

Distinguishing Between Tier 2 and Tier 3 Instruction in Order to Support Implementation of RTI

by Jason E. Harlacher, Ph.D., Marzano Research Laboratory, Amanda Sanford, Ph.D., Portland State University, and Nancy Nelson Walker, Ph.D., Center on Teaching and Learning, University of Oregon

Abstract

Within Response-to-Intervention models, schools create layers of instructional tiers to match levels of support to students' needs. However, there are seemingly contradictory descriptions of Tier 2 and Tier 3 within the literature, and there is a reported need for further clarification on how to intensify instruction within RTI. To provide that clarity, the exact differences between Tier 2 and Tier 3 supplemental support are presented. The differences are described across (a) organizational factors, including time and group size, and (b) assessment factors, including the level of problem analysis and frequency of progress monitoring. Scheduling of instructional time and differences between elementary and secondary settings are also discussed. A list of instructional factors is also included.

Distinguishing Between Tier 2 and Tier 3 Instruction in Order to Support Implementation of Academic RTI

In recent years, schools have begun to implement schoolwide prevention models in an effort to increase student achievement, particularly in the areas of reading and math, referred to as *Response to Intervention* (RTI; Brown-Chidsey & Steege, 2010; Haager, Klingner, & Vaughn, 2007; Jimerson, Burns, & VanDerHeyden, 2007; NASDSE, 2005). Various terms have been used to describe such models, depending on whether the focus is on the academic or behavioral outcomes of students. RTI has often been used to describe an academic tiered model, whereas *positive behavioral interventions and support* (PBIS) is used to describe a behavioral tiered model. Recently, the term *multi-tier system of supports* (MTSS) has emerged to describe the framework in schools that provides both academic and behavioral support for students. The term *RTI* has evolved to refer to the process for academic decision making. In this article, we discuss the academic side of an MTSS. MTSS is a schoolwide approach that establishes a seamless connection between three components: (1) a viable, standards-aligned curriculum and research-based instructional practices; (2) a comprehensive assessment system; and (3) use of the problem-solving model. MTSS commonly employs three layers of instruction, called tiers, which are used to match the level of instruction students need to their level of support. Students' growth is monitored and instructional placements are adjusted accordingly if students do not make adequate progress (Jimerson et al., 2007).

Within an MTSS, all students receive core instruction as the foundation for learning. Those students at-risk for academic failure on the basis of their performance (and validation of their performance) on screening assessments are then provided supplemental support. This first layer of additional support, Tier 2, occurs outside of the time dedicated to core instruction, in groups of 5–8 students, and focuses primarily on providing increased opportunities to practice and learn skills taught in the core (Baker, Fien, & Baker, 2010; Vaughn, Wanzek, Woodruff, & Linan-Thompson, 2007). When Tier 2 is insufficient to meet student need, students are provided Tier 3. Compared to Tier 2, Tier 3 is more explicit, focuses on remediation of skills, is provided for a longer duration of time (both in overall length of intervention and regularly scheduled minutes of instructional time), and occurs in smaller groups (i.e., groups of 1–3 students; Haager et al., 2007; Harn, Kame'enui, & Simmons, 2007; Vaughn, Linan-Thompson, & Hickman, 2003).

One of the primary differences between MTSS and traditional service delivery models is the use of levels of instructional support to flexibly group students according to need. Having instructional tiers ensures proper support for each student because schools are able to match more intensive instruction and resources to students with more intensive needs and less intensive instruction and resources to students with less intensive needs. However, understanding the differences between tiers, particularly Tier 2 and Tier 3, may be difficult for several reasons related to the varying descriptions of Tier 2 and Tier 3 in the literature. For example, some researchers have described Tier 2 instruction as occurring two to three

times per week and Tier 3 instruction as occurring daily (Brown-Chidsey, Bronaugh, & McGraw, 2009), whereas others have described both Tier 2 and Tier 3 support as occurring daily (Chard & Harn, 2008; Denton, Fletcher, Simos, Papanicolaou, & Anthony, 2007). Others have described Tier 2 support as utilizing small groups comprising 4–8 students and Tier 3 as groups of 1–3 students (Chard & Harn, 2008), yet others have described both Tier 2 and Tier 3 support as groups comprising 1–3 students (Algozzine, Cooke, White, Helf, Algozzine, & McClanahan, 2008; Denton et al., 2007). In addition to varying descriptions of Tier 2 and Tier 3 in the literature, there is also a lack of clarity around certain aspects of providing supplemental support. For example, Gessler Werts, Lambert, and Carpenter (2009) surveyed special education directors about RTI. Although 75% of the respondents reported that they had received formal training on RTI, there was limited consensus on various topics, including the amount of time needed for the delivery of Tier 2 and Tier 3 sessions. Other sites have reported needing more training on how to modify instruction that is currently in place (Bollman, Silbergliitt, & Gibbons, 2007; Greenfield, Rinaldi, Proctor, & Cardarelli, 2010). In particular, sites need further clarification on how to intensify instruction at Tier 2 and Tier 3 that is more than just changing the intervention program used, such as learning how and when to modify pacing and group sizes and how to improve the coordination of instruction in the school (Callender, 2007).

Additionally, sites often go through a trial and error process as they try out different processes within the model to find one that fits their site (Dulaney, 2012; White, Polly, & Audette, 2012). Dulaney (2012) described the implementation of RTI within a middle school, and a major finding was that the school went through an evolution process to find a clear procedure for implementing Tier 2 and Tier 3. Prewett et al. (2012) reported similar findings in their analysis of secondary RTI implementation. They analyzed implementation among 17 middle schools and many of the schools reported that they would try one method, only to refine it later after gaining more experience with RTI. Such dynamics can lead to slower implementation and results because sites have to spend time with processes or practices that aren't as efficient or effective as others. Unfortunately, schools do not have time to waste as different processes are tried, and students certainly can't wait either. The lowest 10% of readers in the middle of 1st grade are likely to stay the lowest 10% of readers unless they receive additional support (Good, Simmons, & Smith, 1998), and 74% of poor readers in the 3rd grade likely remain poor readers in the 9th grade (Fletcher & Lyon, 1998). Understanding how to intensify instruction between tiers and knowing how to match expended resources to student need is critical because studies indicate at-risk students make substantial gains in achievement and may even catch up to peers that are on-track when instruction is sufficiently intense (Harn et al., 2007; Vaughn et al., 2003).

What would benefit sites in designing their MTSS frameworks and RTI models is a clear picture of how Tier 2 is different from Tier 3 along several dimensions, including (a) the group size, (b) the processes for monitoring the effectiveness and fidelity of the tiers, (c) what instructional adjustments can be made between the tiers (Greenfield et al., 2010; Murakami-Ramvalho & Wilcox, 2012), and (d) ways to schedule time for the additional support (Dulaney, 2012; Greenfield et al., 2010; Swanson, Solis, Ciullo, & McKenna, 2012). To bring more clarity to the literature and to assist schools with understanding particular aspects of an academic MTSS framework, the differences between Tier 2 and Tier 3 support are presented in this article.

Supplemental Support Within an Academic MTSS Framework: Defining Tier 2 and Tier 3 Specifications

A defining feature of an MTSS framework is a relative increase in intensity among the tiers; more time, attention, and resources are devoted to students at Tier 3 relative to Tier 2 or Tier 1. This increase in support, particularly between Tier 2 and Tier 3, can be summarized across two sets of factors derived from the literature: (a) *organizational factors*, and (b) *assessment factors*. Each set of factors is described in detail next, illustrating how each one becomes more explicit and intensive between Tier 2 and Tier 3. A summary of the two sets of factors is provided in Table 1.

To further illustrate the difference between Tier 2 and Tier 3 support, a list of instructional factors and how they can be conceptualized between the tiers is also presented as part of Table 1. Previous research has summarized research-based instructional factors that can be adjusted to intensify instruction (see Harlacher, Nelson Walker, & Sanford, 2010; Harn et al., 2007; Mellard, McKnight, & Jordan, 2010; and Kupzyck, Daly, Ihlo, & Young, 2012). Using those references as

a basis, a selection of commonly discussed instructional factors was created and examples included within Table 1. This is not meant to be an exhaustive list, but instead is a selection of commonly discussed instructional factors.

Table 1: A Summary of Research-Based Factors that Illustrate the Differences Between Tier 2 and Tier 3

Factor	Tiers of Instructional Support	
Organizational Factors	Tier 2	Tier 3
Time allotted for instruction	30 minutes, 3–5 days/week	45–120 minutes, 5 days/week
Instructional grouping	5–8 students	1–3 students
Duration of intervention	8–15 weeks, <20 weeks	20+ weeks
Interventionist facilitating group	General education teacher, intervention specialist	Intervention specialist, content specialist, special education teacher
Assessment Factors	Tier 2	Tier 3
Level of diagnostic assessment	Group diagnostic assessment	Individual diagnostic assessment
Intensity of progress monitoring	Biweekly or monthly	Twice/week or weekly
Assessment framework	Group-level RIOT/ICEL (if applicable)	RIOT/ICEL
Instructional Factors	Tier 2	Tier 3
Opportunities to respond (OTRs)	Ensure at least 6–8 OTRs/minute	Ensure at least 8–12 OTRs/minute
Success rate of student responses	Ensure that the group is at least 80% successful on new material and 90% successful in review material	Ensure that individual students are at least 80% successful on new material and 90% successful in review material
Instructional focus	Use of core and supplemental programs with support of reteaching and review Group-level needs	More strategically structured, remediation intervention programs Individual-level needs
Behavioral expectations	Provide more structured systems to reinforce and correct challenging behavior	Use functional behavioral assessment to plan an individualized intervention
Precorrection	Utilize group precorrection	Utilize individual precorrection
Amount of review and repetitions	Review and practice of core concepts taught in Tier 1	More intensive practice of core and remediation content Considerably more time spent on reviewing concepts and allowing practice
Error correction	Prompt students to correct errors (“Look at the word again...”)	Provide direct error correction procedures (“That word is _____. What word?”)
Scaffolding	Utilize “I do, we do, you do together, you do alone” framework	Provide more intensive guided practice during “we do”

Organizational Factors

The primary organizational differences between Tier 2 and 3 are (a) the person facilitating the group; (b) the frequency and duration of the supplemental support, which is the number of days of additional support per week, the number of minutes of each instructional session, and the number of weeks of the support; and (c) the size of the group (i.e., number of students). In addition, there are considerations for scheduling and the coordination of Tier 3 support with Tier 1 instruction.

Person facilitating the group. A straightforward difference between Tier 2 and Tier 3 is simply the person who is leading the group and actually teaching the students. Typically, general-education teachers or specialists facilitate Tier 2, and more experienced teachers, such as a special education teacher, content specialist, or teacher with expertise in a content area, facilitate Tier 3 (Harn et al., 2007).

Time and group size in Tier 2. Across studies, elementary students typically receive 30-minute blocks of Tier 2 support in groups no larger than 8 and receive that intervention 3–5 days per week for a period of 8–15 weeks (Abbott et al., 2008; Brown-Chidsey & Steege, 2010; Vaughn et al., 2007). At the secondary level (i.e., middle and high school), students receive Tier 2 support in groups of 3–8 students (Burns, 2008; Prewett et al., 2012) for 40–50 minutes each day (Vaughn et al., 2010). It is recommended that any Tier 2 intervention not last longer than 20 weeks because students make the most gains within the first 20 weeks and much less thereafter (Vaughn, Wanzek, & Murray, 2012).

Group sizes at the secondary level can vary because of the nature of block scheduling and because instruction focuses more on remediation of skills than does elementary schools (Burns, 2008; Prewett et al., 2012). Most sites describe group sizes between 3 and 8 students (Burns, 2008; Prewett et al., 2012), yet some provide Tier 2 in groups of 5–15 students (Pyle & Vaughn, 2012; Prewett et al., 2012; Vaughn et al., 2010). In these instances, however, although all of the students receive intervention during the same time period, the group can be differentiated so that some students work independently while others receive small-group instruction in groups of 3 to 8 (Burns, 2008; Prewett et al., 2012). Depending on the structure of the classes and the schedule used (e.g., block scheduling vs. traditional scheduling), students may receive a daily intervention that is 40–50 minutes, or a 90-minute intervention block two to three times per week (Prewett et al., 2012; Pyle & Vaughn, 2012).

Time and group size in Tier 3. Within Tier 3, students are taught in groups of 1–4 (Denton et al., 2007). Instruction is provided on a daily basis (five times per week), for at least 45–60 minutes at a time (Abbott et al., 2008; Vaughn et al., 2007), and it may extend longer than the 8–15 weeks designated for Tier 2 (Vaughn et al., 2003). In some cases, Tier 3 may be provided anywhere from 60 to 120 additional minutes (Denton et al., 2007). Tier 3 is sometimes described as “triple dipped,” meaning that the student(s) may receive core instruction, Tier 2 support, and a third dose of instruction in Tier 3 (Harn et al., 2007). The defining features for Tier 2 support are that it occurs outside of the core time, occurs at least twice per week, and is delivered in small groups (NASDSE, 2005). In contrast, Tier 3 intervention occurs at least four times per week, but usually daily, in groups comprising 1–3 students (Chard & Harn, 2008; Harn et al., 2007).

Although there are guidelines for group size and time, the main difference between Tier 2 and Tier 3 is the increase in intensity of support. While there are guidelines for group sizes and duration for Tier 2 and Tier 3, the difference is a contextual one, as school will provide instruction at a higher frequency, for a longer duration, for more minutes during instructional sessions, and in smaller groups at Tier 3 relative to what is in place at Tier 2. For example, Chard and Harn (2008) described a model in which students receive instruction in groups of 4–8 at Tier 2 and in groups of 1–3 at Tier 3. Conversely, Denton and colleagues (2007) reported Tier 2 group sizes of 1–3 students for 40 minutes, 5 days per week, and Tier 3 group sizes of 2 students and 120 minutes of daily intervention time. Both are appropriate, contextual models of MTSS and RTI processes because of the relative increase in support.

Coordinating the delivery of Tier 3. Vital to the provision of Tier 3 is its coordination with core instruction. To ensure that students receive exposure to core content skills and have adequate time for remediation of missing or weak skills, Tier 3 cannot supplant students’ access to core instruction or substitute for a core lesson in the general education classroom. Otherwise, although beneficial in remediating some skills, the intervention would create gaps in other skills (Sanford,

Brown, & Turner, 2012). Instead, Tier 3, like Tier 2, must complement and supplement core instruction, without interrupting, conflicting with, or cutting instructional time from core blocks. This ensures that the students in Tier 3 receive practice with the academic language and concepts demanded by grade level standards taught in the core program, while also receiving small-group instruction focused on remediation of skills.

However, doing so requires careful communication between educators and strategic teaching of content. Whereas Tier 2 support is viewed as providing additional instructional time without any major adjustment to the student's core time, Tier 3 often calls for significant adjustment of the student's core time. This adjustment is particularly necessary when schools cannot provide a separate time above and beyond Tier 1 and Tier 2 for Tier 3 support.

Harn and colleagues (2007) described one way to coordinate instruction for students in need of Tier 3 support. In their study, students assigned to Tier 2 received 90 minutes of core instruction plus 30 additional minutes of support. At Tier 3, students also received 30 minutes of additional support time; however, Tier 2 supports were supplanted with Tier 3 supports. In addition, the students' core was "cut in half" for the purposes of delineating a focus on the most vital content. Tier 3 students spent 45 minutes in whole-group core instruction with grade-level peers focusing on grade-level concepts, but then received extended small-group instruction during the remaining 45 minutes to remediate skills not yet mastered. Whereas students in Tier 1 and Tier 2 spend these 45 minutes in small-group instruction with the regular education teacher (15 minutes) and then are rotated to two different learning activities (30 minutes), students receiving Tier 3 instruction had active, small-group instruction for the duration of the 45-minutes. By strategically using instructor resources in this model, instruction can take place either within the regular education classroom or in a pull-out setting.

Scheduling. Scheduling is a logistical component of providing Tier 2 and Tier 3 services. One solution for schools is to set up a common intervention time, during which all available staff are ready to teach certain intervention groups. Grade- or department-level teams use this time to pool all students and then organize them into appropriate Tier 2, Tier 3, or enrichment groups (Griffin & Hattendorf, 2010; Murakami-Ramalho & Wilcox, 2012). In this model, intervention times are staggered between grade-levels so that a sufficient amount of staff are available during each block. This model is beneficial when school personnel are limited, as pooling the staff and students together can free up staff to teach a small group of students; however, it requires that staff work collaboratively to identify group size and the focus of instruction. Another scheduling structure used is a pull-out period (Grimaldi & Robertson, 2011; Harn et al, 2007) in which those needing additional support go to another classroom or section of a classroom to receive Tier 2 or Tier 3 support. Students who do not need extra support stay in their respective classrooms and work on independent projects or another subject. This model requires additional staff to teach instructional groups, and students may miss other instruction and content while receiving additional support (Harn et al., 2007).

Scheduling at the secondary level. Scheduling at the secondary level requires slightly different approaches because of electives and various content courses (Burns, 2008; Prewett et al., 2012). Schools can use electives to provide students with intervention time (e.g., students allowed two electives receive one elective and one intervention period). Or, schools may use a block schedule to provide longer intervention periods (e.g., instead of having daily, 45-minute class periods, some schools provide longer class periods of 90 minutes that occur two or three times per week; Prewett et al.). Schools have also rearranged schedules and staff assignments so that students receive core instruction and supplemental support back-to-back by the same teacher (Griffin & Hattendorf, 2010).

Another option is to reduce each class period during the day by a few minutes in order to create an additional class period for Tier 2 or Tier 3. For example, if a school usually has seven time periods, reducing each period by 5 minutes can result in a 35-minute time block, which can be used for enrichment, study hall, or a free period for students not needing additional support. Schools can also offer intervention time before or after school, called extended learning time (ELT). In this situation, the ELT is not mandatory (because it's outside of school hours), but is highly encouraged (Prewett et al., 2012).

Assessment Factors

Three primary assessment differences between Tier 2 and 3 are (1) the use of individual versus group diagnostic information, (2) the frequency of progress monitoring, and (3) the use of a comprehensive assessment framework at Tier 3.

Individual versus group diagnostic information. Many of the same types of assessments are used across Tier 2 and

Tier 3 (i.e., universal screening to inform initial tier assignment, progress monitoring and mastery assessments to inform student learning, summative assessments to inform intervention effectiveness, and fidelity measures to determine implementation; Hosp, 2008). However, the level of analysis may differ, depending on the protocol adopted. A protocol guides schools' thinking about who gets which level of support and when they are assigned and modified (Tilly, 2008). One protocol used by schools is the "combined protocol," which specifies that standard interventions and group problem-solving are used at Tier 2, and individually designed interventions and individual problem solving are used at Tier 3 (Tilly, 2008). With group problem-solving, the common instructional need is identified among students needing Tier 2 support using brief diagnostic assessments. For example, if oral reading fluency is used as a screening assessment, an assessor can determine a student's rate (i.e., number of words read correctly in 1 minute) and accuracy (i.e., percentage of words read correctly) when reading connected text. From there, educators can identify what skills within reading to focus on (e.g., inaccurate and slow readers are provided general reading instruction, whereas accurate and slow readers are provided fluency instruction). As another example, imagine a grade-level team that analyzed the results of a common assessment used in reading for their 2nd graders. The results revealed that for students who received Tier 2, only 22% of them have mastered *r*-controlled vowels. Accordingly, a focus of decoding lessons in Tier 2 would include *r*-controlled vowels. This group level of problem analysis can help schools efficiently group larger numbers of students into appropriate levels of supports by pinpointing a common missing skill (or skills) to target during Tier 2.

As an analogy, imagine a health clinic that wants to identify the most frequent health concern expressed by its patients. Analyzing initial complaints from patients, the clinic discovers that a good portion of their patients frequently experience cold and flu symptoms. Instead of meeting with each patient separately and developing an individualized plan, the clinic targets those patients' needs all at once by providing a group-oriented intervention (a Tier 2 intervention). The clinic decides to share brochures on how to prevent spreading germs (e.g., washing hands frequently, covering mouth when coughing), passes out free hand sanitizer to those patients and to community venues (e.g., local grocery stores, coffee shops), and provides an on-call nurse to field questions for those individuals who have cold symptoms. In this scenario, the clinic analyzed common areas of need at the group level among its patients needing "Tier 2," without investing resources in analyzing individual patients' complaints.

At Tier 3, the unit of analysis moves from the group to the individual student. As opposed to group analysis, educators use individualized diagnostic assessments to evaluate the exact skills a student has and does not have rather than the skills a group of students have and do not have. In an RTI process, *diagnostic* does not refer to diagnosing a disability; it refers to analyzing the instructional situation and student's skills in order to plan for intervention. Diagnostic assessments are those that assess discrete skills, such as identifying the specific letter patterns a student can and cannot read well or which multiplication tables a student has mastered (Hosp, 2008).

Returning to the health clinic analogy, at Tier 3, the clinic would focus on one particular patient. Imagine that one patient has a recurring cough and the typical "first line" of treatment (the Tier 2 example described above) did not work. From there, the clinic may draw blood to pinpoint a more aggressive approach. The clinic may also conduct an interview with the patient, asking questions about the patient's day-to-day activities, and observe the patient taking deep breaths. The results of such an evaluation would inform the doctors about the individualized course of action to take. In our case, the patient with a recurring cough had a bacterial infection. Low and behold, a round of intense antibiotics has gotten this patient back to full health. With RTI, the goal is similar: to get students back to full educational health.

Frequency of progress monitoring. Another assessment difference between Tier 2 and Tier 3 is the frequency with which students are progress monitored. Students receiving Tier 2 support are monitored once per month or twice per month, compared to weekly or twice a week at Tier 3 (Brown-Chidsey & Steege, 2010). Usually, students at Tier 2 are monitored monthly, but some suggest monitoring every 2 weeks (Kaminski, Cumming, Powell-Smith, & Good, 2008) or weekly monitoring (Johnson, Mellard, Fuchs, & McKnight, 2006). Progress monitoring at Tier 3 is more frequent, but relative to the frequency of monitoring at Tier 2. If monthly monitoring occurs at Tier 2, then biweekly or weekly monitoring occurs for students in Tier 3 (Harn et al., 2007; Vaughn et al., 2007). The guiding principle is that, as the need of the student increases, so does the attention and responsiveness of the staff. The increase in data collection at Tier 3 reflects the urgency of the student's educational need and allows the staff to make decisions regarding instruction more frequently (e.g., every 2 months instead of once per quarter) In deciding upon the frequency of progress monitoring, schools have to

consider the number of data points needed. The validity of the slope (i.e., rate of improvement or rate of growth) depends on the number of data points that comprise it (Kennedy, 2005), and anywhere from 8 to 14 data points are needed to make a valid judgment of a student's growth (Christ, Zopluoglu, Long, & Monaghan, 2012). Consequently, schools may face a conundrum when the intervention has been implemented for a reasonable amount of time, yet the data is not sufficient to make a valid decision. For example, an intervention may have been implemented for 20 weeks, but monthly monitoring has resulted in only five data points. In such a scenario, schools have three options:

1. School staff can obviously increase the amount of progress monitoring to ensure they have at least eight data points in order to make a decision (e.g., collect data at least three more times to obtain at least eight data points).
2. School staff may wish to administer more than one probe during progress-monitoring occasions. Instead of administering one oral reading fluency probe, for example, educators can administer three probes and record the mean or median. When less than weekly monitoring is used, multiple administrations of probes during a progress-monitoring occasion and using the median score provide for a more valid data point (Christ et al., 2012). This can decrease the rate of monitoring required to have sufficient data for accurate decisions from conducting weekly monitoring for several months to conducting weekly monitoring for 3–9 weeks (Christ et al., 2012).
3. School staff can consider the data itself. Guidelines for progress monitoring are not hard and fast rules, because the number of data points needed depends in part on the amount of variability within the data. Specifically, the more variability within the data, the greater the number of data points needed to get a valid picture of the student's growth (Kennedy, 2005). Conversely, lower variability in the data indicates more precision in measurement and, thus, less need for more data points (although it's usually difficult to argue for fewer data points). When evaluating a student's growth rate, an educator should be able to look at the graph and judge, with reasonable confidence, where the next data point will land. If one cannot judge that, then more data are needed until the educator can judge where the next data point will fall with reasonable confidence. Schools could easily encounter situations in which fewer than eight data points provide a clear indication that the intervention is not sufficient for the student and, thus, more data are not needed to make a decision (see Figure 1). To summarize, schools will have to consider intervention time, progress-monitoring schedules, variability within the data, and certain decision deadlines (e.g., end of term or school year) to ensure they have sufficient data to make accurate decisions about student progress.

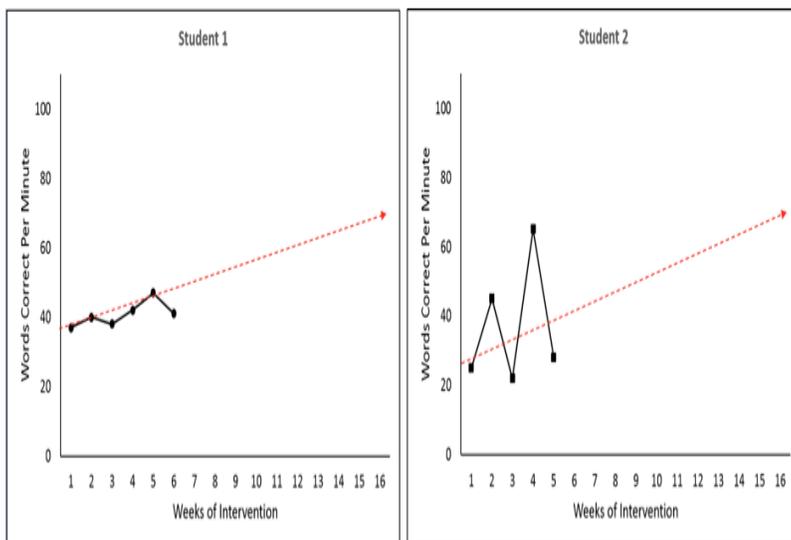


Figure 1. *Illustration of variability within data.*

Note: For Student 1, the data indicate that the student's next data point can be predicted with reasonable confidence, whereas for Student 2, more data is needed. Both examples have fewer than eight data points.

Assessment framework. A final difference with assessment between Tier 2 and Tier 3 is the use of a framework to structure the intensity and explicitness of decision making that corresponds with Tier 3 (Christ, 2008; Howell & Nolet, 2000). Whereas Tier 2 assessment is largely at the group-level, Tier 3 assessment is at the individual level. Thus, assessment at Tier 3 requires a much more comprehensive, thorough, and intensive approach. To accomplish this, assessment at Tier 3 is organized within the RIOT/ICEL framework.

RIOT and ICEL are acronyms for the type of assessments and instructional domains to analyze, respectively, when making decisions about individual students' achievement. ICEL includes *instruction* (how new skills are taught and reinforced), *curriculum* (what is being taught), *environment* (where the instruction takes place), and *learner* (the recipient of the skills being taught). RIOT includes *review* (reviewing existing data, permanent products, attendance records, lessons plans, etc.) that inform the evaluator about the state of affairs, *interviews* (structured, semi-structured, and unstructured methods of assessment that involve question–answer formats) *observations* (directly observing the instructional settings and the student's engagement during learning tasks to examine when and where the problem is most and least likely to occur), and *test* (the administration of formal and informal tests). The RIOT methods are used to obtain information about ICEL (Christ, 2008; Howell & Nolet, 2000).

RIOT and ICEL are best viewed as an organizing rubric that can guide the specifics of problem analysis (see Table 2).

Table 2: Examples of Sources of Information and Assessment Methods Within the RIOT and ICEL Framework to Support Achievement in Tier 3

	Review	Interview	Observe	Test
Instruction	<ul style="list-style-type: none"> Examine permanent product, lesson plans to assess prior strategies and instructional demands 	<ul style="list-style-type: none"> Interview educator(s) for philosophy and perception of student issues 	<ul style="list-style-type: none"> Conduct direct observations to document critical elements of practices Identify antecedents and consequences of behavior 	<ul style="list-style-type: none"> Use checklists, scales, etc. to measure effective practices
Curriculum	<ul style="list-style-type: none"> Review lesson plans and learning objectives to determine match with student's skills Analyze curriculum materials to understand scope and sequence, amount of review, etc. 	<ul style="list-style-type: none"> Interview educator(s) for understanding of curriculum, training received, expectations about pacing, etc. 	<ul style="list-style-type: none"> Examine permanent products to determine alignment with objectives Observe clarity of objectives and student's completion of them 	<ul style="list-style-type: none"> Assess difficulty of materials compared to student's instructional level
Environment	<ul style="list-style-type: none"> Review lesson plans on behavioral expectations; school rules and policies to understand climate; and seating charts to determine distractions 	<ul style="list-style-type: none"> Interview educator(s) to assess rules and routines Talk with students to describe climate, rules, etc. 	<ul style="list-style-type: none"> Observe school and classroom climate and interactions among staff and students 	<ul style="list-style-type: none"> Compare student's performance between different settings to assess impact of environment
Learner	<ul style="list-style-type: none"> Review records to assess previous history and learning, attendance Examine permanent products to assess response to previous instruction 	<ul style="list-style-type: none"> Interview student to describe perception of problem, coping methods, etc. 	<ul style="list-style-type: none"> Observe target skills and behavior 	<ul style="list-style-type: none"> Use a variety of tests to assess student's skill level and behavior

Depending on the hypothesis to test and the intensity of student need, an evaluation may only involve a few “cells” or several of the cells; the more severe the problem, the more areas to be assessed using the framework. The purpose of ICEL is to collect information that has high instructional relevance and pertains to controllable factors (Christ, 2008; Howell & Nolet, 2000). Because the student receiving instruction has not benefited from Tier 1 or Tier 2, much more time is spent analyzing the instructional environment to identify ways to correct the problem compared to students receiving Tier 2. This is not to say that certain instructional domains or cells in the RIOT/ICEL rubric are ignored at Tier 2, but the comprehensive and individualized assessment within RIOT/ICEL at Tier 3 reflects the increase in need and resources from Tier 2 to Tier 3. Additionally, the use of RIOT/ICEL clarifies the level of expertise needed to conduct assessment and make data-based decisions at this level. For example, educators using RIOT/ICEL will need training on how to use instructional observation tools (which fall under the *observe* and *instruction* cells) or how to assess the scope and sequence of a curriculum (*curriculum* cells).

Conclusion

As schools implement RTI and establish MTSS, they will need to make decisions about Tier 2 and Tier 3 that include the frequency of progress monitoring, the size of instructional groups, the frequency and duration of support, where such instructional time will be provided, and who will provide that support. To help schools understand the differences between Tier 2 and Tier 3, variances between those tiers were elucidated in this manuscript. Based on the literature, the primary means for intensifying instruction between Tier 2 and Tier 3 are (a) the amount of instructional time and size of the group receiving instruction offered at each tier, (b) the increase in the nature and frequency of progress monitoring at Tier 3, (c) the use of individualized assessment (instead of group-level assessment) at Tier 3, (d) the use of the RIOT/ICEL framework at Tier 3, and (d) manipulations in a set of key alterable variables that can be used to intensify instruction within or across tiers. Educators seeking to implement schoolwide prevention models in order to maximize resource allocation and support all students in achieving academic standards may be able to use these recommendations from the literature to improve implementation of RTI.

References

- Abbott, M., Wills, H., Kamps, D., Greenwood, C. R., Dawson-Bannister, H., Kaufman, J., ... Fillingim, D. (2008). The Kansas Reading and Behavior Center's K–3 prevention model. In C. Greenwood, T. Kratochwill, & M. Clements (Eds.), *Schoolwide prevention models: Lessons learned in elementary schools* (pp. 215–265). New York, NY: Guilford.
- Algozzine, B., Cooke, N., White, R., Helf, S., Algozzine, K., & McClanahan, T. (2008). The North Carolina Reading and Behavior Center's K–3 prevention model: Eastside elementary school case study. In C. R. Greenwood, T. R. Kratochwill, & M. Clements (Eds.), *Schoolwide prevention models: Lessons learned in elementary schools* (pp. 173–214). New York, NY: Guilford.
- Baker, S. K., Fien, H., & Baker, D. L. (2010). Robust reading instruction in the early grades: Conceptual and practical issues in the integration and evaluation of Tier 1 and Tier 2 instructional supports. *Focus on Exceptional Children*, 42(9), 1–20.
- Bollman, K. A., Silbergliitt, B., & Gibbons, K. A. (2007). The St. Croix River Education District model: Incorporating systems-level organization and multi-tiered problem-solving process for intervention delivery. In S. Jimerson, M. Burns, & A. VanDerHeyden (Eds.), *Response to intervention: The science and practice of assessment and intervention* (pp. 319–330). New York, NY: Guilford.
- Brown-Chidsey, R., & Steege, M. W. (2010). *Response to intervention: Principles and strategies for effective practice*. New York, NY: Guilford.
- Brown-Chidsey, R., Bronaugh, L., & McGraw, K. (2009). *RTI in the classroom: Guidelines and recipes for success*. New York, NY: Guilford.
- Burns, M. K. (2008). Response to instruction at the secondary level. *Principal Leadership*, 8(7), 12–15.
- Callender, W. A. (2007). The Idaho results-based model: Implementing response to intervention statewide. In S. Jimerson, M. Burns, & A. VanDerHeyden (Eds.), *Response to intervention: The science and practice of assessment and intervention* (pp. 331–342). New York, NY: Guilford.
- Chard, D., Harn, B. (2008). Project CIRCUITS: Center for Improving Reading Competence Using Intensive Treatments Schoolwide. In C. Greenwood, T. Kratochwill, & M. Clements (Eds.), *Schoolwide prevention models: Lessons learned in elementary schools* (pp. 70–83). New York, NY: Guilford.
- Christ, T. J. (2008). Best practices in problem analysis. In A. Thomas & J. P. Grimes (Eds.), *Best practices in school psychology V* (pp. 159–176). Bethesda, MD: National Association of School Psychologists.
- Christ, T. J., Zopluoglu, C., Long, J. D., & Monaghan, B. D. (2012). Curriculum-based measurement of oral reading: Quality of progress monitoring outcomes. *Exceptional Children*, 78, 356–373.
- Denton, C. A., Fletcher, J. M., Simos, P. C., Papanicolaou, A. C., & Anthony, J. L. (2007). An implementation of a tiered intervention model: Reading outcomes and neural correlates. In D. Haager, J., Klingner, & S. Vaughn (Eds.), *Evidence-based reading practices for response to intervention* (pp. 107–137). Baltimore, MD: Brookes.
- Dulaney, S. K. (2012). A middle school's response-to-intervention journey: Building systematic processes of facilitation, collaboration, and implementation. *NASSP Bulletin*, 97 (1), 53–77. doi: 10.1177/0192636512469289

- Fletcher, J. M., & Lyon, G. R. (1998). Reading: A research-based approach. In W. M. Evers (Ed.), *What's gone wrong in America's classrooms* (pp. 49–90). Stanford, CA: Hoover Institution Press. Gessler Werts, M., Lambert, M., & Carpenter, E. (2009). What special education directors say about RTI. *Learning Disabilities Quarterly*, 32(4), 245–254.
- Good, R. G., Simmons, D. C., & Smith, S. (1998). The importance and decision-making utility of a continuum of fluency-based indicators of foundational reading skills for third-grade high-stakes outcomes. *Scientific Studies of Reading*, 5 (3), 257–288.
- Greenfield, R., Rinaldi, C., Proctor, C. P., & Cardarelli, A. (2010). Teachers' perceptions of a response to intervention (RTI) reform effort in an urban elementary school: A consensual qualitative analysis. *Journal of Disability Policy Studies*, 21(1), 47–63. doi: 10.1177/1044207310365499
- Griffin, J., & Hattendorf, R. (2010). Successful RTI implementation in middle schools. *Perspective on Language and Literacy*, 36(2), 30–34.
- Grimaldi, S., & Robertson, D. A. (2011). One district's RTI model and IRA's guiding principles: The roads converge. *New England Reading Association Journal*, 47 (1), 18–26.
- Haager, D., Klinger, J., & Vaughn, S. (2007). *Evidence-based reading practices for response to intervention*. Baltimore, MD: Brookes.
- Harlacher, J. E., Nelson Walker, N. J., & Sanford, A. K. (2010). The "I" in RTI: Research-based factors for intensifying instruction. *Teaching Exceptional Children*, 42(6), 30–38.
- Harn, B. A., Kame'enui, E. J., & Simmons, D. C. (2007). Essential features of interventions for kindergarten students most in need of accelerated learning: The nature and role of the third tier in a prevention model for kindergarten students. In D. Haager, J. Klinger, & S. Vaughn (Eds.), *Evidence-based reading practices for response to intervention* (pp. 161–184). Baltimore, MD: Brookes.
- Hosp, J. L. (2008). Best practices in aligning academic assessment with instruction. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology V* (pp. 363–376). Bethesda, MD: National Association of School Psychologists.
- Howell, K. W., & Nolet, V. (2000). *Curriculum-based evaluation: Teaching and decision making*. Florence, KY: Wadsworth.
- Jimerson, S. R., Burns, M. K., & VanDerHeyden, A. M. (2007). *Handbook of response to intervention: The science of assessment and intervention*. New York, NY: Springer.
- Johnson, E., Mellard, D. F., Fuchs, D., & McKnight, M. A. (2006). *Responsiveness to intervention (RTI): How to do it*. Lawrence, KS: National Research Center on Learning Disabilities.
- Kaminski, R., Cummings, K., Powell-Smith, K., & Good, R. H. (2008). Best practices in using Dynamic Indicators of Basic Early Literacy Skills for formative assessment and evaluation. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology V* (pp. 1181–1203). Bethesda, MD: National Association of School Psychologists.
- Kennedy, C. H. (2005). *Single-case design for educational research*. Boston, MA: Allyn and Bacon. Kupzyck, S., Daly, E. J., Ihlo, T., & Young, N. D. (2012). Modifying instruction within tiers in multitiered intervention programs. *Psychology in the Schools*, 49 (3), 219–230.
- Mellard, D., McKnight, M., & Jordan, J. (2010). RTI tier structures and instructional intensity. *Learning Disabilities Research & Practice*, 25, 217–225.
- Murakami-Ramalho, E., & Wilcox, K. A. (2012). Response to intervention implementation: A successful principal's approach. *Journal of Educational Administration*, 50, 483–500. doi:10.1108/09578231211238602
- National Association of State Directors of Special Education (NASDSE). (2005). *Response to Intervention: Policy Considerations and Implementation*. Alexandria, VA: Author.
- Prewett, S., Mellard, D. F., Deshler, D. D., Allen, J., Alexander, R., & Stern, A. (2012). Response to intervention in middle schools: Practices and outcomes. *Learning Disabilities Research & Practice*, 27, 136–147.
- Pyle, N., & Vaughn, S. (2012). Redmediating reading difficulties in a response to intervention model with secondary students. *Psychology in the Schools*, 49, 273–284. doi: 10.1002/pits.21593
- Sanford, A., Brown, J. E., & Turner, M. (2012). Enhancing instruction for English learners in RTI systems: The PLUSS model. *Multiple Voices for Ethnically Diverse Exceptional Learners*, 13 (1), 56–70.
- Swanson, E., Solis, M., Ciullo, S., & McKenna, J. W. (2012). Special education teachers' perceptions and instructional practices in response to intervention implementation. *Learning Disabilities Quarterly*, 35 (2), 115–126. doi: 10.1177/0731948711432510
- Tilly III, W. D. (2008). The evolution of school psychology to science-based practice: Problem-solving and the three-tiered model. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology V* (pp. 17–35). Bethesda, MD: National Association of School Psychologists.
- Vaughn, S., Cirino, P. T., Wanzek, J., Wexler, J., Fletcher, J. M., Denton, C. D., ... Francis, D. J. (2010). Response to intervention for middle school students with reading difficulties: Effects of a primary and secondary intervention. *School Psychology Review*, 39 (1), 2–21.
- Vaughn, S., Linan-Thompson, S., & Hickman, P. (2003). Response to instruction as a means of identifying students with reading/learning disabilities. *Exceptional Children*, 69, 391–409.
- Vaughn, S., Wanzek, J. S., & Murray, G. (2012). *Intensive interventions for students struggling in reading and mathematics: A practice guide*. Portsmouth, NH: RMC Research Corporation, Center on Instruction.
- Vaughn, S., Wanzek, J., Woodruff, A. L., & Linan-Thompson, S. (2007). Prevention and early identification of students with reading disabilities. In D. Haager, J. Klinger, & S. Vaughn (Eds.), *Evidence-based reading practices for response to intervention* (pp. 11–27). Baltimore, MD: Brookes.
- White, R. B., Polly, D., & Audette, R. H. (2012). A case analysis of an elementary school's implementation of response to intervention. *Journal of Research in Childhood Education*, 26, 73–90. doi:10.1080/02568543.2011.632067