that effective teaching practices are valued and widely practiced (Cook & Cook, 2004). In order to achieve effective development of RtI, a substantial amount of professional development is required. For example, implementing a multiple tiered model of intervention is no easy task as it transcends traditional formats and entails mentoring and guided assistance (Kratochwill, Clements, & Kalymon, 2007).

As stated earlier, FAB has provided ample opportunities for faculty and staff to attend workshops and conferences, as well other ongoing professional development such as involvement in the Florida Reading Initiative as trainees and trainers, participating in research and inquiry, as well as pursuing National Board Certification. Thus, the first grade teachers were
already trained/exposed to evidence-based practices, research and inquiry, benchmark
assessments and the resulting data, reflecting upon practice, and constantly working to expand
skills and knowledge.

Implementing an RtI model at FAB required a substantial amount of in-house teacher
professional development. Clearly, in preparing for RtI, there is a need for acquiring skills and
being able to integrate them into daily practice. According to Kratochwill et al. (2007):

Successful implementation of RtI is multifaceted and involves knowledge of evidence-based interventions, multtiered intervention models, screening, assessment and progress monitoring, administering interventions with a high degree of integrity, support and coordinated efforts across all levels of staff and leadership within the school, and sustaining systems of prevention grounded in an RtI framework. (p.624)

Instead, Knotek states, “teachers’ preservice training usually emphasizes grade level curricular
and instructional practices (p. 57).

To prepare teachers for continued implementation of RtI, the RtI Leadership Team had to
consider awareness and what information should be provided to teachers. Since FAB was in the
second year of implementation, special consideration had to be given to teachers new to FAB.
An inservice for all teachers was planned; however, it was decided that preliminary discussions
with new teachers with regard to RtI implementation was important. According to the reading
coach, “professional development may look different for a brand new teacher as opposed to
professional development for a teacher who is in their second year [of RtI implementation].”
The team did acknowledge that providing all teachers with professional development regarding
reading intervention was important. An inservice held on October 10, 2007 was co-lead by the
school psychologist and the reading coach. It provided an overview of essential information
with regard to RtI including why it was important to change, what RtI was, how RtI compared to
traditional approaches of intervention and identification, tiered interventions, the role and value
of data, as well as utilizing problem solving to make decisions about students (Waldron &
Ramirez, 2007).

With regard to examples of primary efforts on preventing reading difficulties at the
beginning of the school year, the reading coach made the following statement:

With first grade we know at the beginning of the year who is in Tier II as they have been
identified by the teacher and the teacher is providing services consisting of explicit,
systematic instruction on breaking the code. All students do not need that intensity of
support. The intervention support teacher has gone in [the classrooms] and coached on
how to get that up and running to help provide support on the connections between what
they're doing in Tier 1 and Tier II. At mid-year in first grade, we will begin Tier III. Tier
III groups will be no bigger than 4 and will happen outside of the reading block.

A little over a month later in a follow up RtI Leadership Team meeting, children needing
language support were the focus of discussion. According to the reading coach, “Most of the
children will not qualify for language due to the new state requirements,” so conversation
focused around how to target more of the speech and language therapist’s time addressing Tier I
and Tier II with the younger grades as part of the reading block. The bottom line was to figure
out ways to provide support for those students.

As referred to earlier, with support from their extended team members such as the reading
coach and the intervention support teacher, the first grade teachers have successfully navigated
and responded to dips in data with regard to oral reading fluency, nonsense word fluency, and
sight words over the past two years. The data in first grade has been very good this year. Last
year, the mid-year progress monitoring data was very different from this year’s mid-year data.

Upon reflection about this situation, Teacher A stated:

Well, I knew that last year’s mid-year data was not as high as I hoped it would be. It
helped me do two different things. The first thing it helped me do is be prepared if I saw
that again, because I knew by the end of the year, you know, we had put some things into
place. So that I felt that I did not need to be overly upset by the mid-year data, just use it
as a guide, and make plans accordingly, according to how the kids fit, and just know this is
our goal, this is where we’re going to get. So, I was prepared that I could possibly see a
trend, and that would be mid-year data that was low. The other thing I did, other than just
being prepared, was I decided, “Okay, what if we put in a few more things into place a little bit sooner. Could we prevent this little bit of a slump at the mid-year?” So that was the other thing that I tried to do knowing that that was a big assessment time.

When the other two first grade teachers were asked if ongoing professional development had impacted their thinking about data, their answers reflected their original stance along a continuum when it came down to their own views regarding student assessment data. Teacher B had been trained to conduct DIBELS assessments so she understood both administration and expected outcomes. With regard to data, she stated, “I know it’s usually included in whatever professional development I’m doing, it’s always suggested, so if it’s suggested, then I’m definitely, as a big fan of data, going to try and incorporate it somehow.” According to Teacher C, “It made more sense to me, and it seemed more valuable. It’s not where I was naturally drawn, but I have been intrigued by it.” She almost seemed surprised as she continued, “I find myself really studying the numbers, and knowing the different personalities, different learning styles, different kids, saying hmm, that’s interesting, they did that and they did that. I do a whole lot of comparing and contrasting. It’s been interesting to see what they’ve done.”

Clearly, strong professional development is a necessary component of effective program implementation and fidelity, especially in light of expanding roles that accompany an RtI approach. General education teachers, in particular, will play a prominent role as schools scale up to RtI implementation, and RtI facilitators depend on these teachers to understand and utilize RtI components, and bring effective core instruction and intervention into their classrooms.

**Empowerment and Expanding Roles**

Stakeholders will play a number of new and significant roles when it comes to implementing an RtI approach as schools strive to provide effective and needed intervention to all students who need support. These roles require putting aside previously held assumptions while making fundamental changes to general and special education instruction, assessment and
intervention. Collaboration and professional roles will depend on the school setting, as well as the amount of experience and training of those involved. The implementation of an RtI model requires changing instruction for at risk students to improve student outcomes, both academically and behaviorally. Schools must harness and effectively maximize their collective resources in an effort to meet the needs of all students (Canter, 2006; Ehrhardt-Padgett, Hatsichristou, Kitson, & Meyers, 2004).

As stated at the beginning of this chapter, the implementation of RtI requires teachers to enhance core reading instruction, establish consistency with scope and sequence, assume responsibility for Tier II interventions through differentiating instruction, and keep documentation on delivery of instruction as well as intervention plans. In addition, the teachers must effectively utilize collaboration and problem solving, recognize trends and patterns across the first grade and their class, analyze data in order to make data based decisions, and repeatedly respond to the data. Teacher A stated earlier that the changes were empowering for teachers and students. She explains in the following:

It seems like there’s a little longer watch time before you pull out the big guns. I think that requires me to carry a little bit more of the responsibility. And then it also requires the child to carry a little bit more responsibility because there might not be another support teacher in my room working with the group. You might have some kids working on their own a little more often. I think that that’s been good because it’s pushing our thinking.

The first grade teacher’s willingness to link assessment data to their reading instruction and intervention is an indication of how well the teachers have integrated what they have traditionally understood as within child variables with regard to learning disabilities, and transitioned to an ecologically focused RtI approach. This is a critical point as teachers and schools must focus on instructional variables in order for children to be successful. According to Kratochwill et al. (2007), “teacher skill and system factors are integrally connected and work together to result in improved student outcomes” (p. 624).
The implementation of an RtI model also creates opportunities, as well as new and expanded roles for school psychologists in schools. At FAB, perceptions about school psychologists have changed substantially. Teacher A and the first grade teachers understand that this researcher helps with progress monitoring and collecting data; however, they are “not sure if the role is so much about collecting as it is more about helping and analyzing the data.”

According to Teacher A:

I used to think of school psychology as a testing body. You know, the person that you refer to get further testing. Now I’m seeing that it can be more too . . . there can be help and feedback with things that are a little bit more typical as well. And it’s not just a matter of administering a test, but it also can be helping me understand what the implications are, and help me understand the results of different things, and how I can change my practice. And then I guess I’ve also learned that, I found out the school psychologist is willing to come in and be another set of eyes in a more informal type of observation and assessment as well, and not just be there for the formal assessment, and that’s been really good. People come in and do those kinds of assessments, so again, it’s another set of eyes when I’m looking at a child, and another set of ears, and another head when it comes to planning . . . I think when we analyze, based on a greater understanding again, of kids who may be a little bit different that the typical learner. The school psychologist can make recommendations that either have to do with implementation of an intervention or maybe further testing that can give us more insight into that particular child. That’s the way I see a school psychologist.

Teacher C reports that school psychological services have “become more of an integral part” of her teaching experience, and it has increased throughout the years since she has been at FAB. Prior to FAB, these services were virtually nonexistent, and she feels FAB is “fortunate to have the support and resources.” When it comes to a school psychologist’s role in collecting data, Teacher C states they “definitely spearhead the planning and they make it happen, they set up time tables, and get people here, and get the results printed off. They’re little fairy godmothers.” With regard to a school psychologist’s usefulness when it comes to analyzing data, consultation, or facilitating the use of the data, Teacher C concludes, “I just think ongoing conversations in situations with kids that either are really outside the norms or just kind of mysterious for whatever reason, those kinds of conversations with other people are helpful.”
Teacher B adds her perspective to how the roles of school psychologists have changed at FAB as she stated:

Well, when I first started here, it was just a person that tested, and then reported, saying yes or no as far as staffing or different programs were concerned. Now I see it more as a broader range in helping with behavior, helping academically, just being a support for the teacher, as well as the child and the parent. It’s a really nice progression as far as helping the teacher be successful in her classroom . . . You progress monitor my students, you establish rapport with them so they’re hopefully truly showing what they can do in that period in time, you share your information with me, we talk about it, and we celebrate the kids that do good. You are also part of the SST meetings and we talk about the data.

With regard to additional supports from school psychologists or other fields that might be necessary to facilitate the use of the data, Teacher B does not think anything is lacking, although she adds, “It would be great to have you in my room full-time. Because you know, especially with some of the kids with their social behavior stuff, it would just be nice to say, ‘Let’s go ask Mrs. Kort.’ It would be very nice.”

According to Kratochwill et al. (2007), “RtI, implemented within the context of a multitiered prevention model, is perhaps, more than any other school improvement strategy, equally dependent on the skill of educators and the system in which RtI occurs” (p. 624). This leads to consideration of the ways FAB has prepared its’ teachers in conclusions about promoting a dynamic and collaborative learning community.

Conclusions about Promoting a Dynamic and Collaborative Learning Community

Implementation of an RtI model is most beneficial to all those involved if everyone buys into the system. In order to develop a dynamic learning community, everyone must subscribe to learned responsibility. According to Hoagwood and Johnson (2002), the RtI focus on curriculum-based assessment, problem solving on multiple levels, and tiers of intervention starting in general education will necessitate substantive changes in how psychologists, teachers
and other stakeholders individually and collectively carry out their expanded roles and responsibilities.

Since the implementation of an RtI approach, the students at FAB and their issues have been more effectively addressed, and not passed on year after year, from classroom to classroom. The first grade teachers believe that one of the biggest benefits of core reading instruction and multitiered intervention is that children “can’t fall through the cracks” because they are being monitored, and the teachers and the school knows where each child is functioning academically at any point in time. The teachers have embraced added roles and responsibilities requiring them to consider a variety of instructional variables as they utilize evidence based practices in core reading instruction and intervention. The teachers are confident they are a team that has the support, resources, and access to deep knowledge allowing them to take their practice to the next level. According to Teacher A:

I do like the fact that we refer kids cautiously, that we try many things, adjusting our core, and adjusting our tiers. I have had times when I’ve wondered, “Is the child disabled, or is the teaching disabled?” What is the deal here? So if we can comfortably learn how to tweak our teaching to help match the child, then that’s what we should try to do.

The shift has empowered the first grade team as their students are not handed off any more due to misguided belief that all of their teaching options have been exhausted and they are helpless to intervene. Instead, the teachers collaborate and problem solve with other stakeholders as they assess the data and request additional strategies in order to maintain control over reading instruction/intervention and each student’s learning.

It is no coincidence that two first grade teachers were approached to speak to RtI District Team Workshop participants in December 2007. If the first grade was touted as the model for RtI this academic school year, then the first grade teachers represented the dream team who demonstrated awareness and conceptual understanding of key RtI components, as well as the
ability to acquire and apply core reading instruction skills and intervention strategies. The
workshop participants were extremely interested in what the first grade teachers had to say,
especially in light of the fact that teacher buy in to the RtI approach at their respective schools constituted one of their biggest concerns.

Site and teacher preparation were important factors in successful RtI implementation. As a laboratory research school, FAB has had a long standing commitment to collaborative culture and learning, the generation and sharing of new knowledge, maximizing resources, and members who constantly strived to take practice to the next level. The first grade teachers had considerable teaching experience at FAB as Teacher A had been there for over 20 years, Teacher B for 10 years, and Teacher C for 11 years. Having been trained in areas such as implementing evidence based reading practices, and benchmark assessments and goals resulted in teachers being prepared in critical areas prior to formal RtI implementation.

With a firm foundation in place, RtI leaders were able to focus on areas such as organizational capacity, staff support, program fidelity, and other critical RtI components (Kratochwill et al., 2007). In order to proceed with implementation of RtI at FAB, it was clear that the RtI Leadership Team needed to raise awareness of key RtI components, as well as promote conceptual understanding, skill acquisition, and application (see Knotek, 2007; Showers & Joyce, 1996). As referred to earlier, to address awareness and promote conceptual understanding, the school psychologist and the reading coach presented an RtI inservice to the teachers in October 2007. The presentation went systematically through a comprehensive overview of essential information and important features of the RtI model. One major focus set for this academic school year was to enhance collaboration and problem solving in SST meetings (Waldron & Ramirez, 2007). Ample evidence presented throughout this chapter indicates the
first grade teachers are able to articulate important features of this model including collaboration, problem solving, the tiers of intervention and differentiation of instruction.

An individual’s increasing conceptual understanding of interventions is made possible through modeling and demonstration. At FAB, the reading coach helped facilitate core curriculum and scope and sequence, while the intervention support teacher was involved with training and coaching of Tier II interventions. Teacher C states, “I think the reading coach is important – she does a lot to support us. O. Gillingham is a strong intervention teacher and has helped me with those reading materials. Just to see her style and her pacing has been instrumental in helping me. There is a sense of being on a team.” According to Knotek (2007), RtI “presupposes that a careful assessment for intervention will allow many students to have their needs met through targeted delivery of efficacious instruction” (p. 59). The first grade teachers understand that there is an important link between assessment and instruction and intervention. According to Teacher C:

I feel like it’s really essential to know what skills your kids have and what skills they need in order to plan. My plans can change on a very frequent basis, if it’s an activity, or if any child doesn’t get a certain skill or something, then they’re part of a group that gets some extra practice, so it can impact my groupings. There are some groupings that stay fairly constant, but there’s always coming and goings into those groupings and those that need extra help. I think it’s really critical to keep an eye on what your kids are mastering or you’re not best meeting their needs.

Teacher A adds, “one of the things I like about curriculum-based assessment is the feeling of accountability, and I think that it’s a good system to have in place because I don’t think we want to short cut anybody, and so I think the system is in place for a reason that way too.”

Skill acquisition at FAB is hands on with follow up to determine treatment integrity. Teachers have Wednesday meetings, grade level team meetings, SST meetings, and informal meetings with their extended support team providing opportunities for collaboration, problem solving, interaction, and deep engagement. The intervention support teacher has helped teachers
implement Tier II interventions, modeled, demonstrated, provided feedback, conducted fidelity checks, and ensured that Tiers I, II, and III have continuity and are complimentary.

With regard to application of skills, “a teacher who is able to implement the RtI process with fidelity to meet the academic needs of students with a range of academic problems will have successfully attained this level of professional development” (Knotek, 2007, p. 58). In the final analysis, the most important factor for schools and their attempts to provide professional development training is whether this translates into successful outcomes for students, and the data in first grade has been impressive. For example, the reading coach held a mid-year DIBELS data meeting with each grade level team. RCM greeted the first grade teachers by saying, “Hello, there’s not a red kid on the sheet!” With regard to the DIBELS data, this year’s mid-year data was higher than the end of last year’s data. In another example from the last SST meeting in April, the reading coach observed, “When we move to Teacher B’s Tier III group, there’s no data to indicate they belong in Tier III any more.” At the same time, Teacher A shared what she loved most about what the reading coach said when the first grade data was looking high. She stated, “I loved that she felt comfortable saying to us, ‘Your data looks high, but don’t take that as a sign that maybe it’s time to coast.’ I love that, and I think that it’s great that we can all say, okay, just spur us on, let’s finish out really strong.”

In addition to preparing teachers, FAB has become an important training ground for aspiring school psychologists. N. Mentor, the current School Psychologist and Professor in Residence, established a place for school psychology graduate students to develop skills and take it to the next level in the 2002-2003 academic school year. In six years, the view of school psychologists has shifted from a “testing body” to team members involved in collaboration and problem solving, providing consultation and support to teachers, as well as helping teachers
understand and utilize the data. School psychologists have extensive training in academic and behavioral interventions, consultation, research, counseling and assessment, and these kinds of skills are useful as schools implement RtI procedures (Canter, 2006).

Teaching and learning networks, teams, and partnerships flourish in school communities that view collaboration and learning as the norm. Such communities understand the powerful potential of teamwork, and choose to harness this energy to accomplish goals (Englert & Rozendal, 2004). According to Walther-Thomas, Korinek, and McLaughlin (1999):

These schools believe that all individuals are valuable to the community. Formal and informal support structures are developed to ensure that all participants are successful. In addition, these schools provide opportunities for all members to contribute to the well-being of the community, because every person has skills, talents, knowledge, and experiences to offer that will make the school a better place. (p. 3)

Characteristics of dynamic and collaborative learning communities include the delegation and distribution of professional responsibilities, established decision-making procedures, shared knowledge, experiences, and resources, and appropriate, well-developed, and well thought out accountability measures (Gersten, Chard, & Baker, 2000; Klingner, Arguelles, Hughes, & Vaughn, 2001). In addition, collaborative communities recognize the importance of dialogue to foster more effective problem solving and solution-finding through discussion with colleagues, consultants, and other professionals (Englert & Rozendal, 2004; Ross & Blanton, 2004).

Collaborative schools tend to be less hierarchical and more democratic. Furthermore, Walther-Thomas et al. (1999) state, “Collaborative communities often reflect openness in discussions, teaching that is personal but not private, clear respect for others’ opinions and beliefs, and a healthy sense of belonging to a group and working as a team” (p. 3).
CHAPTER 4
SUMMARY AND DISCUSSION

The purpose of this study was to gain understanding of the impact of data on teacher understanding and decision making within an RtI problem-solving model. In addition, the inquiry included an examination of the role of the school psychologist in the process of data collection, analysis, and service delivery. Data analysis produced three overarching themes that contributed to understanding factors that impact how teachers make sense of and use student assessment data, and how a school psychologist can facilitate this process. The three identified themes were: (1) making sense of the data through interpersonal interaction; (2) challenging personal assumptions and thinking about one’s practice; and (3) promoting a dynamic and collaborative learning community.

The following is a brief review of the conclusions for each theme presented previously in Chapter 3. With regard to the first theme, making sense of the data through interpersonal interaction, it was revealed through interviews, observations, and document review that FAB’s decision to implement the RtI model required a substantive change and paradigm shift in how stakeholders thought about general and special education, student learning needs, assessment and evaluation, the impact of data, as well as decision-making processes. Moving away from outdated ways of doing things, the newly formatted problem solving team meetings represent the heart of the RtI process by utilizing and promoting problem solving, collaboration, deep engagement, in depth conversations, joint examination of the data, and the knowledge and expertise of faculty and staff. Both the problem solving approach, and teachers making sense of the data through interpersonal interaction, are highly iterative and recursive processes resulting in a continuous cycle of improvement. The first grade teachers believed they were a team, and valued the provision of professional development, an extensive support system, access to
expertise and deep knowledge, and the use of data as an important tool to ensure positive student outcomes. Maintaining one’s balance and finding time to do everything that needs to be done can be a barrier. At the same time, the teachers realized how critically important it was not to leave first grade readers behind, which prompted them to challenge their own assumptions, think about their practice, and connect assessment data to classroom instruction and intervention.

The second theme explored challenging personal assumptions and thinking about one’s practice. Although the first grade teachers started out in different places with regard to how they viewed student assessment data and other core principles of RtI, they all challenged their assumptions, bought in, and eventually come to similar conclusions about the value of data, and how it connects to their instructional practice. Each of the teachers understood that one of the biggest benefits of RtI was that students did not fall through the cracks unnoticed any more because FAB was monitoring their progress. In addition, they understood that using data to make decisions was an iterative process via ongoing assessment, planning, implementation, and evaluation. Again, the goal was continuous improvement. Because the teachers recognized the purpose of this process, they also understood the value of data as an important tool. Unexpected results or dips in data constitute red flags indicating areas that teachers must pay attention to and respond through instructional changes. This also allowed teachers to focus their instruction in order to better meet the needs of students.

The third theme pertained to promoting a dynamic and collaborative learning community that looks to substantive professional interaction with colleagues to support an RtI approach. The RtI focus on curriculum-based assessment, problem solving on multiple levels, and tiers of intervention starting in general education, necessitated substantive changes in how teachers, psychologists, and other stakeholders individually and collectively carried out their expanded
roles and responsibilities. The teachers have accepted additional roles and responsibilities requiring them to consider a variety of instructional variables as they utilize evidence based practices in core reading instruction and Tier II intervention. The teachers enjoyed being on a team and believed they had the support, resources, and access to deep knowledge and expertise that allowed them to take their practice to the next level. Thus, the shift to an RtI approach empowered the first grade teachers as they collaborate and problem solve with other stakeholders, jointly assess the data, and request additional strategies in order to improve reading instruction/intervention and each student’s learning.

As a research laboratory school, FAB and the first grade teachers were well positioned before RtI implementation due to a long standing commitment to the generation and sharing of knowledge and best practices. With this strong foundation in place, RtI Leadership Team members focused on raising awareness of critical RtI components, promoting conceptual understanding, skill acquisition, and application. In the end, the most important factor for schools and providing professional development training is whether this translates into successful outcomes for students, and the data in first grade has clearly been impressive.

Everyone in the school must be engaged in the learning experience. There is an atmosphere of interdependence as all involved must learn and grow in order to improve the prospects for every child at school. Establishing this kind of atmosphere entails fostering communication and practical inquiry, ongoing professional development, overcoming barriers, and working together. The view is that the community cannot afford to let any child be a failure in school.

Although several of these thematically-linked conclusions might be helpful to other schools implementing RtI models, there will be variations in how different schools apply these strategies in particular settings. As stated earlier, the RtI Leadership Team and SST members
played a critical role in facilitating the RtI model at FAB; however, many schools may not have systematic coordination of support personnel and resources in place. Through examination of the data, three general ideas were identified related to teachers making sense of the data, utilizing the data, and how a school psychologist can facilitate this process. The remainder of this chapter will discuss these possible implications, as well as look at limitations of this research, and explore future research agendas.

**Discussion**

Three main ideas relevant to the use and sustainability of an RtI model and evidence-based practices include: 1) site and teacher preparation; 2) teacher development and support within an RtI model; and 3) professional development with regard to school psychologists.

**Site and Teacher Preparation**

According to Kratochwill, Volplansky, Clements, and Ball (2007), “as with other systemic school efforts, implementing RtI requires change on many levels, with the most significant change pertaining to the professional practice of education” (p. 619). In planning to implement an RtI approach in reading, one has to consider how FAB prepared the school site and its’ teachers. Factors such as site preparedness, teacher development, organizational capacity, and staff support ultimately impacts how an RtI approach unfolds in a particular school setting. FAB is a public school that serves approximately 1150 students in grades K to 12. The school places an emphasis on research, and has historically committed to demonstrate cutting edge best practices. In order to fulfill its research mission, the school population approximates the demographic composition of the state of Florida’s school age population. As a result, FAB is comprised of a diverse student population and provides a range of academic support services to students. Teachers and administrators are willing to engage in research to facilitate evidence-based practices and increase positive student outcomes.
As stated in Chapter 2, before implementing an RtI model, FAB already had many practices aligned with RtI (Waldron & Hayes, 2007). Teachers at FAB were trained in the five essential elements of reading instruction; they utilized differentiated reading instruction; a 90-minute block of reading instruction was provided, and there was an available basal reading program in grades K to 2. In addition, FAB was using and periodically analyzing screening and benchmark assessments; daily, evidence-based small group instruction was provided for students performing below expectations; and there were evidence-based materials readily available to support more intensive small group instruction and intervention.

It should be noted that getting FAB to the point where the school had so many practices aligned with RtI was an extensive process, and laying the groundwork took years. The results of this research indicate the preparation process was critically important to successful implementation of RtI. With regard to professional development, research findings indicate inadequate preservice training in related academic and instructional training such as curriculum based assessment, progress monitoring, graphing, direct instruction, and implementing evidence based practices (Kratochwill et al., 2007). Debate over what constitutes evidence based practices may be part of the reason teachers have not been adequately trained (Heward, 2003). Another barrier to training may be attributed to the antimeasurement, antibehavioral, antitesting, or antiscientific perspective of some general and special education educators (Kratochwill et al.)

As a Florida Reading Initiative (FRI) professional development site for effective reading instruction, FAB believes their teachers should be trained in evidence based reading practices. Historically, there was a school-wide focus on reading for at least 7 years before RtI implementation. Teachers and other stakeholders held countless conversations addressing questions such as what is core instruction, and what kinds of interventions do students need? In
addition, L. Grant, the former reading coach and newly appointed director of outreach and professional development, started putting the benchmark assessment data on worksheets to give to the teachers, thereby effectively exposing them to the data over the years.

Clearly, FAB has emphasized teacher development, as well as cultivating certain teacher attributes and attitudes that would eventually impact receptiveness to new innovations. For example, because the first grade teachers were involved in FRI first as trainees, and then as trainers, the teachers reported the professional experience of training other teachers required them to understand the five essential elements of reading instruction on an entirely new and conceptual level. The pursuit of National Board Certification prompted the teachers to reflect on their practice, which is an attribute they seemed to have retained. Involvement in inquiry and research has provided the teachers with an appreciation of scientific methodology and a sense of discovery, as results were not always what they anticipated. Attending and presenting at conferences has helped the teachers stay current with regard to literature and practice. As experienced and veteran teachers who love working at FAB, they trust that the professionals they work with will support them, and will also have thoroughly thought out any new innovation prior to implementation. The first grade teachers also understand that practice and professional preparation changes over time as evidenced by how differently they were trained when they were undergraduates. Thus, the teachers believe if their focus is firmly fixed on the best interest of their students, then they must commit to lifelong learning and continual investment towards improvement and refinement of their practice. As Teacher A indicated in Chapter 3, when the data looks good, that does not mean stop and rest, it means keep going as you may be on the right track.
FAB appears to have put themselves in an excellent position to implement an “RtI instructional model,” which is a term utilized “to refer to a school and classroom model for providing instruction to young students that can help to prevent the emergence of early reading or other learning difficulties” (Torgesen, 2007, p. 1). Torgesen (2007) asserts the validity of an RtI diagnostic approach to the identification of students with learning disabilities is critically dependent on the efficacy of any RtI instructional model implemented in a given school setting. According to Torgesen, “If students do not receive high quality initial instruction, and do not have available to them reasonable interventions if they struggle in the classroom, then far too many students will be judged to have learning disabilities when they are essentially victims of weak instruction” (p. 1).

Schools that are well prepared to implement a high quality RtI instructional model should continually focus on improving three areas. The first area concerns providing high quality core reading instruction with differentiated small group instruction, depending on student needs. Teachers should be encouraged to accomplish differentiated instruction in many ways, including group size, time, lesson structure, and focus of instruction. The second area pertains to ensuring reliable screening, benchmark assessment, and ongoing progress monitoring to identify students at risk for falling behind in reading growth. School leaders and teachers should be trained to use data from assessments like DIBELS to help them make important instructional decisions for students. The third area entails providing struggling readers with sufficiently powerful and effective interventions in order to propel their reading skills and development toward grade level benchmarks. Data derived from ongoing progress monitoring of student growth is intended to be a guide for teachers and problem solving teams in order to effectively adjust interventions to best meet student needs (Torgesen, 2007).
FAB first implemented an RtI model in the 2006-2007 academic school year in grades K to 2. In the second year of implementation, RtI was extended to 3rd, 4th, and 5th grade. Thus, a paradigm shift occurred with regard to understanding, utilizing, and making sense of the data collected. New and developing roles and activities were inevitable, and continuing professional development within an RtI approach will be discussed in the next sections, as this issue remains a centerpiece of concern.

**Teacher Development and Support within an RtI Model**

Theoretically, if an RtI instructional approach is effectively implemented in grades K through 3, then there should be fewer students with reading disabilities severe enough to warrant special education services. Torgesen (2007) presented data (over a 3 year period) on identification rates from 318 Reading First elementary schools in Florida utilizing an RtI instructional model. Results indicated significant reductions in the number of students identified as learning disabled. According to Torgesen, there were two possible reasons for the reduction. The first was utilizing the RtI instructional approach effectively reduced the number of students with serious reading difficulties in these schools. The second possibility impacting the reduction in identified students was because teachers and schools had developed increased skill and “confidence in their ability to meet the needs of students without referring them for special education. The training and support that has been provided thus far has given teachers and schools more instructional options to pursue before a referral is made for diagnostic evaluation” (p. 4).

This researcher proposes that the scenario described above is applicable to FAB as well. FAB has worked to increase teacher skills and capabilities to meet the instructional needs of a wide range of students by utilizing collaboration, problem solving, and data based differentiated instruction in classrooms. In addition, FAB has focused on developing an improved school
system with the ability to provide immediate and focused interventions for students identified through screening and benchmark assessments (Torgesen, 2007). With regard to teacher development in an RtI approach, taking responsibility for Tier II reading intervention was a significant and beneficial move for the first grade teachers. The first grade team’s willingness to take ownership of core reading instruction and Tier II intervention increased personal confidence in their abilities to meet the needs of students, provided empowerment as the teachers were able to maintain control over student learning, honed reading instruction skills, expanded instructional options, and allowed increasing focus of instruction over time. As a result, the first grade teachers have no desire to turn their students over to anyone else because they believe they are capable of improving learning outcomes for their students backed by the support and resources FAB provides.

There were several additional factors that helped the first grade team become the role model for RtI. Technically, research shows that providing access to effective practices via inservices or one-day workshops is not enough to evoke lasting change in teaching practices (Boardman et al., 2005; Fuchs & Fuchs, 2001). According to Huberman and Miles (1984) “large-scale, change-bearing innovations lived or died by the amount and quality of assistance that their users received once the change process was under way” (p. 273). In other words, there should be ample opportunities to practice where follow up is immediate and consistent, and feedback is specific and focused.

Wanzek and Vaughn (2007) agree with this assessment. The authors derived research based implications by synthesizing findings from 18 studies pertaining to students who participated in extensive early reading interventions rendering positive outcomes. Results indicated that anyone interested in putting extensive interventions in place must provide specific
intervention training, including feedback to ensure the quality of implementation. At FAB, the reading coach has helped facilitate core curriculum and an established scope and sequence, while the intervention support teacher has been involved with training, coaching, and providing feedback with regard to Tier II interventions. The first grade teachers reported this support was important for acquisition and application of skills in an RtI approach.

Wanzek and Vaughn (2007) also found the studies with the highest effects placed an emphasis on phonics instruction as well as text reading. With an inclusion model in place at FAB, the teachers understood their students benefited from core reading instruction and Tier II interventions taking place in the general education classroom, a factor promoting better consistency and connectivity between instruction and intervention. As Torgesen (2007) stated earlier, interventions must be sufficiently powerful to accelerate reading performance of struggling students toward expected benchmarks. In addition, teachers should also be able to integrate interventions with current teaching practice and conceptions of teaching (Gersten, Vaughn, Deshler, & Schiller, 1997). The fact that FAB had achieved well developed site and teacher preparation as evidenced by the many practices aligned with RtI before implementation allowed the first grade teachers to take their practice to the next level by integrating data into their own instructional framework.

According to Englert and Rozendal (2004), conceptual opportunities include building conceptual understanding of interventions and linking research ideas to classroom situations and problem solving through discussion with colleagues, consultants, and other professionals. Structurally, FAB scheduled time for interpersonal interaction, deep engagement, collaboration, and problem solving in the form of SST meetings, grade level team meetings, and Wednesday afternoon inservices. According to the first grade team, the SST meetings represented the heart
of collaboration and problem solving where joint examination of the data occurred, and data based decisions were made. The RtI Leadership Team members made three critically important decisions with regard to the SST meetings. The first was the use of floating substitute teachers hired three times a year (coinciding with benchmark assessment) to enable grade level teams to attend SST meetings for a two-hour period. The second was to pull the resulting data together for the teachers and make sure they were able to look it over before each meeting. The third was to ensure all three teachers at each grade level team were in attendance during the problem solving meetings. Not only did this arrangement allow participants to systematically consider data for all students at each grade level, this is the forum that prompted the first grade teachers to gain deeper understanding of the link between data and practice.

The extended SST meetings were framed in specific ways to emphasize the link between data and core reading instruction and intervention. An example of this framework was illustrated in the first two-hour problem solving meeting held in October 2007. The first question the reading coach asked the teachers was, “As a whole, as a grade level, what trends are you seeing in the data?” Teacher response indicated sight words and nonsense word fluency were significantly below benchmark. The reading coach agreed as she stated the team was “looking at almost half of the students in each class.” The next question the reading coach asked was, “What do we need to consider for core instruction that might have an impact on progress?” This question established the connection between data and instruction, prompted the SST members to collaborate and problem solve, and conveyed the message and expectation that the team was capable of effectively addressing the instructional issues raised by the data. Each teacher shared what she was already doing instructionally with regard to sight words and decoding, and then different team members offered suggestions to improve instruction including additional
opportunities to practice, using new scholastic sight word books already ordered, and utilizing sight word poems with accompanying activities.

According to Teacher A, the first grade team left the meeting thinking about sight words and decoding, and how to improve instruction. Follow up included ongoing conversations with the reading coach and each other to share strategies and perceived effectiveness of approaches. Joint examination of benchmark assessment data in January 2008 showed strong student response and growth to core reading instruction and intervention, including sight words and decoding, across first grade. The first grade teachers had the skill and determination to respond to the data, which resulted in positive student outcomes. The experience strengthened the link between data and instruction/intervention, and made it highly likely that the first grade teachers would continue to respond to the data in the future. It should also be noted that the teachers were constantly checking to see if the DIBELS data and their own assessment of student progress were aligned. Collecting multiples pieces of data supported instructional and diagnostic decisions, reinforced an iterative problem solving process, and contributed to the validity and consistency of data.

Abbott, Walton, Tapia, & Greenwood (1999) state, “helping teachers learn to use a problem-solving method of inquiry that links change in practice directly to change in student performance is fundamentally important” (p. 349). Seeing their students make progress over time via benchmark assessment and ongoing progress monitoring was extremely motivating for the first grade teachers. Positive student response to core reading instruction and intervention validated the teacher’s hard work, rewarded each teacher’s attempt to respond to the data, and motivated the teachers to renew their efforts. In addition, the first grade teachers appreciated receiving ongoing progress monitoring data results in graph form. Each student had ongoing
progress monitoring booklets with graphs on the front. After each data collection was concluded, the researcher graphed the results, and Xeroxed the front of the booklets to give to the teachers. The visual depiction of data was quite powerful as the teachers were able to see developing trend lines. As a result, Teacher A started conducting timed readings in her class in the second half of the year, and had her students graph the results. Soon, all the first grade classes were utilizing timed readings and classroom progress monitoring graphs. It should be noted the first grade teachers also appreciated the RtI approach as beneficial for high achieving students as well as struggling students. According to Boardman et al. (2005), for the facilitation of sustained use, teachers must perceive instructional practices as being effective for both typical students and students who are struggling.

Finally, the first grade teachers took their work very seriously because they understood that you really can’t leave first grade behind. According to Wanzek and Vaughn (2007), results of their review suggested early intervention starting in first grade is “associated with higher effect than interventions beginning in second or third grade. The difficulties students face in reading as they enter second or third grade are more complex than in first grade, making significant gains more difficult to achieve” (p. 557). This knowledge drove the first grade teachers as they were determined to make student success their primary focus.

**Professional Development with Regard to School Psychologists**

The third main idea concerning teacher’s understanding and use of data, and how support personnel can facilitate this process, is professional development with regard to school psychologists. According to Kratochwill, Clements, and Kalymon (2007), “in many respects, RtI is first and foremost a *system* of intervention within general education settings and practices” (p. 48). General considerations related to the adoption, application, and sustainability of an RtI model include a substantial amount of professional training, reconsidering and/or expanding
models of prevention, organizational capacity, available resources and support staff, parental involvement, and site and teacher preparation in a given school setting (Kratochwill et al., 2007). Understanding systems and system-level change is not a service that has been emphasized by practicing school psychologists or school psychology training programs. To effectively engage in system-level consultation, school psychologists need to understand and view human behavior through a social systems lens, utilize problem solving and collaborative planning procedures, and be familiar with principles associated with organizational change (Curtis & Stollar, 2002). Working with administration to facilitate system change, identify key leaders and important stakeholders, maximize “buy in,” and help in planning and carrying out faculty/staff training in preparation for implementation (e.g., evaluating student progress) are just a couple of critical areas that school psychologists should be addressing.

Pre-service and inservice school psychologists must seek out ways to make an impact as change agents at their respective school settings by making themselves available to their constituents, and seeking out opportunities to contribute to RtI implementation (Crockett, 2004). At FAB, building relationships, networking, focusing on understanding how the school operated, and providing quality consultation and assessment service to students, teachers, and parents was critically important to lay the groundwork for the researcher’s eventual contribution to the RtI initiative. N. Mentor, the FAB school psychologist and professor in residence, assumed a leadership role with regard to organizing and implementing an RtI approach in reading. Thus, the researcher had a prime opportunity to participate in elementary school meetings, grade level team meetings, SST problem solving meetings, RtI Leadership Team meetings, Research in Action and RtI District Team Workshops, which promoted ongoing interpersonal interaction and strengthened connections with stakeholders. The researcher was also able to bring to the table
qualitative information pertaining to progress monitoring, and add her perspective to collaboration and problem solving, consideration of the data, and decision-making with regard to tiered intervention.

Within an RtI approach, producing changes in student response is key, and this is the instructional task for educators. Thus, instruction must be correctly adapted to students’ need and skill level. It follows that RtI is also about detecting changes in student response over the academic school year, and this is the measurement task for educators. Thus, problem solving teams must consider measurement as the basis for adjusting core reading instruction and tiered intervention (Daly, Martens, Barnett, Witt, & Olson, 2007).

The school psychology team at FAB has played an integral part in measurement with regard to collecting DIBELS benchmark assessment data, as well as ongoing progress monitoring over time. Pre-service and inservice school psychologists must maximize their own “buy in” by establishing themselves as important and relevant members of newly formulated school teams. In this researcher’s opinion, it is easier for both aspiring and established school psychologists to rely on general knowledge, thus participating in RtI implementation broadly, and in many cases, peripherally. Similar to the first grade teachers, the researcher had to take ownership of her measurement role by taking it to the next level. This entailed considering the students’ social-emotional well being by establishing rapport with the students, and nurturing a relationship to make them feel special instead of picked on. This was an important factor in obtaining more accurate measurement, as the students were eager to participate in progress monitoring. The researcher made it a point to know established benchmarks, and how each student was functioning academically. This knowledge was important as it helped the researcher provide qualitative information to teachers derived during progress monitoring, contributed to
post measurement conversations about each student, as well as the validity and consistency of the data. As referred to earlier, the first grade teachers also appreciated getting the results of progress monitoring numerically and graphically represented as soon as possible.

Both established and aspiring school psychologists should be developing deep knowledge of areas such as alternative assessment practices, use and analysis of data, evidence based instructional practices and curriculum, and established benchmarks and goal setting (Kratochwill, Volplanisky, Clements, and Ball, 2007). School psychologists will be expected to utilize their extensive training in academic and behavioral interventions, consultation, research, counseling and assessment. In addition, they will have to work on extending their skill set in order to be more effective in areas such as consultee-centered consultation, looking at the consistency and validity of data, helping teachers understand and utilize the data, as well as provide qualitative information about individual students. FAB has provided numerous opportunities for this researcher to provide consultation and implement problem solving steps in individual cases with each of the first grade teachers, which has contributed to changing perceptions about school psychologists over time. Rather than just testing, school psychologists have become a more integral part of a teacher’s support team with a broader skill set, able to assist academically, behaviorally, and analytically.

According to Batsche, Curtis, Dorman, Castillo, and Porter (2007), statewide surveys developed to assess Florida’s capacity to implement a Problem Solving/Response to Intervention (PSM/RTI) model indicated that a substantial amount of training was necessary if school psychologists intended to play a significant role. Areas of training need included academic and behavior intervention development, problem solving steps, consultation, program evaluation, RtI, tiered service delivery models, progress monitoring, and goal setting. FAB has the capacity to
provide training in all of these areas, and a series of RtI District Team Workshops has already been implemented this past year. The next logical step for FAB would be to establish an RtI training program for pre-service and inservice school psychologists. Without relevant training programs, aspiring and established school psychologists must take the initiative to expand and develop skill sets in order to fulfill new roles.

**Limitations and Future Research**

A review of the literature reveals problems inherent in implementing an RtI model, and what it might take to remedy this situation. There still remains a need for further research and knowledge that must be gained from looking in-depth at individual school sites that have been successful in establishing many of the RtI research to practice connections. In this study, the three teachers on the first grade team at FAB were asked to participate in this study. After careful consideration of the goals of this research study, it was determined that collecting data from this teaching team would render rich information about their understanding and use of student assessment data, the impact on student decision making, the link between assessment and intervention, and the RtI model. The following sections explore the limitations of this study.

First, the researcher and the school psychology team played an integral role in collecting benchmark assessment and progress monitoring data necessary for promoting an effective problem solving model and a tiered system of intervention. The researcher also valued consulting and collaborating with the first grade teachers, and working as a team. Due to the affinity for collaboration and optimism, the researcher tended to gravitate towards consensus building, and had a tendency not to highlight the negative. As a result, the researcher may have exhibited the glass is half full bias, and thus, may not have given adequate voice to dissenting views.
Second, the teachers this researcher worked with on this study are all strong, skilled, and reflective teachers. The first grade teachers individually and collectively have a substantial amount of experience, a variety of training, and deep knowledge of curriculum and their practice. Results would probably have varied greatly if the research had been conducted with new teachers or even experienced teachers less willing to challenge their own assumptions and reflect upon their practice. New teachers tend to be overwhelmed with the day-to-day roles and responsibilities of classroom practice. Thus, a substantial amount of energy is expended trying to establish a firm foundation for teaching. In the researcher’s opinion, new teachers may struggle to handle the data, much less make connections between assessment and practice. On the other hand, there are teachers with considerable experience in the field; however, a multitude of factors may impede continual professional development. One of these factors may include low self efficacy and lack of confidence related to instructional options required to meet a wide variety of student needs. This may be related to other factors such as lack of preparation in the five essential elements of reading or lack of training in skills related to problem solving, curriculum based assessment, and evidence based practices. As a result, there are limitations in the ability to transfer information gleaned from this study to other teachers.

Third, FAB is a unique educational setting that has a history of promoting a collaborative culture of learning and working together in an effort to develop lifelong learners. Parents are very involved with the school, and all faculty members are highly qualified as over 82 percent hold advanced degrees. These factors are important as FAB places an emphasis on research. In committing to this mission, FAB has accepted the responsibility of investigating and disseminating innovative solutions and successful instructional programs to other schools and districts. Thus, FAB works closely with a nearby university’s College of Education on a variety
of projects geared towards enhancing student achievement and accomplishment. Instructional practice is investigated through faculty directed research, and formal studies assisted by university faculty, professors in residence, and graduate students. In addition, FAB has been the recipient of numerous grants including the Florida Reading Initiative (FRI) and the Eastern Regional Reading First Technical Assistance Center.

As a result, FAB was well positioned with regard to site and teacher preparation before RtI implementation. In addition, FAB has set up systematic coordination of support, personnel and resources to promote an RtI model. Schedules have been set up to facilitate common teacher planning time including SST meetings, grade level team meetings, and Wednesday afternoon professional development time. Again, these factors result in limitations in the ability to transfer information to other students and settings without similarly established systems in place.

This qualitative research study provided an in-depth look at an RtI problem-solving model developed at a single elementary school. More specifically, this study focused on data collection, the impact this data had on teacher understanding and decision making with regard to reading instruction and intervention, and the role school psychologists have in this process of RtI data collection, analysis, and service delivery. Presently, few studies exist that explore the factors promoting sustained use and strong implementation of an RtI approach. There are also few studies of teachers within an RtI model with regard to data based decision-making, and fidelity of implementation, instruction, and intervention.

Future considerations and implications for research in this area are wide and varied. For example, high quality professional development has taken on great importance with the advent of RtI implementation. What key variables should be considered when creating professional development plans relative to RtI for teachers and school psychologists? Reflecting upon
lessons learned and studying factors impacting effective professional development will increase the potential for strong implementation. What kinds of attitudes and attributes should schools try to cultivate to better prepare stakeholders? This kind of endeavor is a multifaceted process that cannot be isolated from a particular school setting’s structures for collaboration, schedules, instructional leadership, and curriculum selection.

There are a number of other possible questions to consider in future research. What are teachers actually doing in the classroom with regard to core curriculum and intervention? Are they doing what they say they are doing? What factors affect the validity and consistency of student assessment data? Is consultation effective with regard to implementation of an RtI model? According to Slavin (2003), “In every successful, dynamic part of our economy, evidence is the force that drives change” (p.12). Slavin goes on to observe that this has not been the case in the education realm where untested innovations have come and gone. Evidence-based reform prompts schools to utilize effective practices to improve outcomes for students in order to move to the next level. While researchers and educators work to implement effective RtI models, FAB might benefit from continuing to improve their existing model in order to move to the next level.
APPENDIX A
LETTER OF INFORMED CONSENT

Dear Teacher: December 2007

The purpose of this letter is to obtain your consent for participation in a qualitative research study with regard to ongoing data collection and the link to intervention within the Response to Intervention model. Specifically, participants will be involved in the following:

- **Interviews:** Interviews will be conducted with individual participants in ______________. Interviews will last approximately 40 minutes and will be audio recorded and transcribed. All identifying information will be removed from the transcriptions.
- **Brief demographic protocol:** Individual participants will be asked to fill out a brief demographic protocol related to pertinent background information such as age range, relevant experience, position(s) held at the school, and number of years employed at ASSETS.
- **Follow-up:** The investigator will send the transcribed data to each participant for review, to check the validity of statements made, comments, and clarification as needed.

Your participation in this project is voluntary and will provide insight in the development of a framework for other institutions to follow. Hopefully, this framework will encapsulate the standard practices of successful educational environments like that of FAB.

I do not perceive that there are any risks in your participation. There will be no compensation for participating in this study. Your identity will be kept confidential to the extent provided by law. You are also free to withdraw from the study at any time without prejudice.

Please sign and return this letter. A second copy of the letter is provided to you for your records. If you have any questions about the study or the procedures for data collection, please contact the investigator, Tanya L. Kort (352 214-4509 or tanyakort@hotmail.com), or the university supervisor, Nancy Waldron, Ph.D. (392-0723 ext. 232 or waldron@coe.ufl.edu). If you have any questions about the rights of research participants, you can contact the University of Florida Institutional Review Board (P.O. Box 112250, UF, Gainesville, FL 32611).

Sincerely,

Tanya L. Kort
Graduate Student, School Psychology

I have read the study’s description and agree to participate in the study. I have been provided a copy of this description for my own records.

________________________  _____________________
Signature        Date
APPENDIX B
TEACHER INTERVIEW PROTOCOL

Introduction:
Thank you for volunteering to take part in this research study. I want to talk with you about your experiences as a teacher with regard to ongoing progress monitoring data collection and how it impacts decision-making and intervention. Thus, I would like to ask you a few questions.

1. What kind of ongoing progress monitoring data are collected?
2. How often is data collected, how is it collected, and who oversees the process?
3. For what purpose is data collected?
4. Do you use baseline pretesting measures?
5. If so, whose responsibility is it to collect baseline data?
6. How are benchmarks determined?
7. How do you build upon this data throughout the school year?
8. What systems of support does FAB provide to facilitate data collection, data compilation, and data analysis?
9. What is ultimately done with the data?
10. Is the data collected appropriate for use with regard to intervention? If not, what would be more appropriate?
11. Does the data directly impact your curriculum and lesson plans – either class-wide, small group or individually?
12. Of the data collected, which pieces do you find are the most useful to you?
13. How does the data influence your expectations for the class and individual students?
14. What are the advantages and disadvantages of collecting this kind of data?
15. How do the data impact things like decision-making with regard to differentiation, grouping, individual interaction/instruction, as well as consultation services?
16. How might the data affect high achievers?
17. How does the data impact instruction in other academic domains?
18. Is there collaborative analysis of the data?
19. What is the school psychologist’s role in collecting data?

20. How do you think a school psychologist could be most useful to you with regard to collecting data, analyzing data, consulting with teachers, further assessment, and facilitating the use of data?

21. What other supports from school psychologists as well as other fields do you see as necessary to facilitate the use of the data?

Is there anything that you would like to add? Do you have any questions or comments?
Thank you for your time.
APPENDIX C
TEACHER FOLLOW UP INTERVIEW PROTOCOL

1. Many people have observed that first grade is the role model for RtI – why do you think first grade has been so successful in implementing this model?

2. What barriers does the first grade team encounter?

3. How has talking things over with others helped you make sense of the data and develop better understanding of your practice? Who do you talk things over with in informal settings?

4. Last year, the mid-year progress monitoring data was very different from this year’s mid-year data. One can see that last year’s 2006-07 data indicates how first grade teachers were responsive to their data. Alisa said she remembers everyone sitting around SST taking a close hard look at core and intervention to address issues. According to Marisa, first grade moved mountains in response to needs of students. What did you and the teachers do to respond to the needs of your students?

5. This academic school year, how have you and the other first grade teachers repeatedly responded to the data when the results are not what you expected?

6. Do you think core in first grade is as equally developed as intervention? How has the data informed Tiers 2 and 3?

7. How valid and consistent do you think the data is? For example, how consistent is the DIBELS data with your own progress monitoring results and classroom observations?

8. Can you tell me what you know about the history of curriculum based progress monitoring?

9. When you look at the data now – what does it mean to you – what have you learned?
APPENDIX D
DEMOGRAPHIC PROTOCOL

Your initials _______

1. Please indicate your age in years from the ranges below:
   □ 21 - 25    □ 26 - 30    □ 31 – 35    □ 36 - 40    □ 41 - 45
   □ 46 - 50    □ 51 - 55    □ 56 - 60    □ 61 – 65

2. What is your ethnicity?_________________________________________________

3. How many years have you been teaching at FAB? _____________________

4. How many years have you been teaching? _________________________________

5. Where did you graduate and what degree(s) do you hold?
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________

6. What previous experiences/training/certifications have been helpful in your role as a
teacher?______________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
LIST OF REFERENCES


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BIOGRAPHICAL SKETCH

Tanya Leimomi Kort was born on January 1, 1960, in Honolulu, Hawaii. Daughter of Paul and Emily Luke, she grew up with a younger brother, Paul Scott Luke. She spent her childhood years in Honolulu and graduated from Sacred Hearts Academy in 1978. She attended Methodist College in Fayetteville, North Carolina, and received a Bachelor of Arts degree (B.A.) in English, and a Bachelor of Science degree (B.S.) in biology. After graduation, Tanya spent several years in North Carolina before moving back to Hawaii in 1990. She then spent seven years teaching elementary students at ASSETS School, an independent school for students with dyslexia and learning disabilities. Tanya met and married Denny, her husband, and they moved to Singapore in 1998. She served as the principal of the Dyslexia Association of Singapore for two years. In 2000, Tanya moved to Gainesville, and she began her graduate studies in school psychology at the University of Florida in 2001. She completed her Master of Arts in Education (M.A.E.) degree in August 2006. She obtained her Doctor of Philosophy degree in school psychology in August 2008 at the University of Florida.