

## **Implementing RTI**

### **Response to Intervention at the Secondary Level: Two Districts' Models of Implementation**

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Response to Intervention (RTI) is the practice of providing high quality instruction matched to student needs through a three-tiered model, and using rate of learning over time and level of performance for making important educational decisions (Batsche et al., 2005). Although RTI is allowed in federal regulations, the research literature offers few strategies or models of implementing RTI in secondary settings (Mastropieri & Scruggs, 2005). Consequently, few districts have taken on the challenge of implementing RTI at the secondary level. The purpose of this paper is to describe two models of RTI implementation at the secondary level, one for language arts and another for math. The discussion will include the systems-level structural and instructional challenges, how data were regularly used for decision-making, and reflection on lessons learned for future RTI implementation.

#### **Model One: Language Arts Intervention**

##### *Background Information*

Chisago Lakes School District is located in rural Minnesota and serves 3,600 students grades Pre-K through 12 from five predominantly white, lower to middle socio-economic communities. This district is a member of the St. Croix River Education District (SCRED), which serves five rural districts in northeastern Minnesota. Chisago Lakes High School (CLHS) serves about 1,200 students in grades 9–12, approximately 10% of which receive special education services, 8% receive free and reduced lunch, and approximately 1% receive English Language Learning instruction. CLHS is on a block schedule with four 85-minute blocks per day. The school year consists of four quarters that are 9 weeks long.

During the 2003-2004 school year, Chisago Lakes High School began implementing a five-step problem-solving model through its student assistance team (SAT). After two years, the SAT team identified two challenging trends for RTI implementation: 1) a need for a schoolwide, tier 2 program for ninth grade students to address remedial academic skill instruction, passing classes, school attendance, and discipline referrals; and 2) the logistical challenges for developing interventions for individuals or groups of students on a block schedule, where student classes changed four times per school year. For example, in order to fit 15-30 minute academic interventions into students' schedules, they often were assigned to 85-minute study halls for which they received no credit towards

graduation. At the end of a nine-week term, if students still needed intervention, they often were assigned to another study hall, usually at a different time of the school day with a different staff member.

### *Description of RTI English Class*

One response to these trends was the creation of the “RTI English 9” class. The class was designed to remediate basic reading and writing skills in order to increase academic engagement, reduce discipline referrals, and provide core ninth grade English content instruction needed to advance to 10th grade English curriculum. Moreover, this course provided a consistent time and place in general education for tier 2 level interventions to occur.

### *Instruction.*

The RTI English 9 class met daily for 85 minutes (one block) for the entire school year. Two full-time, general education teachers instructed 18 students in the class. One teacher was a core curriculum content specialist and the other was an academic interventionist with training in remedial reading and writing instruction and progress monitoring for secondary level students. The content included the core ninth grade English curriculum taught at a modified pace and adapted to meet the needs of diverse learners. In addition, 30–40 minutes of each block were dedicated to daily remedial group and individual reading and writing instruction. The content of the remedial instruction and how it was delivered (small or whole group v. individual) was adjusted quarterly based on curriculum-based measurement (CBM; Deno, 1985) reading and writing data that were collected for every student in the class on a weekly basis for reading and two times monthly for writing. Finally, RTI English 9 utilized cooperative learning as its primary method of instructional delivery.

The content specialist chose cooperative learning as the primary instructional method given the extensive research base and his past success in using this approach with students considered at-risk for academic failure. Typically, the English 9 class is taught during one block for one semester, but the RTI English 9 class covers this content during one block for an entire school year (two semesters). An instructional challenge was to modify the pace and content of the core English 9 curriculum.

### *RTI English 9 students.*

Student enrollment in the RTI English 9 class was determined by several sources of data including CBM and group administered standardized measures of reading such as the Minnesota Basic Skills Test (BST) and the Measures of Academic Progress (MAP)(Northwest Evaluation Association, 2005) in math, reading, and language arts. Furthermore, overall attendance and grades during 8th grade were considered. Finally, input and recommendations from students’ eighth grade teachers were used for final enrollment decisions. Specifically, teachers were asked about students’ overall academic performance, level of school engagement, and amount of anticipated support needed for a

successful transition to the 9th grade. Overall, the decision to place a student in the RTI English 9 class was not based on a single point of data, but rather a comprehensive look at the child's overall academic performance and school engagement indicators such as attendance.

The team for RTI English 9 class placement decision-making included the high school assistant principal, the school psychologist, the three guidance counselors, the assistant principal from the middle school, and several middle school teachers. Eighteen eighth grade students who the team considered to be the most at-risk for academic failure in 9th grade were enrolled in the class. Of these 18 students, 12 had passed their Minnesota BST (graduation standard test) in Reading, but only two students achieved the MAP benchmark score set for eighth grade students in the spring and met or exceeded the eighth grade CBM oral reading fluency benchmark of 160 words per minute. Four students were at or above the eighth grade CBM writing fluency benchmark of 72 correct word sequences when given 30 seconds to think and 3 minutes to write.

#### *2005-2006: Year One Implementation*

The first quarter of the school year, the RTI English 9 teachers focused on three main goals: 1) build relationships with students, 2) establish a consistent cycle of CBM data collection, and 3) apply problem-analysis procedures to make decisions about what kinds of academic interventions would be needed and for whom. These were lofty goals considering that the content specialist teacher was new to the district and both teachers were involved in ongoing training in the district's problem-solving model, using data for decision-making, and developing a repertoire of academic interventions. There were several formal and informal meetings among the school psychologist, the assistant principal, and both teachers to trouble-shoot, answer questions, and provide mentorship and support for the new concepts. For example, the academic interventions teacher worked closely with the school psychologist on collecting accurate baseline data and then using these data for individual student goal setting. The school psychologist also provided consultation for applying the problem-solving model/problem analysis and then determining appropriate interventions.

At the end of the first quarter, the RTI English 9 team met to review the data. The team used the CBM data, first quarter grades, and student observations conducted by the teachers and guidance counselors to identify individual and classwide needs. Based on these, the team felt the entire class would benefit from daily implementation of remedial interventions in both reading and writing. The team chose to implement the Six-Minute Solution (Adams & Brown, 2003) and a daily oral language (DOL) writing activity. The Six-Minute Solution is a peer tutoring, reading fluency building intervention. In samelevel pairs, students engage in repeated readings of 1-minute nonfiction passages as their partners note the number of words read correctly. Daily Oral Language consists of sentences with spelling, grammar, and punctuation errors that students correct. Students corrected two incorrect sentences individually, and then sentences were corrected as a whole class. The reasons the team chose these interventions were threefold: 1) problem analysis revealed that these interventions were a good fit with the identified reading and

writing problems of the RTI English 9 students; 2) students in special education with similar academic needs receiving these interventions had shown growth on their CBM reading and writing fluency measures; and 3) these interventions were brief enough to reasonably fit into the class block, but still allow ample time to cover core content. At the end of the second quarter, the team again met to review the data. Individual students were identified for further problem-solving. One student was identified as having exceptional oral reading and writing fluency rates, but was failing all ninth grade classes, refused to wear his glasses, and was frequently off-task. The team decided to implement an individualized behavior intervention plan with this student in the RTI English 9 class. In addition, three students were identified as making little or declining progress in oral reading fluency, and they were reading below an eighth grade level. After further analysis of the reading problems, the team determined that these students needed more time for fluency building instruction. An additional reading intervention where students completed daily one-on-one multiple repeated readings with a trained paraprofessional was implemented at the start of Term Three.

Two notable challenges emerged at this time. First, the academic interventions teacher was only available for 45 minutes of the 85-minute block due to building-wide scheduling demands. Hence, there was need for a paraprofessional to deliver additional instruction to students not making progress. Second, the three students receiving the additional, one-on-one reading interventions had to be pulled from the content instruction of the RTI English 9 class. The content specialist noted that at this point the class felt like a “revolving door” in which students were coming and going for interventions or additional progress monitoring. This also interrupted the routine and flow of content delivery, which is critical for students who struggle with academically engagement.

### *Year One Summary of Outcomes*

At the end of the school year, the RTI English 9 team met to review student data and reflect on accomplishments and challenges. Of these 18 students, still only 12 had passed their Minnesota BST in Reading. However, 11 students were at or above the eighth grade oral reading fluency benchmark of 160 words per minute, and eight were at or above the eighth grade writing fluency benchmark of 72 correct word sequences. One notable success was the dramatic improvement in overall reading fluency on instructional level passages with an average slope of 1.01 words increased per minute per week. Corroborating this information were growth rates on the MAP test in reading. Eight students approached or achieved the MAP benchmark score set for ninth grade students in the spring, and 14 had shown growth on their MAP scores. Average growth from fall-to-spring for students participating in the RTI English 9 class was 4.9 Rasch unit (RIT) points (typical score for high school students is 230 to 260 and national average growth for ninth graders is 1.6 points). Growth for these same students in their eighth grade year, before this intervention, was 0.9 RIT points (national average growth for eighth graders is 3.2 RIT points). However, slopes for writing fluency were not as improved with an average slope of .16 correct word sequence per minute per week.

Of the three students who received an additional reading intervention, two students met year-end goals. The third student was referred to the special education team and eventually qualified for special education services under Specific Learning Disability through the RTI process as described by IDEA 2004 (20 U.S.C. 1414(b)(6)(B)).

### **Model Two: Math Intervention**

The second example of using high school students' response to intervention data for making instructional decisions comes from the East Central School District, a rural district located in east-central Minnesota. East Central serves approximately 900 students and is a member of the St. Croix River Education District. Approximately 50% of the students are eligible for free and reduced lunch. Students are predominantly white with the largest ethnic minority group being Native American (around 10%). The district consists of a single K-12 building and an Area Learning Center.

#### *Students At Risk*

In 2005 the Minnesota Department of Education changed the timing and content of tests students need to pass in order to graduate from high school. The test used to determine eligibility for graduation in mathematics moved from 8th grade to 11th grade, which dramatically reduced the amount of time students had available for remedial work if they did not pass the test. Additionally, the test now includes higher-level mathematics content, such as Algebra, Geometry and some content typically seen in an Advanced Algebra course.

The building principal and secondary math department faculty were concerned that many students would not be adequately prepared to pass such a test. The optimal sequence of math classes in order to obtain the necessary content for the state tests was Algebra in ninth grade, Geometry in 10th grade, and Algebra II in 11th grade. East Central began to look at this particular course sequence, the number of students enrolled in these courses, and other test results to determine who would be at-risk for not passing the new graduation test in mathematics in grade 11.

Students in grades 2 through 9 take the Measures of Academic Progress (MAP; NWEA, 2005) in the fall and spring to determine student's instructional needs and evaluate effectiveness of programs by measuring yearly growth. NWEA recommends that students who obtain a RIT score of 235 in mathematics will be ready for Algebra (NWEA, 2005). Given the recommendation for students to take Algebra in ninth grade, students who did not score a 235 by the end of their eighth grade year were at-risk for not passing the graduation test in mathematics.

According to the 2005 norms of the MAP, expected growth of eighth grade students in math is an increase of 5.2 RIT points during the eighth grade year. Students who scored 230 or higher in fall of their eighth grade year were thus on track to master the content of Algebra, Geometry, and Algebra II by the MCA Math test. Using the 230 RIT score as a benchmark for students' readiness for the sequence of math courses, the district found 28

of the 62 eighth grade students scored below 230 RIT in fall. These students were at-risk for failing to graduate from high school.

*Intervention: Math Resource Room*

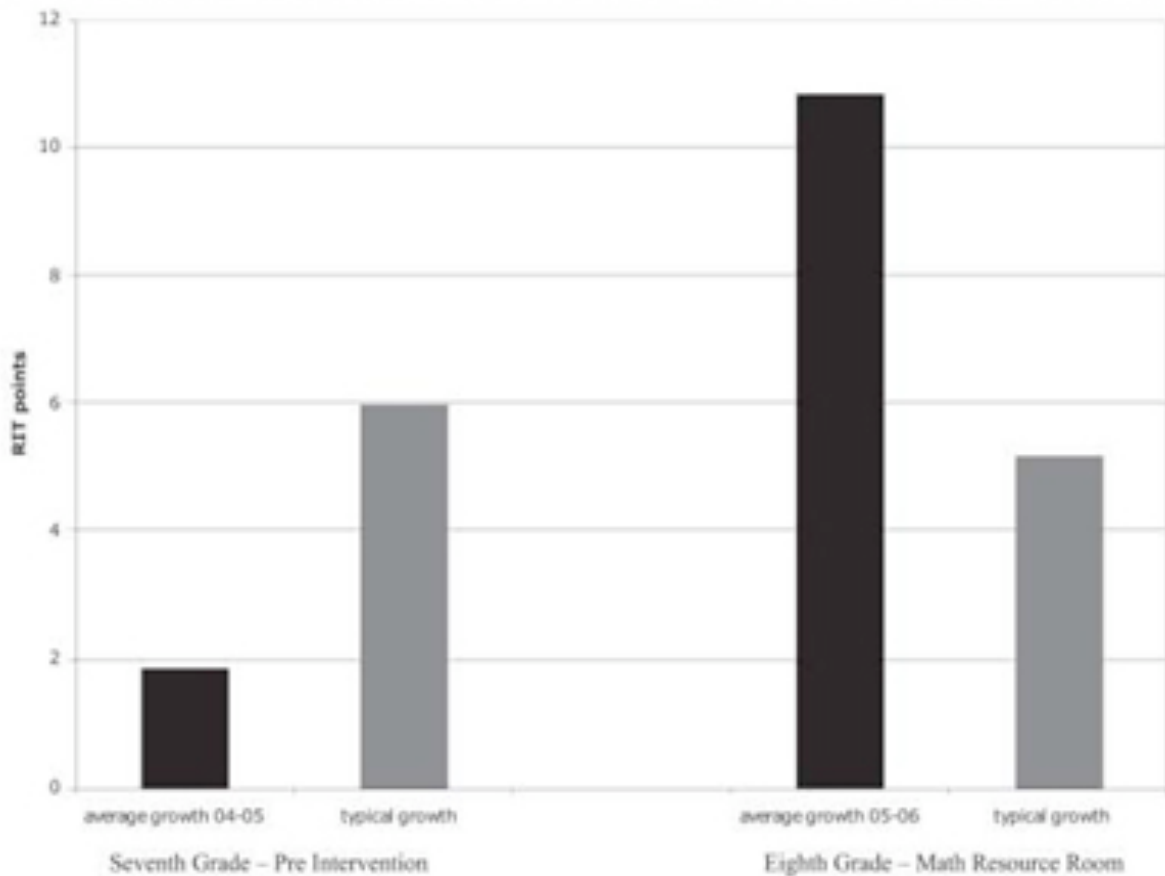
The secondary administration and mathematics teachers decided to implement a math resource room to help these students prepare for Algebra in grade 9. The math resource room provided students with an opportunity to participate in supplemental math instruction to remediate their math skills so as to be better prepared for Algebra by ninth grade. Students had to miss another class in order to participate in the math resource room. Most students missed a physical education or other elective class. Parent permission was required due to the change in students' schedule.

Of the 28 students who were invited to participate in the math resource room due to a RIT score in mathematics below 230 in fall of 8th grade, 16 students participated. The math resource room was structured based on several best practices components. Grading and behavior management followed recommendations by Sprick (1985). Components included learning contracts and a grading system that focused on work completion, accuracy of work, and effort/behavior. Students could earn points for contributing to math conversations, asking relevant questions, and making a significant improvement in behavior or attitude during class. Students could lose points for disruptive behavior, late work, unexcused absences, and reminders to stay on task. Grades were based on participation points (behavior/ effort), accuracy of daily assignments, monthly test scores, and weekly CBM probes. As recommended by Sprick (1985), students met with a paraprofessional weekly to compute their grade so they always knew how well they were doing in the class.

Instruction for students was based on their MAP Mathematics test performance. The MAP test has a Learning Continuum that specifies skills the students need to learn, and instruction was based on this list of skills. The math resource room was staffed by an eighth grade teacher, a paraprofessional, and peer tutors, which reduced the ratio of instructor (including peer tutor) to student to one instructor for every two students. The peer tutors allowed students to have easy access to assistance and they modeled good working behaviors.

Students participated in daily math resource room sessions from January to May. In both September and May, students took the MAP test to see growth for the eighth grade year. The typical growth from fall to spring for eighth grade students according to the 2005 national norms was 5.2 RIT points. The average increase in RIT points for the students who participated in the math resource room was 10.83 versus an average growth of 1.88 RIT points for those same students in the previous year (see Figure 1).

**Figure 1. Average growth on the MAP math for students participating in Tier 2 math "Resource Room" intervention, in the year before participation (04–05) and the year of participation (05–06), compared to national average ("typical") growth in both grades.**



### *Outcomes*

Although participating students made on average twice the growth typically seen in eighth grade, our goal was to increase student's skills to a point where they were ready for Algebra in 9th grade, which is indicated by a RIT score of 235. One student increased performance to 235 RIT points, and two others obtained scores of 234 RIT points. Nine of the 13 remaining students made significant growth but were still not at a level that would predict success in Algebra. Four of the students did not make substantial growth. Despite the fact that not all of these students reached the recommended goal of 235 RIT points, these students went on to take Algebra in their ninth grade year, with continuing supplemental instruction through the resource room. Due to accumulating credits for graduation, students could only participate in the math resource room during study halls or electives.

The math resource room was successful in increasing students' math skills as measured by average growth on the MAP. A survey of math resource room students found that students typically said the math resource room helped them. All participating students agreed that the math resource room should be continued. The most significant outcome will be apparent when these students take the MCAII test in 11th grade. Increasing the number of students who pass the test on the first try will confirm the success of this intervention.

### **Lessons Learned for the Future**

The data from these interventions served to further develop both programs. In RTI English 9, programming will continue for students in grade 10, as well as for incoming ninth grade students. A greater focus on writing instruction will also be included in these courses. In the Math program, the use of the resource room will be expanded to serve a wider range of grade levels, rather than waiting until eighth grade to deliver this important supplemental intervention.

Both examples described above demonstrate that delivery of supplemental interventions within an RTI framework can be accomplished at the secondary level. In both cases, appropriateness of the intervention, as well as adjustments to intervention, were based on psychometrically sound data in keeping with best practices. Furthermore, buildingwide adjustments to allow for Tier 2 level resources, including staff and classroom space, was necessary. Fortunately, this was accomplished primarily through existing resources with few new resources being added. Anecdotally, the use of these data was highly valued by all team members, despite the fact that many team members in both examples were new to these concepts and uses of data. Rather than blocking the development of data-driven decision making practices in their schools, these secondary teachers welcomed the opportunity to evaluate and adjust instruction in an informed manner.

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