Improving Schools Through a Response to Intervention Approach: A Cross-Case Analysis of Three Rural Schools

Katharine Shepherd
George Salembier
University of Vermont

Abstract

While the basic tenets of the RtI model are well-established in the literature, few studies have been conducted to describe its implementation in rural schools. We conducted a qualitative study in three rural schools that had been designated as pilot sites by our state department of education. A cross-case analysis of the data collected through interviews, observations, and document reviews indicated positive changes, including (a) increased use of databased decision-making, (b) increased collaboration among general and special educators, (c) development of a common knowledge base around RtI, (d) re-definition of principals' roles, and (e) promising trends on statewide tests of reading achievement.

By many accounts, the Response to Intervention (RtI) provision included in the 2004 re-authorization of the Individuals with Disabilities Education Act (IDEA, 2004) is one of the most significant recent developments in education, requiring a renewed focus on collaboration among general and special educators for the purpose of promoting achievement among struggling learners (Fuchs & Fuchs, 2005; Harry & Klinger, 2007; Vaughn, Linan-Thompson, & Hickman, 2003). RtI has been conceptualized as an approach to instructing and monitoring the progress of all students for the purpose of ensuring that they receive interventions, supports, and accommodations, as needed, to meet local, state, and national standards (Stecker, Fuchs, & Fuchs, 2008; Yell & Drasgow, 2007). The model is predicated on a set of assumptions that includes the use of scientifically based curricula in the general education setting, regular administration of universal screenings, use of a problem-solving or standard protocol approach to making databased decisions, identification and use of a tiered system of intervention and support, assurance of fidelity in the delivery of instruction and targeted interventions, and ongoing progress monitoring for identified students (Batsche et al., 2006; Fuchs & Deshler, 2007; Harry & Klinger, 2007; Kame'enui, 2007). IDEA 2004 also allows use of an RtI approach to replace the aptitude-achievement discrepancy formula that has traditionally been used to document the presence of a learning disability (Fuchs, Fuchs, & Compton, 2004). A key principle of the RtI approach is its emphasis on early intervention and accountability for student progress within the general education classroom (Mesmer & Mesmer, 2008; Richards, Pavri, Golez, Canges, & Murphy, 2007).

To date, much of the research on RtI has focused on its theoretical constructs, the degree to which the model is a more accurate way of determining eligibility among students with learning disabilities, and/or the degree to which it is being implemented with fidelity within specific classrooms (e.g., Burns & Senesac, 2005; Case, Speece, & Molloy, 2003; Coyne, Kame'enui, Simmons, & Harn, 2004; Fuchs, 2003; Fuchs, Fuchs, Compton, Bryant, Hamlett, & Seethaler, 2007; Jenkins, Hudson, & Johnson, 2007; Kavale, 2005; McMaster, Fuchs, Fuchs, & Compton, 2005; O'Connor, Harry, & Fulmer, 2005). A number of studies have explored the predictive validity of specific reading assessments with respect to their ability to accurately identify children with reading challenges (Catts, Petscher, Schatschneider, Bridges, & Mendoza, 2009; Walker-Dalhouse et al., 2009), while others have explored the efficacy of particular interventions, and/or the degree to which teachers are implementing them with fidelity (Bryant et al., 2008; Daly, Martens, Barnett, Witt, & Olsen, 2007; Mesmer & Mesmer, 2008).

While the components and potential challenges of the RtI model have thus been described and debated in the literature, fewer empirically-based studies have investigated the implementation of RtI in authentic school settings, particularly schools in rural areas (Dexter, Hughes, & Farmer, 2008; Kovaleski, 2007). Implementing sites will need to consider the scope and intensity of professional development activities (Bergstrom, 2008; Kratowchwill, Vopiansky, Clements, 2008).

Author Note:
Address all correspondence to Dr. Katharine Shepherd (Katharine.Shepherd@uvm.edu).
Conducted interviews, observations and document reviews to identify and confirm the perceptions of teachers, administrators, staff, school board members, and parents regarding classroom and school-wide changes associated with initial and ongoing implementation of RtI. We also analyzed student achievement data in reading, as measured by performance on the state's mandated annual assessment (i.e., the New England Common Assessment Program or NECAP), to explore whether or not student outcomes appeared to be positively affected by implementation of the RtI approach. We conducted a cross-case analysis (Miles & Huberman, 1994) to identify the primary benefits, challenges, and limitations of the specific RtI approach used in the pilot program. In this article, we report the results of the cross-case analysis and preliminary student data in order to describe the implementation process and identify key questions and considerations for the future.

Research Methods

Site and Participant Selection

The Department of Education selected three sites to pilot implementation of an RtI model. Table 1 depicts characteristics associated with each of the schools selected through this process, including the pseudonym assigned to each school, and statewide comparisons as available for specific school and student characteristics.

Due to the small size of the three schools, we were able to interview all professional staff who played a key role in the implementation of RtI, for a total of 36 professional staff interviewees across the three schools. We also interviewed a sample of individuals at each school who represented the roles of paraprofessionals, school board members, and parents, for a total of 16 interviewees in this second category. In addition, the two consultants from the Department of Education participated as interviewees. Table 2 lists the study participants according to their roles in each of the three schools.

Data Collection

Research teams of 3 to 5 individuals collected data through site visits of 4 to 5 days at each of the schools, as well as 3 to 4 days of off-site data collection and follow-up. Each research team included one or both of the co-authors, as well as an additional special education faculty member from an institution of higher education, a principal from another rural elementary school, and/or a teacher. Prior to initiating the site visits, the co-authors met with the full research team on five occasions to review and revise interview and observation protocols and to develop consistent techniques for conducting interviews, observations, and document reviews. The semi-structured interview protocols consisted of 15 to 18 questions each. The
Table 1.

Comparison of Pilot School Characteristics

<table>
<thead>
<tr>
<th>Pilot Schools</th>
<th>Average Daily Enrollment</th>
<th>Town Population</th>
<th>Grade Levels Served</th>
<th>Students Eligible for Special Education</th>
<th>Students Receiving Free and Reduced Lunch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenfield</td>
<td>141</td>
<td>1,714</td>
<td>K-6</td>
<td>9.2%</td>
<td>43%</td>
</tr>
<tr>
<td>Willowdale</td>
<td>128</td>
<td>750</td>
<td>K-6</td>
<td>8.6%</td>
<td>48%</td>
</tr>
<tr>
<td>Pineview</td>
<td>102</td>
<td>314</td>
<td>K-6</td>
<td>13.7%</td>
<td>50%</td>
</tr>
<tr>
<td>State Average</td>
<td></td>
<td></td>
<td></td>
<td>14.9%</td>
<td>29%</td>
</tr>
</tbody>
</table>

Table 2.

Interview Participants by Role

<table>
<thead>
<tr>
<th></th>
<th>Greenfield</th>
<th>Willowdale</th>
<th>Pineview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Special education administrator</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Central office administrator</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Special educator</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Classroom teacher</td>
<td>8</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Speech and language pathologist</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Title I teacher</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Guidance counselor</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Special Education paraprofessional</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>School board member</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Parent</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>14</td>
<td>19</td>
</tr>
</tbody>
</table>

Interviewers asked the interviewees to describe their background and role in the school, as well as to comment on the following categories and their relationship to the implementation of RtI: (a) instruction and assessment, (b) building-based support team process, (c) special education eligibility, (d) roles and responsibilities of educators, (e) family and community, and (f) professional development. In addition, the interviewers asked the interviewees to comment on contextual and structural factors that appeared to positively or negatively affect implementation. We audio taped interviews with participants’ permission, transcribed the audiotapes, and analyzed them along with notes of observations and document reviews.

Researchers also conducted 3 to 4 classroom observations and 1 to 2 observations of building-based support teams at each site for the purpose of triangulating information obtained through the interviews. Classroom observations lasted approximately 30 min. each, during which time the researcher assigned to conduct the observation recorded detailed field notes on classroom practices, such as whole class and small group instructional activities, and the roles utilized by classroom teachers, paraprofessionals, and others involved in implementing
the Rtl approach. Observations of building-based support teams, known in our state as Educational Support Teams, elicited descriptions of the use of databased decision-making and development and follow-up on intervention plans designed for individual students. Documents reviewed during the site visits included written policies and procedures designed to inform teachers, families, and community members about the purpose and nature of the approach, as well as documents describing the teams charged with implementing the Rtl approach (i.e., Educational Support Teams, Rtl Steering Committees, etc).

**Data Analysis**

Following completion of the site visits, we coded and analyzed approximately 800 pages of interview transcripts, observation notes, and notes on document reviews using procedures associated with qualitative inquiry (Glesne, 2005; Patton, 2002). We began with a set of 12 initial codes derived from the interview protocols and review of the literature and used these to code two interviews from each site until an inter-rater reliability of at least 85% was established. The process for reaching reliability included individual coding, followed by a check of agreement among codes, and a discussion of differences of opinion about the use of the coding scheme. We resolved the differences through discussion and clarified them through the development of a revised coding scheme, which included more detailed descriptions of the meaning of each code and the addition of four new coding categories. We each then used the revised and annotated coding scheme to re-code the first two interviews from each school. A comparison of the re-coded interviews showed an overall agreement rate of 85%. Following this, we coded an additional three interviews from each school and found that our intercoder reliability continued to be at least 85% for each transcript. We then divided the remaining interviews, observation notes, and notes of document reviews so that each of us coded one half of the data for each school. We conducted two additional reliability checks, again showing an agreement rate of at least 85%. Table 3 depicts the final coding scheme used to code all interviews, observation notes and notes of document reviews.

Following this process, we entered the coded data into a data management system. Using the constant comparative method of analysis (Strauss, 1987), we reviewed each of the coded categories of data to identify initial themes that could organize and make meaning of the data gathered in each school. A research assistant prepared draft versions of individual site reports and distributed them to each of the three schools. Although each school was invited to submit suggestions for revisions to the report, none of the schools chose to do so. Finally, we conducted a cross-case analysis (Miles & Huberman, 1994) of the three reports. We created a matrix of themes emerging across the three sites and examined supporting data within each theme to look for similarities and differences in schools’ experiences with the implementation of Rtl. Through this process, we identified four themes that created a conceptual framework for understanding

<table>
<thead>
<tr>
<th>CP</th>
<th>Classroom practice/Tier I</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>Progress monitoring and universal screening</td>
</tr>
<tr>
<td>IN</td>
<td>Tier I and II interventions</td>
</tr>
<tr>
<td>EST</td>
<td>Educational Support Team</td>
</tr>
<tr>
<td>EL</td>
<td>Eligibility practices</td>
</tr>
<tr>
<td>RR</td>
<td>Roles and relationships</td>
</tr>
<tr>
<td>LD</td>
<td>Leadership</td>
</tr>
<tr>
<td>FAM</td>
<td>Families and Rtl</td>
</tr>
<tr>
<td>SB</td>
<td>School Board and Rtl</td>
</tr>
<tr>
<td>PD</td>
<td>Professional development</td>
</tr>
<tr>
<td>MI</td>
<td>Factors identified as most important to implementation</td>
</tr>
<tr>
<td>GC</td>
<td>Factors identified as greatest challenges to implementation</td>
</tr>
<tr>
<td>AD</td>
<td>Advice to others</td>
</tr>
</tbody>
</table>

Table 3.

Revised Coding Scheme for Rtl Data
factors that appeared to be associated with implementation of an Rtl approach. These are as follows:

1. Increasing the use of databased decision-making across Tiers I, II, and III;
2. Expanding teachers’ roles and relationships through increased communication and collaboration;
3. Creating a common focus, language, and knowledge base around Rtl and literacy; and
4. Transforming the role of the principal.

Findings
Our primary purpose in our presentation of the themes is to describe instructional and school wide practices that were common across the sites and indicated positive outcomes for teachers, principals, and students with and without disabilities. That said, we also include descriptions of the variations in implementation that seem most instructive with respect to understanding the challenges faced by rural schools as they attempted to take on systemic change in a relatively short period of time. The findings begin with a description of the underlying assumptions and characteristics of the Rtl approach as they were presented through the initial course and implemented at each pilot site and are followed by a discussion of the four themes emerging through the cross-case analysis.

Underlying Assumptions and Characteristics of the Rtl Approach Used in the Pilot Sites
At the outset of the study, we recognized that, while researchers and practitioners have achieved a degree of consensus regarding the basic principles of Rtl, the field has not endorsed a single model for implementation. As such, we conducted an initial interview with the state consultants during which they described the Rtl approach as they had presented it to teachers and administrators at each of the three pilot sites. The consultants constructed the Rtl course and resulting approach around the five premises described below. While their intent was to create a level of consistency across the sites, they recognized that actual implementation would be likely to vary in accordance with individual site characteristics, past practices, community contexts, etc.

Rtl as a general education initiative. The two consultants identified Rtl as a change process that was fundamentally a general education initiative rather than a special education initiative. In their minds, the primary purpose of the Rtl approach was to support the needs of all learners through the use of scientifically-based curricula, ongoing assessments, and a three-tiered model of service delivery that included implementation of instruction with fidelity. A second purpose was to use Rtl as a means of gathering data to be used in making eligibility determinations for students suspected as having a learning disability.

A three tiered approach to instruction and interventions. The Rtl approach used in the pilot sites referred to three tiers of instruction. Tier I was defined as instruction provided in the general education classroom using scientifically-based core curricula with differentiation, as needed. Tier II support was provided to individual students who were not responding to Tier I instruction, as identified through a review of their performance on universal screening measures, targeted progress monitoring, and other curriculum-based or standardized measures of achievement. Tier III instruction was reserved for students identified as eligible for special education services. In each school, an interdisciplinary problem-solving team known as the Educational Support Team supported classroom teachers in making decisions about whether to move students from one tier to another, and/or whether to refer a student for a special education evaluation.

Use of scientifically-based core curricula and interventions. The Rtl course devoted significant time to helping participants analyze their current core curricula in the area of literacy to determine whether materials could be described as “scientifically-based.” Core curricula and targeted interventions were considered to be scientifically-based if they were recognized as such by the What Works Clearinghouse, a website developed by the United States Department of Education, and/or if publishers provided information supporting this designation. The consultants also provided guidelines regarding what it meant to implement instruction with fidelity. They did not, however, endorse either specific core curricula or interventions implemented at the Tier II or III levels.

Common measures for universal screenings and progress monitoring. The Rtl approach used in the pilot sites required universal screenings to be administered to students three times per year, generally in October, January, and April. Progress monitoring of students receiving interventions was typically conducted every 2 to 4 weeks. While the consultants presented options for the types of assessments to be used in universal screenings, all three schools chose to use the assessments and data management systems available through AIMSweb (2008) for both universal screenings and progress monitoring.

Choice of a standard protocol and/or problem-solving model. The Rtl course also focused on ways to adapt schools' Educational Support Team processes to identify and develop plans for students in need of additional supports. The literature has identified both “standard protocol” and “problem-solving” as potential approaches for teams to use in
within the classroom or in small groups outside of class. Students requiring Tier II interventions received these instruction that was based in a scientifically-based core time" in which teachers began with whole class. A day included a common 90-min. block of "literacy II, and III levels. Evaluation systems as a way to determine whether or incorporated measures of fidelity into their teacher implementation, the principals reported that they had increased focus on the use of scientifically-based core curricula. Interviewees in each of the schools reported that their initial professional development experience provided opportunities for teachers and administrators to analyze and bring greater consistency to their core curricula. As one principal noted, “You have to start with the key concept that every student gets classroom instruction that is evidence-based.” Following implementation, the principals reported that they had incorporated measures of fidelity into their teacher evaluation systems as a way to determine whether or not teachers were using effective practices at the Tier I, II, and III levels.

In the Greenfield School, for example, each school day included a common 90-min. block of “literacy time” in which teachers began with whole class instruction that was based in a scientifically-based core curriculum and differentiated according to need. Students requiring Tier II interventions received these within the classroom or in small groups outside of class that brought together students performing at similar skill levels. As one teacher reported, “Everyone is moving during literacy time;” as such, students did not feel that it was unusual or stigmatizing to leave class for extra support. The principal was often present in classrooms, in part to determine whether instruction was occurring with fidelity. The flexibility of the system allowed teachers and paraprofessionals to engage in informal communication and sharing about each was doing, what was working and not working for individual students, and what changes might need to be made to improve literacy instruction at the classroom level.

Theme #1: Increasing the Use of Databased Decision-Making Across Tiers I, II, and III

Databased decision making within Tier I. When asked to describe changes associated with the implementation of RtI, nearly all interviewees began by describing the practice of universal screening that took place three times per year. Teachers reported that the graphs of student and classroom performance generated through the AIMSweb program were one of the most powerful aspects of the RtI approach, helping teachers identify students who might be in need of differentiation and/or increasing levels of support. They reported changes, such as “increased teacher talk” about students’ progress, a more “intentional, purposeful and systematic” approach to assessment and instruction, and an “increased sense of responsibility and accountability.” As one teacher commented, RtI has been something that, now that I see it, it’s what I’ve always been looking for. It’s a way of being able to tell how your students are doing at any point in time . . . it gives me a lot of feedback as a teacher as to how I can best teach my kids and which ones are being successful with (my instruction) and which ones are not.

Along with introducing universal screenings, adoption of the RtI approach was associated with an increased focus on the use of scientifically-based core curricula. Interviewees in each of the schools reported that their initial professional development experience provided opportunities for teachers and administrators to analyze and bring greater consistency to their core curricula. As one principal noted, “You have to start with the key concept that every student gets classroom instruction that is evidence-based.” Following implementation, the principals reported that they had incorporated measures of fidelity into their teacher evaluation systems as a way to determine whether or not teachers were using effective practices at the Tier I, II, and III levels.

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Databased decision-making within Tier II. General and special educators described a number of ways in which regular progress monitoring of students receiving Tier II interventions helped them to improve their skills in databased decision-making. Most teachers reported that they used the AIMSweb probes to conduct progress monitoring every 2 to 3 weeks. They found the visual nature and frequent use of the assessments to be meaningful and motivating for parents, students, and teachers in determining the effectiveness of interventions on student performance. Some teachers referred to assessment results during parent conferences, while others used them on a regular basis with students. A teacher in Willowdale described how:

I use the graphs to communicate with the kids (receiving Tier II interventions). They know exactly where they are as well as I do, so after I have progress monitored them, within the next couple of days, I pop them up on the computer screen and we have a quick little conference. I just show them “here you are now” and we look at the growth . . . So it's changed my practice where I'm communicating more with the students rather than just keeping it to parent communication.

The interviewees described how their Educational Support Teams were used as a forum for discussing the results of universal screenings and progress monitoring. In the Greenfield School, the Educational Support Teams established a process in which fall universal screening data was examined on a classroom-by-classroom basis to discuss overall student performance and identify students who might be in need of Tier I or Tier II interventions. In the other two schools, Educational Support Teams reviewed progress-monitoring data when individual teachers referred students whose performance data indicated a need for more intensive interventions.

A majority of the interviewees reported that the implementation of the RtI approach had strengthened team decision-making within the Educational Support Team process. Many noted that their Educational
Support Team protocols had become more data driven, focused, systematic, and efficient. As teachers reported, "the data is [sic] a catalyst for making decisions," "the data is [sic] right there and recent," and "it's visible and accessible." Further, many teachers observed that the use of uniform screening and progress monitoring measures provided Educational Support Team members with a common knowledge base and language to use as they communicated with one another about individual student performance. Classroom teachers and principals across the three schools reported they had become more involved in collecting and analyzing data; subsequently, they found themselves making more meaningful contributions during Educational Support Team meetings than they had prior to the RtI approach.

**Databased decision-making within Tier III.** Principals and teachers also reported that the implementation of RtI had resulted in changes to referral and evaluation practices within special education Evaluation and Planning Teams. Several special educators reported that teachers were clearer about the fact that Evaluation and Planning Teams would initiate special education evaluations only after teachers provided evidence of students' lack of response to Tier II interventions. This was in contrast to "pre-RtI" Educational Support Team practices, in which it was not uncommon for classroom teachers to "push for" a special education evaluation prior to trying out and collecting data on interventions at the Tier II level. Progress monitoring data also were used in the special education evaluation process to document that a student's disability was resulting in an "adverse effect" on academic performance. One school was able to provide data showing that referrals for special education had decreased since implementation of the RtI approach, and two others indicated that their referral patterns had flattened or started to decline. Although none of the schools had discontinued use of the discrepancy model in determining the presence of learning disabilities, special educators in two schools reported that their schools were moving in this direction.

**Challenges to databased decision-making.** In spite of these changes, a number of factors inhibited consistent use of databased decision-making. Although the majority of teachers conducted ongoing progress monitoring for students receiving interventions, a few noted that time constraints made it difficult to keep up with this practice. Others found the computer-based data management system to be cumbersome. A few teachers reported that they struggled to connect the results of universal screenings to actual changes in their instructional practices at the Tier I level, noting that they were challenged by a lack of time and/or resources that would allow them to differentiate instruction so as to meet the diverse needs of students in their classrooms.

Across all three schools, a number of interviewees also acknowledged the challenge of using data associated with RtI measures along with data collected through other assessment measures to inform instruction and curricula decisions. On the one hand, many teachers and administrators appreciated the fact that AIMSweb probes could be conducted and analyzed more quickly than state and locally mandated assessments; as such, they found that the probes provided immediate feedback for teachers to use in monitoring and adjusting instruction. On the other hand, some teachers felt that the RtI assessments were better measures of word identification and fluency skills than reading comprehension skills. A number of these interviewees noted that their schools already used more in-depth measures of reading comprehension that, while administered on a less frequent basis, seemed to produce more accurate and in-depth information. Finally, a number of teachers were still searching for ways to integrate assessment results across the various measures available to them, including RtI assessments, local assessments of reading, and state level standardized tests. They felt particularly challenged to do so when assessment results seemed to contradict one another.

**Theme #2: Expanding Teachers’ Roles and Relationships Through Increased Communication and Collaboration**

Principals, teachers, and paraprofessionals across the three sites reported that the implementation of RtI was associated with increased levels of communication and collaboration among administrators and general and special educators. A number of interviewees spoke of the emergence of a “common language” around RtI as evidence of increased collaboration. A teacher in the Greenfield School commented that “I guess the real change is that we’re all on the same page and this gets us talking a common language and we’re responding in a uniform way,” while a special educator from the Willowdale School noted: “We are problem solving outside of the formatted structure . . . We were always doing this but it’s definitely more focused because of the RtI implementation.” As a whole, these changes were described by many interviewees as leading to an increased sense of purpose, capacity, and empowerment in their schools.

**Expanding the roles and responsibilities of principals, teachers, and paraprofessionals.** The implementation of the RtI approach was associated with the willingness of principals, teachers, and staff in each of the schools to take on new roles and responsibilities. Principals in all three schools played
increasingly prominent roles on their Educational Support Teams as a result of changes made in their team structures and processes. Many classroom teachers described how they had expanded their roles by making changes to Tier I instruction and curricula, administering universal screenings three times per year, and delivering Tier I and II interventions. Special educators noted that the implementation of RtI helped them to develop a deeper understanding of the core curricula and teachers’ approaches to enhancing literacy. In each of the schools, one teacher was designated or emerged as a “point person” to coordinate data entry, analysis, and management associated with the AIMSweb program. Many interviewees noted the importance of this role, noting that it helped them to feel comfortable with the technical aspects of progress monitoring and to spend more of their time designing and implementing interventions. A second grade teacher in the Greenfield School commented that the point person in her school was “easing me into it. I think if I were on my own, the expectations would be heavier on me.”

The interviewees identified several key assumptions related to shifting and expanded roles. One was that student needs, rather than “teacher convenience” were used to justify the creation of new roles or expansion of existing ones. Second, there was a sense that the implementation of RtI could not be taken on by a few individuals; rather, roles needed to be defined in ways that created a sense of positive interdependence. Third, the interviewees noted the importance of flexibility in role definition. Teachers’ focus on increasing student performance created the need to engage with other teachers in discussing and designing student specific interventions and sharing the responsibility for implementing interventions within and across classrooms. A special education teacher expressed the view that RtI was best viewed as a “whole school” initiative rather than as a special education initiative, noting that:

It’s really the teachers that are implementing it. I will go as a support if they need an extra person to do the fluency probes or the benchmarks. I’m available, but they are really the ones who are doing it all. It’s such a plus for me because they bring so much information to me and to the meetings . . . It puts more ownership on them and provides data when they have students they are concerned with. It’s really about the teachers.

Expanding teacher leadership. The interviewees spoke often about the ways in which the implementation of RtI created opportunities for both general and special education teachers to take on leadership roles. Each school’s AIMSweb “point person” was identified as having the most expertise on the data management aspects of RtI and, as such, became a leader with respect to data management and analysis. The restructuring of Educational Support Teams frequently involved the addition of nurses, guidance counselors, and other new members who had not previously been involved in analyzing student data. Across all schools, teachers and administrators who had become most knowledgeable of and engaged with the RtI process had been identified as “teacher trainers” who were called upon with some regularity to describe their school’s implementation of RtI to teachers in other schools in their districts and/or at the statewide level. Within their own schools, these teachers advised their principals as to ongoing professional development needs related to the sustainability of the RtI approach.

Challenges to the expansion of roles and responsibilities. Not surprisingly, the interviewees identified some challenges associated with increased collaboration and expanded roles and responsibilities. A number of interviewees in the Willowdale and Pineview Schools reported a need for more common planning time for teachers to identify and monitor the effectiveness of interventions. While many of the teachers identified as “teacher leaders” felt empowered by their new roles, they also reported feeling pressed for time as they attempted to manage their increased responsibilities. The issue of flexibility in funding and roles was also raised by a number of interviewees. Each of the principals acknowledged that certain state and federal regulations made it difficult to blend funding in ways that would allow special educators to provide supports to students receiving Tier I and Tier II interventions. While the principal in the Greenfield School had found ways to re-allocate funding so that special educators could work with any student in need of support, other principals were unsure as to how to do this.

Theme #3: Creating a Common Focus, Language, and Knowledge Base Around RtI and Literacy

A majority of the interviewees described the professional development offered through the RtI course as a critical component of their initial implementation of RtI, noting positive elements of both the content and delivery of the course. They reported that the opportunity to take the initial RtI course in their own school was instrumental to their participation. Both general and special educators commented that the content of the course promoted a greater understanding of the RtI initiative and assisted teachers in developing their collaborative skills. They identified the focus on specific literacy interventions, universal screening and progress monitoring, and applying the AIMSweb technology as being the most
important parts of the course. Further, a number of teachers commented on ways in which their principal’s involvement in all phases of professional development played a critical role in encouraging and motivating faculty and staff to implement the RtI initiative. One teacher described the power of taking the course alongside of her school administrator, noting that it was critical to:

... have leaders that understand your practices of teaching literacy and math and to have them take the courses with you and provide support for you. It was important how our principal saw RtI and connected it to our school vision of a professional learning community where all professionals and students are learning.

Continuing learning through follow-up technical assistance and ongoing professional development activities. A second key feature of the professional development model used in the pilot sites was the provision of ongoing technical assistance and support by the state consultants. Following completion of the course, the consultants went to each school to assist in administration and analysis of the first round of universal screening probes. In addition, the consultant encouraged teachers and administrators to call upon them to provide support in a variety of areas, including data management and analysis, refinement of databased decision-making through the Educational Support Team, and identification of Tier II and III interventions for students requiring additional supports. The consultants offered this level of assistance on an “as needed” basis for a full year following initial implementation.

Beyond the professional development provided through the pilot process, many of the interviewees noted the importance of being able to continue to access other opportunities available during the school year. Individuals and small groups of teachers who identified specific areas of need in relation to the implementation of RtI requested ongoing professional development offerings. They utilized a variety of delivery formats including coursework, workshops, book groups, and mentoring and coaching from colleagues, each of which focused on specific aspects of literacy instruction.

The continuation of professional development activities was most systematic in the Greenfield School. The principal reported that a professional learning community (PLC) model (DuFour & Eaker, 1998) developed prior to the pilot project was re-vitalized to support implementation of RtI. The interviewees described a complementary relationship between the two models, in which the PLC protocol provided a specific set of questions for teachers and the principal to use in reflecting on student performance, and RtI provided a clear framework for improving instruction.

Challenges to implementing and sustaining professional development. The interviewees described several challenges to professional development, some of which were related to the initial opportunities provided through the pilot process and some of which related to issues of sustainability. While most were enthusiastic about the content of the original course, some interviewees felt that it could have been differentiated to meet a variety of teacher needs. Some teachers, for example, felt that they were already knowledgeable about the content around literacy and would have preferred to move more quickly to learning about administration, data management, and analysis of the RtI assessments. While a majority of the interviewees were thankful that the pilot process had started with a focus on literacy, some believed that it would have been helpful for their schools to move more quickly to implement RtI in the areas of written expression and numeracy. Finally, a number of principals and teachers commented that, by definition, sustainability of the approach only could be achieved if professional development related to RtI was ongoing and connected to other initiatives. The professional learning community model used in the Greenfield School offered one an integrated approach to implementation, but this model was not in use at the remaining schools.

Theme #4: Transforming the Role of the Principal

The emergence of instructional leadership. The final theme to emerge in the cross case analysis centered on the ways in which the role of the principal needed to be re-focused and expanded in order to promote more systemic and sustainable implementation of RtI. While we observed variation in the degree to which the three principals participated in the implementation of RtI, each had expanded his/her role in ways that signaled a move toward instructional leadership. Each of the principals had been involved in the initial decision to apply to the state department of education for status as a pilot site, and each also had been involved in initial efforts to create “buy-in” for RtI among teachers and staff. They participated in the original RtI course, signaling to teachers that RtI was important and that their principal was equally invested in developing a deep understanding of its implications for assessment and instruction. The principals also served as key members of their schools’ Educational Support Teams. Team members noted that their principals’ presence helped to validate the team’s role within the school and to promote databased decision-making as a “new way of doing business.” Following initial professional development and implementation efforts, team members also recognized principals for
their efforts to support teachers and paraprofessionals in purchasing materials, attending additional workshops and conferences, and scheduling technical assistance with the state consultants.

General and special educators at the Greenfield School spoke particularly highly of their principal, communicating overwhelmingly positive support for her ability to link the goals of RtI to a longstanding school wide vision for student success. Many interviewees described her as a “hands-on leader” who spent many hours in the classroom helping to administer assessments. She created and used a tool for assessing the degree to which interventions across the three tiers were being implemented with fidelity. The interviewees in the Greenfield School spoke highly of the principal, who always had been known as a “math specialist,” was open at the onset of the initiative about her own need to develop her skills in literacy. Her participation in the initial course as well as her commitment to the PLC model communicated a strong message to the staff about the need for continuous learning. Each of these factors contributed to comments that the principal was a “true instructional leader.”

**Building structures to sustain implementation.**

We have discussed elsewhere the significant efforts made across the three schools to strengthen Educational Support Team structures, processes, and use of databased decision-making. The notion that the Educational Support Team could serve as a critical factor in implementation was introduced through the original course and reinforced by each of the principals. In addition, two principals created “RtI Steering Committees” in an effort to create additional structures for the purpose of ensuring sustained and systemic implementation of RtI. Their purpose was to coordinate professional development efforts in ways that promoted collaboration while deepening and extending the knowledge and use of RtI among teachers.

**Challenges related to the changing roles of principals.**

The interviewees noted some challenges and variations in leadership practices. The principal at the Greenfield School was credited for her transformative and instructional leadership, but some teachers believed that the remaining two principals needed to continue to deepen their knowledge of literacy and related practices in assessment and instruction. The principals also varied in their ability to communicate a vision for school wide improvement that established RtI as a framework for change. Similarly, some principals were attuned to issues of sustainability from the outset and were therefore more successful than others in ensuring that the implementation of RtI would continue beyond the life of the pilot project.

**Emerging Patterns in Statewide Assessments**

Along with qualitative data collection, we reviewed school wide results of reading achievement reported during the first, second, and third years following the pilot process. These data reflect student performance on the New England Common Assessment Program (NECAP) measures of reading achievement, which are administered annually in the fall to all schools in the state. The data, depicted in Table 4, report the percentage of students performing in two categories: (a) students achieving at or above the standard and (b) students achieving below the standard.

These data indicate a marked increase in student performance in reading achievement in the Greenfield School from 2007 to 2009. In the Willowdale and Pineview Schools, the data show a relatively stable pattern of student performance over the 3-year period, with students performing above the state average in each of the 3 years. While it was not the intent of this study to show causality between implementation of the RtI approach and improved student performance, we recognized that the latter would provide the ultimate measure of its success.

### Table 4.

**NECAP Reading Scores from Three Pilot Schools**

<table>
<thead>
<tr>
<th>School</th>
<th>Fall 2007 Below Standard</th>
<th>At or Above Standard</th>
<th>Fall 2008 Below Standard</th>
<th>At or Above Standard</th>
<th>Fall 2009 Below Standard</th>
<th>At or Above Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenfield</td>
<td>34</td>
<td>66</td>
<td>30</td>
<td>70</td>
<td>19</td>
<td>81</td>
</tr>
<tr>
<td>Willowdale</td>
<td>12</td>
<td>88</td>
<td>8</td>
<td>92</td>
<td>11</td>
<td>89</td>
</tr>
<tr>
<td>Pineview</td>
<td>23</td>
<td>77</td>
<td>21</td>
<td>79</td>
<td>24</td>
<td>76</td>
</tr>
<tr>
<td>State average: Grades 3 - 8</td>
<td>30</td>
<td>70</td>
<td>29</td>
<td>71</td>
<td>28</td>
<td>72</td>
</tr>
</tbody>
</table>
Discussion

As researchers, we found ourselves commenting often on the complexity of the change process associated with the implementation of RtI. We were not surprised to find variations in practice or to discover that some schools appeared to have made more systemic changes than others. That said, we also appreciated the degree to which each of the schools had made substantive changes in a relatively short period of time. The discussion that follows focuses on a set of five interdependent factors that appeared to promote consistent implementation and the potential for sustainability of the RtI initiative. While these factors were exhibited in varying degrees across the three sites, their presence as a “critical mass” may be linked to a deeper and more widespread implementation of the initiative.

Conceptualizing RtI as a General Education Initiative Linked to School Wide Vision for Improvement

A key component of the RtI approach utilized in the pilot process was its emphasis on viewing RtI as a general education initiative linked to an overarching vision of school improvement. The use of databased decision-making as a means to school improvement was seen as the centerpiece of RtI. Importantly, this approach to implementing RtI was thought to be associated with an increased sense of collaboration among general and special educators. The three schools’ focus on RtI as a school wide initiative supports the notion that a core principle of RtI is to serve as a preventative measure that promotes accountability in the general education classroom (Mesmer & Mesmer, 2008; Richards et al., 2007).

Recognizing the Key Role of Building-Based Leaders

The interviewees identified leadership as a key ingredient of change, noting that the degree to which their school’s principal played a central role in initial implementation was linked to the degree to which the innovation appeared likely to be sustained over time. Across the three schools, the principals were described as demonstrating a number of critical leadership practices, including articulating the ways in which RtI was central to a comprehensive vision for school improvement, participating in professional development efforts, and becoming knowledgeable about all aspects of RtI. The principals created new leadership roles for teachers that encompassed the areas of data management, databased decision-making, and coaching and mentoring others in the use of specific interventions. Fixsen et al. (2005) noted similar patterns in leadership and capacity building as factors that contribute to sustainability over time.

Establishing Common and Consistent Assessment Practices

Teachers’ increasing ability to share data with colleagues, students, and parents was powerful and helped to create a shift in thinking about the roles that teachers needed to play in improving student performance. Moreover, teachers reported that implementation of RtI had made them more focused on using data to inform instruction, and less concerned with “fixing” students by referring them for special education evaluations. As reported elsewhere in the literature (Batsche et al., 2006; Fuchs & Deshler, 2007; Harry & Klinger, 2007), the experience of these three schools indicates that successful implementation of the RtI approach may be connected to the ability of teachers and administrators to foster a culture of databased decision-making and continuous improvement.

Implementing Authentic and Ongoing Professional Development Opportunities

Given the rural nature of the schools, the interviewees appreciated the convenience of the on-site course and valued the embedded nature and relevance of the content and delivery of material. The model of professional development used in the three schools holds promise for schools in rural areas because it combined an intensive effort at the outset of the initiative with opportunities for ongoing professional development (Bergstrom, 2008; Kratchowill et al., 2007).

Reinforcing Team Structures for Databased Decision-Making and Problem-Solving

A key finding of this study that is not well-documented elsewhere in the literature was the fact that the three schools were engaged in enhancing and/or creating school wide organizational structures that allowed teachers and administrators to engage in databased decision making and collaborative problem-solving. The Educational Support Team structure provided a forum for reviewing student specific data to determine when to initiate, revise, or terminate interventions across the three tiers of support. Two schools created RtI Steering Committees as forums for monitoring school wide performance, considering changes in core curricula, and identifying professional development opportunities related to RtI. It appears from this study that strong teams are a necessary condition for successful implementation of an RtI approach, as they provide opportunities for teachers to develop their leadership skills and for teams to take action rooted in careful analysis of student and school wide performance data.
Conclusions and Implications for Policy and Practice

In thinking about how to present implications that recognize the complexity of change involved in the RtI initiative, as well as the limitations of our use of qualitative research methods in just three schools, we have chosen to explore implications through the lenses of practice, professional development, and policy. Throughout this discussion, we focus on the importance of considering sustainability of the RtI approach from the outset (Fixsen et al., 2005).

Ensuring the adoption and sustainability of key practices. The experiences of administrators and teachers at the three pilot sites suggests that schools interested in implementing RtI may need to pay particular attention to the readiness phase of change. The degree to which teachers demonstrate engagement at the outset seems to be connected to the degree to which changes in practice can occur and be sustained over time. Principals play a critical role in building a rationale for taking on the innovation and linking it to existing school improvement efforts. Once the approach is put into place, leaders also must ensure that teachers have adequate supports and structures, as well as ongoing access to relevant professional development.

Providing professional development for growth over time. This study was initiated following an intensive on-site professional development effort carried out in each of the three pilot sites by two state consultants with expertise in RtI. Future implementation efforts—especially those that seek statewide adoption of the approach in rural schools—may need to explore cost effective professional development options such as on-line modules and course delivery. Given the importance of the role of principals in implementing RtI, specific leadership training may be in order. Additionally, pre-service programs will need to examine their curricula to ensure that new teachers and administrators understand the tenets of RtI and possess necessary skills in instruction and assessment, as well as in collaboration and systems change.

Ensuring that state and federal policies promote implementation. If educators and policy makers determine that the RtI approach is worth sustaining over time, we will need to ensure that upcoming re-authorizations of NCLB and IDEA frame the initiative as an organizing principle for change. The pilot process used in our state offers one approach to building in incentives for rural schools to take on the challenge of implementing this comprehensive initiative. Policy makers and professionals will need to continue to use grant monies and other forms of inducement to persuade schools to place RtI at the center of their attempts to improve student performance. Finally, policy makers may need to revisit funding formulas to ensure that regulations promote collaboration and inclusive programming. The three tiered framework of RtI demands, that general and special educators have flexibility in their roles as they assess, instruct, and re-assess students to determine the level of services they need.

Future Research

Our study indicated a number of positive outcomes and trends, but we also encountered questions in need of further study. One relates to the utility and validity of the assessments used in the RtI approach. The practices of universal screening and progress monitoring are predicated on the reliability and predictive value of the instruments being used. Many teachers appreciated that the RtI assessment measures could be administered quickly, but some questioned whether they were sensitive enough to measure higher-level skills in reading comprehension. Second, we recognize that a limitation of our study was our reliance on qualitative data. Future studies might use a mixed methods approach to make a stronger case for the efficacy and sustainability of the RtI model. We recognize the field's need to conduct further research and debate around RtI, but having had the experience of witnessing its implementation in context, we are encouraged to think that the approach is one that may lead to school wide improvement.
References


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