In a Responsiveness-to-Intervention (RTI) model, successive levels of instructional supports based on scientifically sound practices are provided to students who experience academic difficulties. Although professionals have described specific components of the RTI multi-tiered system in different ways, authors of the RTI series in this issue describe a three-tiered system of instructional service to students who struggle academically, including the identification and provision of special education to students with specific learning disabilities (SLD). What is common across discussions of RTI as a prevention-intervention model is that increasingly more intensive instructional support is provided during each successive tier to students who are designated as at risk or when these students demonstrate academic unresponsiveness in previous tiers. The third tier, or tertiary intervention, is the main focus of this article. In this model, Tier 3 includes the provision of special education services.

Under the Individuals With Disabilities Education Improvement Act of 2004, states may no longer require the use of the discrepancy approach (i.e., between intellectual functioning and achievement) to identify individuals with SLD. The law permits states and districts to use data from student response to research-based interventions, such as those collected through an RTI approach, as an alternative route for identifying SLD. Although RTI practices have been in place in some locations for a number of years (see e.g., D. Fuchs, Mock, Morgan, & Young, 2003; Marston, Muyskens, Lau, & Canter, 2003; Tilly, 2006; Vaughn & Chard, 2006), no standard protocol has been mandated for directing the RTI process. Consequently, current models vary with respect to particular features of the model. What is common among approaches, however, is that progress-monitoring data are used for decision-making purposes. Data aid teachers in making judgments about the success of their instruction for individual students and to determine when additional support is needed, or conversely, when such intensive instruction no longer is needed because a student has responded well to intervention. For example, when progress-monitoring data illustrate good response to secondary prevention services (i.e., Tier 2), the student may be moved back to primary prevention (i.e., Tier 1). Progress monitoring continues, and, if the student experiences a serious lag in academic achievement, Tier 2 intervening support may be necessary again. In this way, progress-monitoring data support flexibility within the RTI model for moving a student back and forth through tiers and become central to RTI practices.

The following section briefly reviews typical practices in Tiers 1 and 2 and describes how tertiary instruction (i.e., Tier 3) differs from previous tiers. In this model, intensive tertiary intervention includes the provision of special education. Next, the RTI process is described in the context of a classroom scenario with a hypothetical student who struggles significantly with reading. This case study illustrates how progress-monitoring data are used to move this student through the RTI tiers and subsequently to aid in identifying her as having an SLD. Within tertiary
intervention, progress-monitoring data are used in a variety of ways: to develop an individualized education program (IEP) goal, to judge the adequacy of student progress and the success of the instructional program, to determine when instructional changes appear necessary, and to formulate instructional modifications to better meet individual needs. Moreover, when data indicate substantial improvement in level and rate of progress, students may be moved out of tertiary intervention into a less intensive instructional tier. Finally, several remaining questions regarding RTI practices and challenges for implementation are discussed.

Overview of Tiers

General Description of Tier 1

Universal screening may be a part of Tier 1 or is completed routinely prior to the implementation of Tier 1 interventions. Benchmark scores, results on standardized achievement tests, or median scores from several progress-monitoring measures may serve as tools for determining risk status. After students are designated as being at risk by the screening method, Tier 1 serves as preventive instruction conducted in general education classrooms. Although progress-monitoring data may be collected for all students in the classroom, some RTI models collect progress-monitoring data in this tier only for those students who are designated as at risk. The classroom teacher implements research-validated instructional practices and monitors student progress for a specified period of time, such as 5 to 10 weeks. If progress-monitoring data are collected at least every month with all students in class, these data can also serve as a gauge for determining the overall effectiveness of classroom instruction. For example, if student progress is poor for most students in the class, then the teacher may need support in implementing more effective instruction. If, however, most students are progressing well and only a subset of students show poor progress, then the assumption is made that the instructional practice is generally effective but is not working as anticipated for the subset of students. For students designated as at risk, progress-monitoring data illustrate how well they are responding to otherwise effective instruction. If student progress is poor, then other instructional practices may be tried as part of the general curriculum with progress monitoring continuing, or the student may be referred for Tier 2 preventive instruction.

General Description of Tier 2

Typically considered a part of preventive instruction or early intervening services within general education, Tier 2 instruction may be conducted by a general classroom teacher, reading specialist, school psychologist, or trained paraprofessional. Instruction at this level is considered more intensive than Tier 1 instruction because it is focused on areas of demonstrated need. For example, if students perform poorly in phonemic awareness, then Tier 2 instruction may provide a supplemental program emphasizing sounds in language. Tier 2 instruction is provided to students in small groups (e.g., 4–6 students) who perform similarly. Tier 2 instruction is made available in addition to Tier 1 instruction and may be provided several times per week for 30 or more minutes or as frequently as daily. This additional instruction may follow standard procedures for a particular intervention program or a student support team may devise intervention methods for groups of students. Progress monitoring for the students in Tier 2 continues for a specified period of time, such as 8 to 12 weeks, and data are used to determine whether (a) progress is good and the student returns to Tier 1 instruction, (b) progress does not occur at the expected rate and the student continues with another Tier 2 intervention, or (c) progress is poor and the student is referred to a more intensive level of instruction in Tier 3.

General Description of Tier 3

The third tier of instruction is considered to be the most intensive and is focused on individual student need.

In the following section, a hypothetical case study illustrates one school's RTI approach in providing effective educational services to all students. This scenario highlights the use of progress-monitoring data in identifying a young student with SLD. Ruby Sue is a first grader who differs markedly from her peers in both level of performance and rate of progress. This dual discrepancy (L. S. Fuchs & Fuchs, 1998) is used as the rationale for providing her with increasing levels of instructional support. When she repeatedly fails to respond adequately to effective class-
room and supplemental instruction, a multidisciplinary team finds that she is eligible for special education and labels her as having an SLD. This case study details the use of progress-monitoring data for developing Ruby Sue’s IEP goal, evaluating her response to instruction, and formatively devising effective instruction. These data are used as well to judge when Ruby Sue is successful and may be able to thrive academically without such intensive intervention.

RTI Scenario

Ruby Sue moved to a southeastern school district at the beginning of first grade. Johnson Elementary currently uses the Dynamic Indicators of Basic Early Literacy Skills (DIBELS; see Good & Kaminski, 2003) as a schoolwide progressive benchmark system to evaluate reading skills several times across the year for all students in the school, kindergarten through Grade 5. Given three times a year, benchmark scores indicate risk status (i.e., at risk, at some risk, or at low risk) for meeting the next benchmark. Alternate forms of DIBELS measures are available for more frequent progress monitoring.

Prior to second grade, several measures are administered at each benchmark period to evaluate a different dimension of early literacy skills. However, once students are reading connected text, oral reading fluency is the predominant measure used to gauge overall reading achievement. Oral reading fluency has been used with success for years as a part of curriculum-based measurement procedures (CBM; Deno, 1985) in monitoring the overall reading progress of students with disabilities. CBM is a research-validated form of progress monitoring and has contributed to improved student achievement when teachers use the data for instructional decision making (for review, see Stecker, Fuchs, & Fuchs, 2005).

During the 3rd week of school, all first grade students were screened on letter name fluency (i.e., naming letters of the alphabet in 1 min), phoneme segmentation fluency (i.e., producing sound segments for words provided orally), and nonsense word fluency (reading vowel–consonant or consonant–vowel–consonant patterns as entire “words” or as individual sounds; see Good & Kaminski, 2003 for specific information on benchmark scores and categories of risk status). Ruby Sue’s scores indicated that she was at low risk on letter naming, that she had emerging skill in phonemic segmentation but was not yet established, and that she was at risk on nonsense word fluency. Mr. Dalton, the first-grade teacher, was concerned about Ruby Sue’s performance. Johnson Elementary provides parents with an explanation of the evaluation system used in reading each year, so Ruby Sue’s scores were sent home to her parents.

Tier 1

Because nonsense word fluency is the most sophisticated of the literacy measures given early in first grade and because Ruby Sue had performed so poorly on this measure, Mr. Dalton decided to continue monitoring Ruby Sue’s progress weekly on nonsense word fluency. He used the district’s core reading program, which followed a code-emphasis approach. Oral activities supported vocabulary and comprehension development. Mr. Dalton provided a description of his instruction on his school Web page. He monitored Ruby Sue’s progress for 8 weeks on nonsense word fluency and sent home a copy of her progress-monitoring chart every few weeks.

After 8 weeks, Mr. Dalton met with the school’s Student Support Team to discuss Ruby Sue’s lack of progress. The first phase in Figure I shows progress-monitoring data for nonsense words during Tier 1 instruction. Ruby Sue’s scores grew minimally from 7 to 11, or about 0.5 letter sounds per week on average. She fell significantly behind her peers who generally were responding well to Mr. Dalton’s instruction. The Student Support Team recommended that Ruby Sue enter Tier 2 supplemental instruction. Mr. Dalton sent home a note explaining this recommendation and invited Ruby Sue’s parents to a conference to discuss this next step.

Tier 2

**First Phase.** Ruby Sue entered Tier 2 with five other children. Ms. Cortez, a reading specialist, served as the intervention teacher and provided 30 min of supplemental instruction 3 days per week in phonemic awareness and phonics activities according to a prescribed sequence for 10 weeks. Ms. Cortez continued to monitor Ruby Sue’s progress weekly on the nonsense word fluency task. About every month, she also checked performance on phonemic segmentation. Ruby Sue’s performance increased a little on phonemic segmentation, and nonsense word fluency grew steadily but at a minimal level over time. Both the level of performance and the rate of improvement were less than anticipated. In addition, the winter benchmark period for DIBELS occurred during this intervention phase. Oral reading fluency was added as a measure and letter naming was dropped. Ruby Sue’s score on phonemic segmentation fell just at the established level, but her nonsense word fluency score of 24 remained in the at-risk range. On the oral reading fluency measure on first-grade passages, Ruby Sue read six words correctly, in 1 min, which also fell in the at-risk range. Even with her improvement on nonsense word fluency, she still was lagging far behind her peers. Consequently, the Student Support Team decided Ruby Sue should enter a second cycle of Tier 2 preventive instruction. Figure 1 depicts the progress-monitoring data collected during this phase of supplemental instruction.

**Second Phase.** Ruby Sue met with three other students 5 days per week for 30 min during this second phase of Tier 2 instruction. Consequently, instruction in this phase was offered more frequently and with fewer students than during the first phase of Tier 2 instruction. Ms. Cortez addressed similar skills, but she spent more time modeling and providing practice opportunities with skills just demonstrated. Because oral reading fluency was the most robust of the DIBELS measures given for the rest of first grade and because that measure would continue to be used in second grade, Ms. Cortez switched to monitor-
ing Ruby Sue’s progress weekly with oral reading fluency and checked nonsense word fluency only periodically. At the end of 10 weeks, the Student Support Team met to review Ruby Sue’s progress. Refer to Figure 1 for Ruby Sue’s progress-monitoring data on oral reading fluency.

Ruby Sue read very slowly with 14 words correct per min at the end of this instructional phase. Her teachers reported that Ruby Sue could say sounds for about two thirds of the consonants but had difficulty blending sounds to read words. She also had a limited sight word vocabulary. However, she did appear to comprehend information adequately while listening to stories being read or during group discussion. Her very weak performance with basic reading skills, however, concerned her teachers and triggered a referral for Tier 3 intervention.

Because Ruby Sue’s parents had been informed all along of Ruby Sue’s progress (or lack thereof) during first grade, they were not surprised when the school recommended that Ruby Sue receive more intensive instruction and be evaluated for a possible SLD. With parental consent, a comprehensive evaluation was conducted at this point. Several assessments and rating scales were administered to rule out possible vision and hearing problems, cognitive disability, and emotional-behavioral disability. Likewise, speech-language disability and cultural and linguistic factors were eliminated as possible contributing factors to Ruby Sue’s learning problems. Performance information from Ruby Sue’s teachers and progress-monitoring data that demonstrated continued nonresponsiveness to otherwise effective reading instruction provided a large part of Ruby Sue’s achievement data. Districts, however, may elect to conduct a more thorough investigation of a student’s academic and cognitive functioning at this point (see Batsche, Kavale, & Kovaleski, 2006, for discussion). The multidisciplinary team determined that Ruby Sue had an SLD in basic reading skills and was in need of specialized services. The IEP team met to develop a long-range plan for individualized instruction. Special education services were delivered as Tier 3 intervention.

**Tier 3**

**IEP Goal Development.** The IEP team needed to develop a year-long goal in reading for Ruby Sue for near the end of her second-grade year. Although they had data on oral reading fluency for first-grade measures, they gathered baseline data on second-grade passages as well. Ruby Sue’s average score on two second-grade passages was 12 words correct per min, which fell close to her scores on first-grade passages. She seemed to read the same words across all the passages. The team knew that oral reading fluency was a technically sound measure for monitoring overall reading achievement in elementary students and chose to use this measure for developing Ruby Sue’s IEP goal. Because the team thought that the gap existing between her peers’ and her
performance could be closed with intensive, specialized instruction, the IEP team set 90 words correct per min as her annual goal to be achieved by Week 34 of second grade for Ruby Sue. The team considered several factors in setting this long-range goal. First, 90 words correct per min was the DIBELS benchmark for the lowest score that still fell in the low-risk category by the end of second grade. Second, the team looked at average and ambitious rates of growth for second graders (see L. S. Fuchs, Fuchs, Hamlett, Walz, & Germann, 1993). Realistic and ambitious rates of growth per week were 1.5 and 2 words correct, respectively, at second grade. Approximately 37 instructional weeks (i.e., 4 weeks left in first grade and 33 weeks in second grade) would occur before the date of the annual goal. A particular weekly growth rate could be multiplied by the total number of instructional weeks left to meet the goal and then could be added to baseline performance to determine a reasonable goal. In Ruby Sue’s case, an ambitious growth rate of 2 words per week multiplied by 37 weeks was 74 words. Then, the 74 words were added to the baseline of 11 words to yield a goal of 85 words correct per minute, which also could be rounded up to 90. Ruby Sue’s parents wanted her to be able to read like her peers and supported the provision of intensive services so Ruby Sue could get the specialized help she needed to reduce her gap in performance. Thus, the IEP team designated 90 words correct per min in second-grade passages as the long-term goal. Ruby Sue’s IEP statements for current level of performance and her annual goal are listed below.

- **Current Level of Performance:**
  Given passages written at the second-grade level, Ruby Sue currently reads aloud 11 words correct in 1 min.

- **Annual Goal:**
  Given passages written at the second-grade level, Ruby Sue will read aloud at least 90 words correct per min in 37 weeks.

**Instructional Decision Making.**

Figure 2 shows Ruby Sue’s IEP progress-monitoring graph. The open triangle represents Ruby Sue’s baseline performance on oral reading fluency in second-grade passages at Week 34 of her first grade. The open triangle depicts the long-term goal set for Week 34 of Ruby Sue’s second-grade year. The line connecting baseline and the goal is the goal line, which depicts how quickly Ruby Sue needs to progress through the curriculum in order to meet her annual goal. Ruby Sue’s teachers continued to monitor her progress frequently and compared her actual rate of improvement periodically against the goal line to judge whether Ruby Sue was making adequate progress toward attaining her long-term goal. When Ruby Sue appeared to be making less growth than anticipated, her teacher modified instruction in some way to try to stimulate better achievement. When Ruby Sue made progress that was better than anticipated, the team raised her goal and considered whether a trial of less intensive instruction, such as that provided in Tier 2, was warranted. Thus, progress-monitoring data were used within an RTI model as an objective basis for determining when modifications were necessary within instructional tiers and when movement in and out of instructional tiers appeared justified.

**Instructional Implementation.**

Ms. Ames, the special educator, worked with Ruby Sue, along with 2 other students, for 75 min daily on literacy activities specific to Ruby Sue’s needs. This instruction occurred in addition to Ruby Sue’s core reading program and focused heavily on decoding skills, including letter–sound correspondences for consonants and short vowels, blending to sound out words, high-frequency sight words, and use of word lists and teacher-made passages for reading practice. Although some oral activities supported vocabulary and comprehension, the greatest proportion of time was spent helping Ruby Sue to read words and connect text independently. Although Ms. Ames primarily used first-grade materials for instruction, she continued to assess Ruby Sue’s oral reading fluency on second-grade passages. The trend line, or slope, through the first instructional phase of 8 weeks in second grade illustrates increasing progress but not quite at the desired rate when compared to the goal line (refer to Figure 2 and the superimposed trend line on the Tier 3A data set). Therefore, Ms. Ames made an instructional enhancement to her program by adding more sight words, teaching sound correspondences for common letter combinations, and using decodable books for reading practice. She had Ruby Sue spell and write the words she was reading. By examining the progress-monitoring data for the next phase of instruction of 8 weeks, Ms. Ames could see that Ruby Sue continued to improve. She had two scores that actually fell above the goal line; however, the overall trend of Ruby Sue’s performance was a little less steep than the goal line.

Consequently, Ms. Ames sought to improve Ruby Sue’s rate of growth once again. Ms. Ames considered Ruby Sue’s performance and the aspects of the program that could be modified to better meet Ruby Sue’s needs. Because Ruby Sue was making good improvement, Ms. Ames continued with her general plan for decoding instruction but added fluency-building activities and expanded her repertoire of reading selections. She primarily used second-grade materials at this point, and they also reread passages used in the core program earlier in the year. Ms. Ames previewed vocabulary and skills for upcoming lessons in the general classroom.

In this way, Ms. Ames used progress-monitoring data to determine the relative effectiveness of her instructional procedures. Periodically, she examined the actual rate of Ruby Sue’s progress against the anticipated rate of progress to judge how well the instructional program was working for Ruby Sue. Over time, she was able to construct more effective instruction for Ruby Sue by introducing program modifications to better suit Ruby Sue’s needs.

**Movement Among Tiers.**

Looking at progress-monitoring data for the third phase of instruction revealed that Ruby Sue had made substantial progress. Ruby Sue’s trend of performance actually exceeded the anticipated rate of growth depicted by the goal line. If Ruby Sue continued in this fashion, she likely would exceed her annual goal. Ms.
Ames met with the IEP team to discuss Ruby Sue’s progress. The team decided that Ruby Sue’s goal should be raised to 105 words correct per min and that a cycle of Tier 2 instruction should be conducted without Tier 3 intensive intervention. Progress monitoring would continue. If Ruby Sue were to continue to progress well, Tier 2 instruction may be continued for the rest of the year. If Ruby Sue’s progress-monitoring data showed little progress or a decline, more intensive Tier 3 intervention would again be considered. In this way, progress-monitoring data could be used to direct the level of intensity of instructional support she needed. Movement in and out of instructional tiers was flexible, with special and general education services working in a coordinated fashion. Once Ruby Sue demonstrated a positive growth trajectory without intensive special education provided in Tier 3, the IEP team could dismiss her entirely from special education supervision.

In Ruby Sue’s case, the IEP team did not release her fully from special education. Her instructional placement changed to Tier 2 services, and supplemental instructional time was reduced to 30 min. However, the special educator continued to monitor Ruby Sue’s progress toward her IEP goal and to consult with the Tier 2 intervention teacher regarding instructional practices. Progress-monitoring data were used to direct the level of intensity of instructional support she needed. Movement in and out of instructional tiers was flexible, with special and general education services working in a coordinated fashion. Once Ruby Sue demonstrated a positive growth trajectory without intensive special education provided in Tier 3, the IEP team could dismiss her entirely from special education supervision.

### Remaining Questions and Challenges for RTI Implementation

As has been discussed in this series, advantages of using an RTI approach to schoolwide assessment and instructional practices are many. Reconfiguring school resources to assist students at different levels of instructional intensity establishes a system of educational service for all students in need before they experience a lengthy cycle of failure. Early intervening services may

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**Reconfiguring school resources to assist students at different levels of instructional intensity establishes a system of educational service for all students in need before they experience a lengthy cycle of failure.**
ultimately reduce the number of students referred for special education or may reduce the impact of a disability on students' academic progress. Emphasizing the use of evidence-based practices at all instructional levels contributes to student success and may eliminate or reduce ineffective instruction as a cause of poor student performance. Progress-monitoring data can be used as an objective source of information for judging student achievement, evaluating instructional efficacy, and planning instruction. For example, progress-monitoring data can be used to develop instructional programs formatively to accelerate student progress. Movement of individual students among instructional tiers is flexible and is based on student data and research-based criteria for likelihood of success.

With RTI practices, however, several issues remain to be resolved. Central to the use of data generated through RTI for potential SLD identification is the concern over actual implementation of evidence-based instructional practices. If the expectation holds true that RTI practices eliminate students from special education referral whose low performance is primarily due to ineffective instruction, then RTI models must verify that evidence-based practices are in place in primary and secondary prevention programs. Consequently, schools are compelled to consider the resources that are necessary for supporting high-quality instruction in all levels of instructional practice.

If progress-monitoring data are used to capture overall student response to instruction, then progress-monitoring measures must be technically sound, and research evidence should guide the use of these data for decision making. For IEP development, goals should be written that are measurable and for which suitable progress-monitoring measures can be used to judge the adequacy of student progress toward ultimately attaining them. Consequently, it may be advantageous to select a measure that can be used for progress monitoring across the entire year. With Ruby Sue, different tools were selected for monitoring her progress across the first grade. Having one tool, such as word identification fluency (see L. S. Fuchs, Fuchs, & Compton, 2004) in first grade (or letter-sound fluency in kindergarten) for monitoring growth across the entire year may aid in decision making and be an important consideration when selecting measures for monitoring IEP goals in early grade levels.

RTI models must verify that evidence-based practices are in place in primary and secondary prevention programs.

Other technical questions relate to the number of tiers included in the RTI model, length and number of preventive treatment phases within each tier, frequency of progress monitoring (e.g., once or twice per week), and comprehensiveness of special education evaluation (for discussion, see Fletcher, 2006; L. S. Fuchs & Fuchs, 2006). Other issues include the movement in and out of tiers. For example, how long should a child remain in intensive special education services? What procedures should be followed when a student performs well in a more intensive instructional tier but performs poorly when moved to a less intensive tier?

Although some RTI work has been done with respect to mathematics, most RTI models to date have addressed reading with young, elementary-age students. How can RTI be implemented effectively across subjects and grade levels? What measures should be used with older students who may be in need of special education services? As RTI holds much promise for improved instruction and better alignment and collaboration between general and special education, continued research is needed to guide the adoption of specific RTI practices by states and districts.

References


Pamela M. Stecker (CEC SC Federation), Professor of Special Education, Eugene T. Moore School of Education, Clemson University, Clemson, South Carolina.

Address correspondence to Pamela M. Stecker, Clemson University, 213 Holtzendorff Hall, Clemson, SC 29634 (e-mail: stecker@clemson.edu).

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