

Progress Monitoring as Essential Practice Within Response to Intervention

Pamela M. Stecker

Clemson University

Douglas Fuchs

Lynn S. Fuchs

Peabody College of Vanderbilt University

Response to intervention (RTI) encompasses a process for evaluating whether students react to evidence-based instruction as expected. Typically considered a multitiered, prevention-intervention system, successive levels of instructional support are provided when a student's response to the academic program is sufficiently poor, particularly as compared to his or her peers' responses. In 2004, the reauthorization of the Individuals with Disabilities Education Improvement Act (IDEIA; P. L. 108-446) allowed for a student's response to research-based intervention to be part of the process for identifying students with specific learning disabilities (SLD). Rather than requiring the traditional aptitude-achievement discrepancy approach to identification, which sometimes necessitated years of poor academic achievement before a student might qualify for special education services (i.e., a wait-to-fail model), IDEIA allows for continued poor response to validated instruction as a means for documenting that a student's disability may require specialized services to produce appropriate learning outcomes. In other words, if a student continues to perform poorly despite the implementation of scientifically validated instruction, then inadequate instruction is eliminated as a cause for the student's insufficient learning. Instead, the student's lack of appropriate response to otherwise generally effective instruction is, in part, evidence for the presence of a disability. Within a multitiered RTI system, students are likely to receive help at earlier stages in their learning with perhaps some disabilities even being prevented from developing or their overall impact lessened. This preventive aspect has prompted many schools to adopt an RTI framework as a means for reforming their educational practices (e.g., see Tilly, 2006). As potential LD identification is embedded within this preventive framework, however, schools are faced with questions about how best to operationalize this process. Professional concerns expressed about using RTI as a part of SLD identification typically revolve around issues related to instruction and assessment. Although sound instruction is paramount to successful implementation of RTI, assessment data should drive decision making. Therefore, we argue that progress monitoring comprises one of the most critical

features of successful RTI implementation. Careful progress monitoring aids teachers and student support teams in making instructional decisions throughout all levels of the RTI system and provides data to corroborate SLD identification.

We propose a sample framework for RTI implementation within the context of elementary-level instruction in reading that is based on available research. We identify critical aspects of both instruction and assessment that must be addressed by schools as they operationalize RTI. Also within this multitiered framework, we describe how progress monitoring data can be used to provide salient information regarding the presence of a learning disability. Last, we discuss additional challenges rural schools may face when carrying out RTI.

Instruction and Assessment Within an RTI Framework

Tier 1: Primary Prevention

Instruction. Most models of RTI involve multiple tiers, or levels, of instruction aimed at preventing (a) inadequate instruction from being implemented over sustained periods of time and (b) disabilities from developing or becoming more severe. The first tier of such a framework occurs as general education instruction. Because data used from an RTI process for potentially identifying students with SLD must show lack of adequate response to scientifically validated instruction, Tier 1 must necessarily involve implementation of instructional practices that have been tested empirically. Schools must be able to defend that the core programs and instructional procedures used by their teachers have been generally effective in promoting student achievement or that specific instructional components within these programs have empirical validation for improved achievement. When a student fails to respond adequately to instruction, teachers need to be reasonably certain that their instructional practices did not contribute to the student's poor learning. Consequently, high-quality instruction in general education classrooms becomes the first order of business when implementing RTI.

Specific issues related to instructional practices at the first tier of prevention involve both decision making and monitoring that should be conducted at the school and/or district level. For example, selecting core programs and instructional practices that are generally effective across a broad range of students, including students who are low achieving, is critical to the RTI process. Individuals or teams should analyze instructional programs and instructional procedures and the available research-based evidence supporting their use. Schools may need to provide professional development on effective use of materials and practices to teachers in general or to specific individuals or grade levels. Initial training, though, may be insufficient on its own to produce desired long-term outcomes. Therefore, schools need to determine how fidelity of instructional practices can be assured. In addition to classroom observation to verify that instruction is occurring as expected, teachers may need ongoing support, professional development, or coaching (see Vaughn & Chard, 2006). Shanahan (2008) suggests how reading specialists may be used within this tier for providing professional support in literacy. Specific instructional content and instructional practices that are important in Tier 1 reading programs have been described by a variety of researchers (e.g., see Foorman, 2007; Taylor, 2008), and generally focus on critical practices identified by the National Reading Panel (2000) as effective. Although classroom instruction may vary with respect to the particular programs and practices used, Tier 1 instruction should be designed to meet the needs of diverse groups of students, be research based, and be implemented with fidelity. Moreover, teachers should be afforded the ongoing professional support necessary to implement instruction effectively.

Assessment. Assessment data should play an integral role in Tier 1 preventive practices. Typically, screening measures are used to target students at the beginning of the year in terms of their relative likelihood for achieving important educational outcomes. For example, those students whose scores fall below a certain criterion score or perform below a particular percentile may be viewed as at risk for reading difficulties or disabilities if preventive instruction is not provided. Screening practices in reading are particularly popular in the kindergarten and first-grade levels, when early intervening services are likely to contribute to improved achievement and perhaps help students avoid a future of persistent and severe reading problems. In addition to one-time screening measures, schools may implement benchmark assessment systems in which all students are assessed at several points during the school year. Similarly, teachers examine student scores to identified benchmarks that indicate relative risk status for reading failure. One option

within the multitiered framework of prevention/intervention is providing these targeted students with supplemental instruction in the second tier of RTI. However, those students targeted as at risk could potentially catch up to peers without such supplemental assistance when afforded high-quality instruction in the general education classroom. Therefore, progress monitoring also becomes an important component of Tier 1 services.

Progress monitoring encompasses a system of brief assessments that are given frequently, at least monthly, to determine whether students are progressing through the curriculum in desired fashion and are likely to meet long-term goals. Data are plotted on a graph, and a line of best fit is superimposed on the data to show the student's actual rate of improvement. Consequently, progress monitoring scores provide teachers with information about both the level of student performance and his or her rate of academic improvement. When yearly goals are set, the student's initial performance (i.e., baseline) can be connected to the long-term goal to show the rate of improvement that is expected for this student to meet the long-term outcome. Consequently, a teacher can compare the student's actual rate of improvement to his or her projected rate of improvement in order to determine whether the student is responding sufficiently to the instructional program and is likely to meet long-term expectations.

Although some screening or benchmark measures may be used on a more frequent basis for progress monitoring purposes, progress monitoring tools often differ from typical screening and benchmark assessments in terms of duration of assessments, frequency of administration, consistency and equivalence of content assessed, and usefulness of information for determining both level and rate of student academic growth. One specific type of progress monitoring tool that evaluates student achievement toward general outcomes is known as curriculum-based measurement (CBM; Deno, 1985). CBM is important, because much of the research on progress monitoring has focused on procedures that are prescribed by CBM methodology (see L. S. Fuchs & Fuchs, 1998). With CBM, important skills in the reading curriculum can be sampled systematically, or the measures may rely on a single behavior that represents overall competence in reading. This overall indicator approach to progress monitoring has been the more widely used method for gauging student improvement in reading. Teachers give short probes (e.g., 1-3 minutes) usually in grade-level reading material on a frequent basis. These short measures are equivalent in difficulty level, and student scores are plotted on a graph. Teachers use the graphed information to judge both the student's level of performance and his or her rate of progress over a

period of time. Examples of CBM progress monitoring measures in kindergarten through the sixth grade include letter-sound fluency, word identification fluency, passage reading fluency, and maze fluency.

With letter-sound fluency, kindergarten students say the most common sound for individual upper and lower case letters for 1 minute. With word-identification fluency, first graders read aloud from a list of high-frequency words for 1 minute. At second and third grade, students read aloud grade-level connected text for 1 minute. For students without disabilities in the fourth and higher grades, written passages are provided that contain blanks for every *n*th word. Typically three word choices are provided for each blank. As the student reads silently for 2½ minutes, he or she selects the correct word for the blank. Across all these measures, the number of correct responses is the datum plotted on the student graph. Decision rules are applied periodically to evaluate whether the student is progressing as desired. When the student's actual rate of growth is less steep than the anticipated rate of growth necessary to meet to long-term outcome, the teacher's decision would be to change one or more components of the instructional program in an effort to boost student achievement. Therefore, progress monitoring data can be viewed as means for formatively evaluating the overall effects of the instructional program on student achievement.

In an RTI framework at Tier 1, progress monitoring data are important. Measures typically are given weekly to students who are targeted as performing significantly below peers on initial progress monitoring assessments, screening tools, or benchmark systems. Rather than immediately referring these students for supplemental Tier 2 assistance, however, the general classroom teacher may pay close attention to these students to see whether they start to respond adequately to the core program. If progress monitoring data are collected for at least another 5 weeks, for example, rates of improvement show that many students who would have otherwise been targeted for supplemental help based only on initial scores actually fare well to Tier 1 instruction without additional support (Compton, Fuchs, Fuchs, & Bryant, 2006). That is, these students respond well to the core program without additional intervening services. Because the provision of supplemental Tier 2 instruction is costly, schools may better leverage their resources by using progress monitoring data to reduce the number of students targeted as needing extra assistance. Of course, if progress monitoring measures demonstrate inadequate growth during Tier 1, suspected risk is confirmed and supplementary assistance should be provided.

In addition to using progress monitoring measures with students targeted as low performing, progress

monitoring data may serve an additional function within the RTI framework regarding the quality of instruction being provided. When progress monitoring measures are used with all students (even if not as frequently as with students who are targeted as at risk), administrators or reading coaches may be able to better determine when instruction is generally effective. If data across the class indicate that most students are progressing in an upward fashion, professionals can be reasonably assured that students are responding positively to the instructional program. However, when data indicate that most students have made little change across 1 or 2 months of instruction, this information may be used to determine which teachers may need additional help to improve their instructional effectiveness.

Another benefit of using progress monitoring data with everyone in Tier 1 is to determine whether students who may have exceeded benchmarks or criterion scores initially continue to grow academically. For example, when only screening or benchmark systems are used in Tier 1, teachers may not pay close attention to students whose performance meet these criterion scores or they may not evaluate overall effectiveness of the program until another benchmark assessment is given. Consequently, a student may perform above minimum cut points; however, without progress monitoring data, the teacher may remain unaware of the student's failure to grow as anticipated. Although progress monitoring measures may be given with different rates of frequency for particular students (e.g., more frequently for students suspected to be at risk and less frequently for students who perform well), having progress monitoring data across the entire class can aid teachers in determining whether the core program is working for the majority of students and may better help the teacher to accommodate academic diversity.

Recommended practice. Questions, then, that schools must address when delivering Tier 1 services within a preventive RTI framework relate to the selection and implementation of scientifically based reading practices. Schools may need support in selecting the best instructional programs to match local needs. To evaluate student responsiveness to these instructional programs, best practice would indicate that, in addition to screening procedures, progress monitoring measures be used at least weekly (e.g., across 5-8 weeks) with students suspected as at risk of reading failure. When progress monitoring data indicate that students are performing below their peers in both level and rate of improvement, Tier 2 services should be initiated. We suggest that desirable practice also includes teachers conducting progress monitoring with entire classes periodically to judge whether all students are progressing as they should. Schools will need to

determine how to support teachers in using progress monitoring data to strengthen their own instructional practices and to interpret whether accommodations and modifications made in the core program have desired effects on particular students or groups of students.

Tier 2: Secondary Prevention

Instruction. When students do not respond adequately to otherwise effective Tier 1 instruction, then supplemental support should be provided. Tier 2 services often are pull-out instructional services that are delivered to small groups of students on a frequent basis, such as every day or several days per week. RTI frameworks have employed both standard-treatment and individual problem-solving approaches as methods for providing supplemental instruction. With a problem-solving approach, a student support team may discuss or design the types of instructional practices and content that would seem best to boost a particular student's achievement. Targeted students with similar needs may be grouped together for supplemental instruction. Although a problem-solving approach has much intuitive appeal, researchers tend to support the use of a standard set of interventions for particular grade levels for both empirical and logistical reasons (D. Fuchs, Mock, Morgan, & Young, 2003). Instructional fidelity is an important, ongoing issue. Like Tier 1 instruction, supplemental instruction should be based on scientific evidence of its effectiveness. With individual problem solving, multiple types of secondary prevention programs may be implemented within one school. The quality of the instruction will be dependent on both the team's design and the educator's delivery of such instruction. Schools need to verify that each of the supplementary programs is designed well with empirical validation and that each program is delivered as expected. School resources may be taxed beyond their capacity for delivering this level of support and assurance that programs are scientifically based.

A standard-treatment protocol utilizes a prescriptive set of procedures that have been validated by research as being generally effective for low-performing students at this level. Several examples of secondary preventive instruction have been described by researchers as effective for Tier 2 services (Kamps & Greenwood, 2005; O'Connor, Harty, & Fulmer, 2005; Vaughn & Denton, 2008; Vaughn & Roberts, 2007). In addition to meeting scientific criteria for their selection, a standard set of instructional practices yields practical benefits. Both training in and verification of instructional delivery as expected will be easier with implementation of standard instructional practices. This secondary level of prevention should provide students with additional instructional time in reading and more intensive instructional delivery with increased opportunities to respond and practice reading skills.

Small-group instruction (e.g., three to five students) should enable Tier 2 interventionists to more carefully attend to individual student responses and to provide needed corrective feedback and reinforcement.

Assessment. Progress monitoring data are critical for evaluating whether students respond sufficiently during Tier 2 support. The same measures used for progress monitoring at Tier 1 can be used at Tier 2. Interventionists should collect data at least weekly. Slope of improvement may be evaluated across 8-15 weeks of secondary assistance. If students progress well, they may move back to Tier 1 without continued support of Tier 2 instruction. However, when students are returned to Tier 1 without supplemental instruction, their progress should continue to be monitored to make sure they now are able to benefit adequately from the core program. If students do not respond as desired to the core program, an additional round of Tier 2 instruction may be needed or a student support team may decide that more intensive, individualized intervention is needed, such as that provided in Tier 3. When student progress is poor or proceeds at a slow pace in Tier 2, students either may receive an additional round of a standard Tier 2 treatment or move to Tier 3, depending on the amount of instructional time already spent in Tier 2. Although recommendations may change in the face of additional research, L. S. Fuchs and Fuchs (2006, 2007) describe case studies in which research-based cut scores and rates of improvement can be used to quantify adequate student response to secondary prevention at first grade. Progress monitoring data that illustrate poor response in both level of scores and slope of improvement to otherwise generally effective instruction provide evidence for determining that a student potentially has a learning disability. Thus, progress monitoring data from both Tier 1 and Tier 2 levels, including any successive iterations, are critical for determining overall student unresponsiveness to instruction and for eliminating the lack of effective instruction as a contributing factor to the student's learning problems.

Recommended practice. Schools must determine the nature of the secondary prevention provided in Tier 2 programs and determine personnel for delivering the instruction. Ensuring that instructional practices in Tier 2 are based on empirical data that support their general effectiveness for low-performing students becomes a critical factor in selecting appropriate supplemental instruction. Consequently, we recommend using a standard-treatments approach to delivery of secondary prevention. Interventionists who have instructional expertise in working with low-achieving students may be best positioned to deliver supplementary assistance. However, teachers of students with learning disabilities probably should not serve as the secondary interventionists. Although they may provide some

support functions for general education classroom teachers in Tier 1 and for interventionists in Tier 2, teachers prepared to deliver instruction to students with SLD should have the majority of their instructional time preserved for working directly with students with identified learning disabilities. However, their expertise certainly may be valuable in designing instruction and interpreting progress monitoring data generated in prevention activities. Shanahan (2008) also suggests how reading specialists may be used to serve some of these functions in Tiers 1 and 2.

One major difference among schools implementing RTI practices is the number of tiers and/or number of rounds of successive, preventive services that are provided prior to special education referral. Ideally, general education classroom teachers provide at least one round of preventive instruction in Tier 1, and one or two rounds of support are provided in Tier 2 prior to referral for Tier 3. We see Tier 3 services as individualized services designed to meet the unique learning needs of students. Because this description describes the essence of special education, we argue that individualized instruction in Tier 3 is special education. Consequently, when students have been afforded generally effective instruction in both core reading programs and in targeted supplemental services and still fail to thrive, then these students should be referred for special education evaluation. In other words, poor response in Tier 2 services serves as a trigger for special education evaluation. Although some RTI systems include three to five tiers of support prior to special education referral, we maintain that expecting general education to provide increasingly more individualized services in multiple layers of instruction is problematic. Individualization is the hallmark of special education practice. Moreover, protracted preventive instruction may deny students with true disabilities and their parents the specialized services, rights, and protections due them under IDEIA.

Tier 3: Tertiary Intervention

When a student has received several rounds of preventive assistance, including more targeted assistance within Tier 2, and still progresses poorly academically for both level of performance and slope of improvement, he or she should be considered for special education. RTI progress monitoring data collected throughout the multitiered system can be used to help document the presence of a learning disability. However, other assessments may be conducted as well to confirm the presence of a learning disability and to eliminate other potential disabilities as the probable cause for the difficulties in learning (Fletcher, 2006). The Division for Learning Disabilities (DLD, 2007) describes several types of assessments that may be conducted at this point, such as classroom observations; data to eliminate other

disabilities, environmental or economic disadvantage, cultural, or linguistic factors as the primary cause of the learning problems; and data from other academic measures to help document learning strengths and weaknesses. If it appears that a student does have a learning disability, he or she enters Tier 3 intervention and receives special education instruction.

Instruction. Special education is to be designed with student needs and strengths in mind. Once long-term goals are established, the Individualized Education Program (IEP) team develops an instructional program, including any required supports or supplemental services that would aid the student in accomplishing these long-term goals. Instruction does not have to be delivered one to one, but it typically is delivered to small groups of students with similar needs. Special educators must use research-validated practices designed to meet the more intensive academic and behavioral needs of students with disabilities. Intensity of instruction, amount of instructional time, and specificity of instructional design and delivery focused on student need distinguish special education from previous levels of academic support. Ongoing revisions, or modifications, in the instructional program, however, may be required during this special education intervention, as teachers must use progress monitoring data to judge the adequacy of student improvement. When students fail to progress as anticipated, then special educators should revise features of their instructional programs, continue to collect data, and reevaluate the effects of their instructional changes on student performance. Programmatic changes that teachers generally consider tailoring to specific student needs include the particular instructional procedures used, the teacher-to-student ratio for instructional delivery, time allocated for particular instructional components, instructional materials used, and type of motivational or reinforcement strategies implemented. Any of these instructional program modifications or a combination of these components may be altered in an effort to boost student achievement. In this fashion, teachers use CBM data as a means for informing their instruction, as they try to develop in a formative way the best set of instructional practices they can for individual students. Research confirms the significant effects on student achievement when teachers use progress monitoring data to formatively devise instructional programs best suited to the individual needs of students with disabilities (Stecker, Fuchs, & Fuchs, 2005).

Assessment. Monitoring student progress toward long-term goals is critical in special education. In this tier, teachers use CBM data to help determine long-term goals and to monitor student progress toward those long-term goals throughout the year. These same CBM probes can be used in all three tiers to judge the adequacy of student progress. For the special education program, these CBM data can be used to describe both

the student's present level of performance and his or her long-term goal. For example, an IEP statement to describe a third grader's current level of performance with respect to oral reading fluency could be written as the following: "Given passages written at the third-grade level, Marc currently reads aloud 50 words correctly in 1 minute." Once the IEP team establishes a reasonable, yet ambitious long-term goal for Marc based on normative growth rates and data-based benchmark levels, a graph can be used to depict the goal line that connects the current level of performance information with the long-term goal. Because this goal line shows the rate of progress Marc needs to make throughout the year in order to meet his long-term goal, the special educator can administer the same type of CBM probes throughout the school year to judge student progress toward attaining the long-term goal as well as to determine whether the student actually has attained the long-term goal at the year's end. The IEP statement describing the long-term goal in reading uses the same type of language as its corresponding statement for the student's present level of performance and can be phrased as the following: "Given passages written at the third-grade level, Marc will read aloud at least 100 words correctly in 1 minute by the end of the year" (or by a particular date).

The teacher continues to administer CBM probes once or twice weekly. Then, using data-based decision rules, the teacher periodically evaluates the adequacy of student progress and the efficacy of his or her instructional program for the student. If the student's actual rate of improvement is less steep than the projected rate of improvement depicted by the student's goal line, then the teacher makes some type(s) of instructional revision to try to better meet the student's needs. If the student responds well to instruction and improves at a rate greater than anticipated, then the teacher, or IEP team, can raise the student's goal. When the student performs consistently well with rate of progress and level of performance reaching some predetermined benchmark, the IEP team may reconsider the student's program. The team may move the student out of Tier 3 services and back into Tier 2. Although the student may not be released completely from special education at this point in time if special education consultation continues, the RTI framework allows for fluid movement in and out of tiers of instructional support. Progress monitoring data, then, are critical at each level. The special educator, interventionist, school psychologist, or classroom teacher would need to continue to collect CBM data to judge the adequacy of student progress in the new configuration. If the student fails to flourish in Tier 2 with supplemental assistance only, then he or she may need to return to the more intensive instructional program provided in Tier 3. If, however, the student responds well, he or she may continue with Tier 2 for a specified period of time or

even be placed back in Tier 1 without any supplemental instructional assistance (see D. Fuchs, Stecker, & Fuchs, 2008, for case study example). Because decision making is dependent on student data, though, progress monitoring should continue for this student regardless of the level of instructional tier to make sure he or she continues to progress as desired.

Recommended practice. For special education, progress monitoring data are used to describe the student's initial level of performance as well as to target long-term goals. The same types of data are used to evaluate student progress toward those goals. Conducted once or twice weekly, special educators use the progress monitoring data to judge the adequacy of student progress and the efficacy of the instructional program as well as to inform instructional planning. Approximately every month, the student's response to the program should be evaluated with revisions made when indicated as necessary. When students progress well, movement out of the more intensive tertiary intervention and into less intensive supplemental assistance should occur. Student progress, however, should continue to be evaluated with data being used to direct movement in and out of instructional tiers.

Challenges for Rural Special Education

We described a general model for implementing RTI, using a framework that encompasses the entire school but ultimately contributes to the identification process for students with SLD by relying on progress monitoring data for decision making. Centered on the two main areas of instructional practice and assessment, we explained that using progress monitoring data to evaluate the effects of high-quality instructional practice on student performance is an essential feature of the RTI system.

As schools make decisions about how to best implement an RTI model, educators must pay close attention to data already collected from research. As such, a school's or district's RTI model may need to change over time as new information is acquired. Additionally, schools need to take into account local considerations when designing an RTI model. Consequently, rural schools may face additional challenges that could affect RTI implementation. For example, rural schools may not have the resources or available pool of candidates to hire as intervention specialists. Rural schools may need to leverage the schoolwide resources they have for implementing a multitiered approach to instructional intervention. Particularly when professional resources are limited, implementation of RTI may be more successful with fewer tiers and with the use of standard treatments for supplemental instruction. Providing professional development for instructional delivery and ensuring the

fidelity of instructional practices will likely be more easily managed when standard interventions have been adopted.

When schools are located in relatively isolated areas or are located at a distance from university-based teacher preparation programs, state departments of education, or regional resource centers, professional development of staff regarding RTI implementation may be problematic. Several university-based programs, though, describe how distance education is used to provide teacher preparation in rural areas (Bargerhuff, Dunne, & Renick, 2007; Canter, Voytecki, & Rodriguez, 2007), including supervision (Jung, Keramidas, Collins, & Ludlow, 2006). Although not without their own sets of challenges (see, e.g., Bargerhuff et al., 2007; Keramidas, Ludlow, Collins, & Baird, 2007), these same types of Web-based technologies, such as online instruction, videoconferencing, Webinars, email, chats, and other interactive strategies could be used to provide assistance in rural settings. Thus, rural schools could form alliances with university partners for developing training and ongoing support during implementation of RTI.

The U.S. Department of Education has funded several national centers in recent years that have developed materials and resources suitable for professional development directly related to progress monitoring and RTI. Although funding has ended for several of these centers, Web-based resources, such as presentation materials, web-based articles, and archived Webinars will continue to be made available. Both the National Center on Student Progress Monitoring (<http://www.studentprogress.org>) and the Research Institute on Progress Monitoring (<http://www.progressmonitoring.org>) provide training materials and research-based information regarding progress monitoring measures and practices. One of the purposes of the National Research Center on Learning Disabilities (<http://www.nrcld.org>) is to disseminate information and research about best practices related to RTI and the SLD identification process. The Center on Instruction (<http://www.centeroninstruction.org>) addresses reading, mathematics, science, special education, and English language learners and has numerous links to RTI presentations and information. The most recently funded center, the National Center on Response to Intervention (<http://www.rti4success.org>) will provide Web-based

materials as well as face-to-face technical assistance to states or schools implementing RTI. Rural schools could take advantage of the many professional development resources offered by these national centers.

Implementation of an RTI framework requires much coordinated and sustained effort. A variety of decisions need to be made about both instruction and progress monitoring practices before schools should adopt an RTI framework. For example, schools need to decide on a scientifically based comprehensive core curriculum and the instructional delivery practices that should be used in general education. Fidelity of instructional practices along with the provision for coaching or teacher support should be an important consideration. Tools used for screening and ongoing progress monitoring should be established. The number of levels of multitiered instruction and the length of instructional interventions should be determined as well as the instructional approach used: problem solving, standard treatments, or some combination of both. Additionally, schools should determine when special education evaluation is triggered within this RTI framework but also must allow for student referral to occur at any point in time.

One necessary feature, though, of the well-designed RTI model is the use of progress monitoring for decision making. Of course, successful learning outcomes are not possible without high-quality instruction implemented with fidelity. To ensure that students are achieving as expected, however, progress monitoring becomes a critical tool for decision-making purposes at all tiers within the RTI framework. Progress monitoring data are used (a) to target students in need of additional assistance, (b) to judge student responsiveness to interventions, and (c) to develop formatively individualized programs for unresponsive students (L. S. Fuchs & Fuchs, 2008). Additionally, progress monitoring data may be used as a method for identifying instructional programs that need to be strengthened or teachers who may benefit from professional development and coaching. When implemented well, what RTI may offer over more traditional methods of SLD identification is a system of coordinated services that provides instructional and behavioral assistance to those students suspected at risk at much earlier points in time as well as identify students with SLD at earlier ages, thereby potentially lessening the impact of the disability or preventing some students from developing disabilities.

References

- Bargerhuff, M. E., Dunne, J. D., & Renick, P. R. (2007). Giving teachers a chance: Taking special education teacher preparation programs to rural communities. *Rural Special Education Quarterly*, 26(1), 3-12.
- Canter, L. L. S., Voytecki, K. S., & Rodriguez, D. (2007). Increasing online interaction in rural special education teacher preparation programs. *Rural Special Education Quarterly*, 26(1), 23-27.
- Compton, D. L., Fuchs, D., Fuchs, L. S., & Bryant, J. D. (2006). Selecting at-risk readers in first grade for early intervention: A two-year longitudinal study of decision rules and procedures. *Journal of Educational Psychology*, 98, 394-409.
- Deno, S. L. (1985). Curriculum-based measurement: The emerging alternative. *Exceptional Children*, 52, 219-232.
- Division for Learning Disabilities. (2007). *Thinking about response to intervention and learning disabilities: A teacher's guide*. Arlington, VA: Author.
- Fletcher, J. M. (2006). The need for response to instruction models of learning disabilities. *Perspectives*, 32(1), 12-15.
- Foorman, B. R. (2007). Primary prevention in classroom reading instruction. *TEACHING Exceptional Children*, 39(5), 24-30.
- Fuchs, D., Mock, D., Morgan, P. L., & Young, C. (2003). Responsiveness-to-intervention: Definitions, evidence, and implications for the learning disabilities construct. *Learning Disabilities Research & Practice*, 18, 157-171.
- Fuchs, D., Stecker, P. M., & Fuchs, L. S. (2008). Tier 3: Why special education must be the most intensive tier in a standards-driven, no child left behind world. In D. Fuchs, L. S. Fuchs, & S. Vaughn (Eds.), *Response to intervention: A framework for reading educators* (pp. 71-104). Newark, DE: International Reading Association.
- Fuchs, L. S., & Fuchs, D. (1998). Treatment validity: A unifying concept for reconceptualizing the identification of learning disabilities. *Learning Disabilities Research & Practice*, 13, 204-219.
- Fuchs, L. S., & Fuchs, D. (2006). Identifying learning disabilities with RTI. *Perspectives*, 32(1), 39-43.
- Fuchs, L. S., & Fuchs, D. (2007). A model for implementing responsiveness to intervention. *Teaching Exceptional Children*, 39(5), 14-20.
- Fuchs, L. S., & Fuchs, D. (2008). The role of assessment within the RTI framework. In D. Fuchs, L. S. Fuchs, & S. Vaughn (Eds.), *Response to intervention: A framework for reading educators* (pp. 27-49). Newark, DE: International Reading Association.
- Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C. §1400 et seq. (2004).
- Jung, L. A., Keramidas, C. G., Collins, B., & Ludlow, B. R. (2006). Distance education strategies to support practica in rural settings. *Rural Special Education Quarterly*, 25(2), 18-24.
- Kamps, D. M., & Greenwood, C. R. (2005). Formulating secondary-level reading interventions. *Journal of Learning Disabilities*, 38, 500-509.
- Keramidas, C. G., Ludlow, B. R., Collins, B. C., & Baird, C. M. (2007). Saving your sanity when teaching in an online environment: Lessons learned. *Rural Special Education Quarterly*, 26(1), 28-39.
- National Reading Panel. (2000). *Report of the National Reading Panel. Teaching student to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. (NIH Publication No. 00-4769). Washington, DC: U.S. Department of Health and Human Services, National Institute of Child Health and Human Development.
- O'Connor, R. E., Harty, K. R., & Fulmer, D. (2005). Tiers of intervention in kindergarten through third grade. *Journal of Learning Disabilities*, 38, 532-538.
- Shanahan, T. (2008). Implications of RTI for the reading teacher. In D. Fuchs, L. S. Fuchs, & S. Vaughn (Eds.), *Response to intervention: A framework for reading educators* (pp. 105-122). Newark, DE: International Reading Association.
- Stecker, P. M., Fuchs, L. S., & Fuchs, D. (2005). Using curriculum-based measurement to improve student achievement: Review of research. *Psychology in the Schools*, 42, 795-819.
- Taylor, B. M. (2008). Tier 1: Effective classroom reading instruction in the elementary grades. In D. Fuchs, L. S. Fuchs, & S. Vaughn (Eds.), *Response to intervention: A framework for reading educators* (pp. 5-25). Newark, DE: International Reading Association.
- Tilly, W. D., III. (2006). Diagnosing the learning enabled: The promise of response to intervention. *Perspectives*, 32(1), 20-24.
- Vaughn, S., & Chard, D. (2006). Three-tier intervention research studies: Descriptions of two related projects. *Perspectives*, 32(1), 29-34.
- Vaughn, S., & Denton, C. A. (2008). Tier 2: The role of intervention. In D. Fuchs, L. S. Fuchs, & S. Vaughn (Eds.), *Response to intervention: A framework for reading educators* (pp. 51-70). Newark, DE: International Reading Association.
- Vaughn, S., & Roberts, G. (2007). Secondary interventions in reading: Providing additional instruction for students at risk. *Teaching Exceptional Children*, 39(5), 40-46.