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# 1 Beyond Response to Intervention

*Teaching as It Ought to Be!*

The emerging response to intervention (RTI) initiative may best be understood, in broad terms, as a commitment among educators to *change a child's life*.

That is, RTI is intended to change students' trajectory of learning or behavior from a growth curve that leads to failure to a growth curve that leads to success for struggling students (Bender, 2009a). For advanced students, RTI represents a commitment to challenge them to the very limits of their abilities and skills, and then beyond. To create such profound change, RTI includes a commitment to provide whatever educational and behavioral interventions might be necessary, at whatever level of intensity, to create that positive change in students' future. As authors in this area, we realized that this definition is somewhat different from other definitions of RTI that have been proposed, but we are confident that this definition places the emphasis exactly where it should be: on the individual student. Thus, the best understanding of RTI is that this instructional approach is intended to change a child's life.

In fact, evidence has shown that RTI has already drastically transformed reading instruction in the elementary grades and has begun to revolutionize education across all grade levels and content areas (Geisick, Graving-Reyes, & DeRuvo, 2008; Gibbs, 2009; James, 2010; Legere & Conca, 2010; East, 2006; Protheroe, 2010; Rozalski, 2010; Stewart, Benner, Martella, & Martella, 2007). Perhaps more than any other single factor, the RTI initiative is leading the revolution in

instructional strategies. Here's an example: As recently as 2007, most elementary teachers were not conducting a reading screening for every student in the class three or more times a year, nor were intensive systematic interventions routinely provided for struggling students. Today, nearly all elementary teachers are conducting such universal screening as well as providing highly structured interventions under the RTI initiative (Bender & Larkin, 2009). Thus, when students display significant delay in developing early reading skills, rigorous interventions with small groups of students are taking place to ameliorate those delays. This represents a major restructuring of educational practice (East, 2006).

*The recent RTI initiative has restructured elementary reading and has begun to restructure middle and high school instruction as well.*

Today, virtually every state is currently implementing RTI in reading in the primary and elementary grades, and many middle and high schools are currently developing RTI models for the upper grades (Duffy, 2007; Gibbs, 2009). In that sense, schools are much more responsive today to students' learning needs in reading than ever before, and this represents the actualization of one of the imaginings presented in the introduction to this book. For reading in the elementary grades, at least, we may have already attained the lofty goal of identifying and then meeting every student's instructional needs.

Initially, most schools implement RTI in reading and mathematics, but many schools are likewise implementing RTI procedures to alleviate behavior problems in the classroom as well (Stewart et al., 2007). Thus, teachers even in those higher grades will soon be participating in RTI in one or more of these areas, if they are not already doing so (Duffy, 2007; Fuchs, Fuchs, & Stecker, 2010; Hoover, Baca, Wexler-Love, & Saenz, 2008; James, 2010; Protheroe, 2010).

Of course, reading has been an educational priority, and the vast majority of states began their RTI efforts in the area of elementary reading (Bender & Larkin, 2009). Today, the strongest research base for RTI is in that area (Berkeley, Bender, Peaster, & Saunders, 2009; Fuchs & Deshler, 2007; Fuchs & Fuchs, 2007; Legere & Conca, 2010). However, as early as 2005, educators around the nation began to turn their attention to applications of RTI in other subjects such as mathematics (Bender & Crane, 2010) or in other grade levels such as middle and high school grades (Duffy, 2007; Gibbs, 2009; Johnson & Smith, 2008; Rozalski, 2010). In short, RTI is likely to impact how nearly every teacher in the public school age range conducts his or her class, and as such, this may very well be the single most important innovation in education in decades (Bender, 2009).

## EXACTLY WHAT IS RTI?

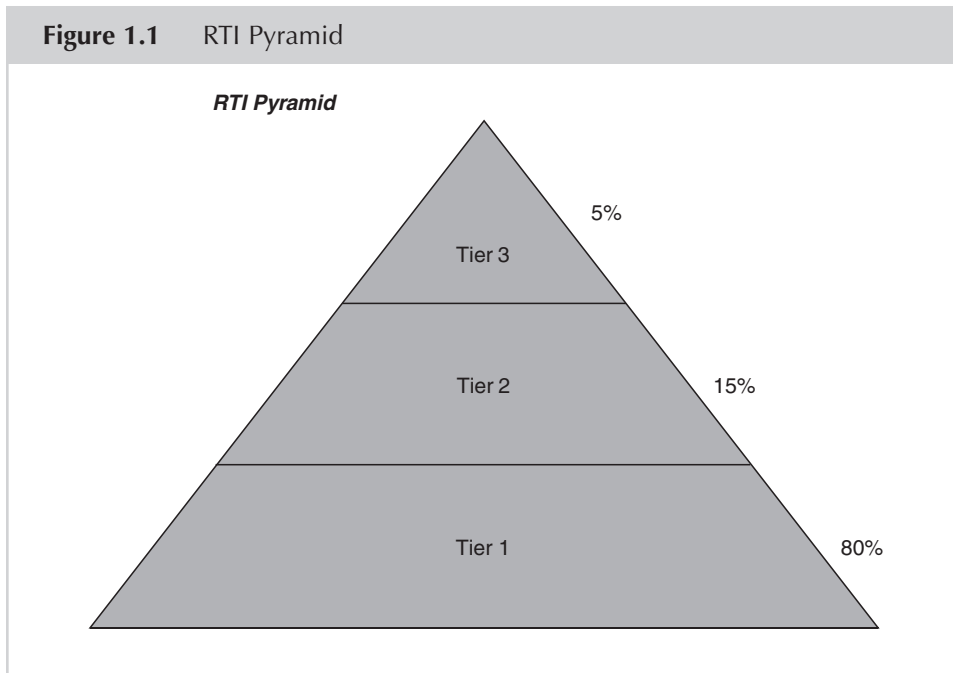
Realizing that some readers may not be completely familiar with RTI, it is probably wise to begin with the basics. As noted previously, we see RTI as an effort to improve a student's trajectory of learning or behavior. However, a more conventional definition will help one understand the profound impact RTI is likely to have in education. Most definitions of RTI suggest that the RTI process may be defined as a set of systematic, increasingly intensive educational interventions that are designed to target an individual student's specific learning challenges (either academic or behavioral) and to provide a supplementary intervention within the context of the general education class—that is, aimed directly at those learning challenges to assist the student in progressing through school (Bender, 2009; Boyer, 2008; Fuchs et al., 2010; Hoover & Love, 2011).

*RTI may be defined as a set of systematic, increasingly intensive educational interventions that are designed to target an individual student's specific learning challenges and to provide a supplementary intervention within the context of the general education class.*

Using RTI, it should be possible to assist virtually every struggling student during the critical early grades and hopefully to prevent significant problems later in school. Based on changes in federal legislation in December 2004, the federal government now allows the RTI procedure to be implemented as one component of the eligibility determination for students suspected of having a learning disability (Bradley, Danielson, & Doolittle, 2007; Fuchs et al., 2010; East, 2006). However, in the larger nationwide RTI efforts, a student's eligibility for learning-disability services is a secondary issue (East, 2006). RTI has emerged from its early roots in special education and is now, first and foremost, a fundamental restructuring of instructional options and interventions within the general education class, focused on assisting all struggling students. Under an RTI framework, if a teacher sees a problem in the basic skills of reading, mathematics, or behavior, that teacher is both committed and obligated to provide an intensive, research-based intervention that is designed to alleviate that problem (Bender, 2009). Further, almost all of the RTI process take place in those classes well before eligibility for special education is considered (Fuchs et al., 2010; Hoover & Love, 2011; East, 2006), indicating again that eligibility for special education is a secondary concern in RTI.

### The “Revised” RTI Pyramid of Intervention

RTI is typically described in terms of a pyramid of interventions, such as that presented in Figure 1.1, and while many educators are now familiar



with this pyramid, those experienced in RTI realize that this overall model must now be modified or revised somewhat to present an accurate picture of how RTI is currently implemented in schools. In this section, we have described the original RTI pyramid, as well as the essential modifications of the original concept, to show both those changes in the RTI model and how the RTI initiative is transforming classrooms across the nation (Bender, 2009).

The pyramid of intervention is usually divided into three or more instructional intervention levels, or *tiers*, and each tier represents a different level of intensive intervention designed to alleviate the learning problem (Bender & Shores, 2007; Fuchs et al., 2010; Hoover & Love, 2011; Kame'enui, 2007; Protheroe, 2010). By 2009, approximately 73 percent of the states had adopted a three-tier pyramid model for their RTI efforts (Berkeley et al., 2009; Spectrum K-12, 2009), similar to that pictured in Figure 1.1.

In this model, Tier 1 was originally described as instruction provided for all students in the general education classes (Bender & Shores, 2007; Fuchs et al., 2010; Gibbs, 2009). As the model suggests, every student experiences instruction at the Tier 1 level, which is why this tier is presented as the largest in the model. However, as the percentages within the original three-tier model indicate, this level of instruction is typically described as meeting the educational needs of perhaps 80 percent of the students in the class (Boyer, 2008; Bradley et al., 2007; Fuchs & Deshler, 2007), while the remaining 20 percent of the

class is described as needing more intensive instruction to meet their educational goals.

While initial discussions of RTI around the nation took those percentages as “holy writ” (Bender & Shores, 2007; Boyer, 2008; Bradley et al., 2007; Fuchs & Deshler, 2007), more recent descriptions of RTI have raised questions about those percentages, leading to some revisions in the RTI model (Bender, 2009; Bender & Crane, 2010). In fact, those percentage estimates are based on reading instruction in the elementary grades, specifically from research on primary reading in programs such as *Reading First*, and thus these general percentages are probably inaccurate in other subjects such as mathematics or in the higher grade levels (Bender, 2009; Bender & Crane, 2010). As one example, reading deficits may compound over time, resulting in increased reading deficits in the higher grade levels. Therefore, as many as 30 percent or 35 percent of the students in middle and high school grades may not have their instructional needs met for reading in Tier 1 instruction during the high school years (Gibbs, 2009). This suggests that a higher percentage of middle and high school students might need to progress to the more intensive tiers of instruction within the RTI model.

*Over time, reading deficits may compound and result in increasing deficits demonstrated by more students in the higher grade levels; thus, the percentages presented in the original RTI pyramid might be underestimates.*

At the Tier 1 level, the general education teacher provides all of the instruction (Bender & Shores, 2007). Thus, general education teachers are expected to deliver instruction for large and small groups, as well as some individual assistance based on the individual needs of the students. Further, as described in the literature on RTI (Bender & Shores, 2007; Boyer, 2008; Bradley et al., 2007; Fuchs & Deshler, 2007; Fuchs et al., 2010; Kame’neui, 2007), primary and elementary teachers also have the responsibility of conducting individual screening assessments for all students to identify students who are struggling. The term *universal screening* is used among proponents of RTI to represent the fact that these screening assessments are undertaken for all students in the class, and such screening is usually conducted three times each year. Data from those universal screening assessments are then used to identify students who may need more intensive instruction at the Tier 2 level (Fuchs & Deshler, 2007; Fuchs et al., 2010).

*Universal screening measures are screening assessments in basic skills that are undertaken for all students in the class and are typically conducted a minimum of three times each year.*

While this model works fairly well in elementary reading and mathematics, it is not clear from the research literature how universal screening might be implemented in middle and high schools (Duffy, 2007; Johnson & Smith, 2008). In fact, there is virtually no research literature on either screening procedures or general RTI implementation for high schools or middle schools (Johnson & Smith, 2008). Therefore, this question of who is responsible for universal screening assessments at the Tier 1 level, like many other questions, is still an open question for the higher grade levels (Deshler, 2010; Gibbs, 2009). Again, this universal screening might require some revision of the initial pyramid of intervention, in terms of the duties of general education teachers in the upper grade levels.

Tier 2 interventions include supplemental, targeted intervention for a small group of students who are struggling academically in the general education class (Boyer, 2008; Fuchs & Fuchs, 2007). Again, this general percentage may not be accurate in all subjects or in the higher grade levels (Gibbs, 2009). However, using this figure as a basis, in a typical class of twenty-four fourth-grade students, one might expect that between four and six students would be struggling in their reading and that they would thus require a supplemental, Tier 2 intervention.

*Tier 2 interventions include supplemental, targeted intervention for a small group of students who are struggling academically in the general education class.*

The good news is that Tier 2 interventions work for the majority of students, as shown by rather extensive research in the elementary years; in fact, as many as 85 percent of students, or perhaps even 95 percent, typically have their needs met through a combination of Tier 1 and Tier 2 instruction (Bender, 2009a; Bender & Larkin, 2009). Again, educators should exercise caution in extrapolating those figures to RTI interventions in subjects other than elementary reading as well as in the higher grades. Like the Tier 1 intervention, the general education teacher is expected to deliver this Tier 2 level of targeted, intensive instruction for those struggling students (Fuchs & Fuchs, 2007), at least in the lower grade levels. It is not yet clear if this expectation is appropriate for middle and high schools.

Tier 3 is described in the literature as a very intensive, highly specific instructional intervention (Fuchs & Fuchs, 2007; Johnson & Smith, 2008). Of course, such intensive instructional interventions take considerable teacher time, and that has become a concern during RTI implementation. Further, in some school districts or states, this level of instruction takes place after a child is identified as needing special education services (Fuchs et al., 2010; Fuchs & Fuchs, 2007; Johnson & Smith, 2008). However, in other states, the Tier 3 intervention is required prior to any eligibility decision (Kame'enui, 2007; East, 2006). Therefore,

educators are urged to check the eligibility regulations in their own states and school districts to determine when students may participate in Tier 3 interventions.

Because of these issues, there is considerable disagreement in the literature on RTI concerning who is responsible for Tier 3 instruction. While many RTI proponents agree that Tier 3 should be a function of general education, in most cases reported in the literature, there is virtually no example in which general education teachers were responsible for the actual daily delivery of Tier 3 instruction (Bender, 2009a; Duffy, 2007; Fuchs et al., 2010; Gibbs, 2009; Johnson & Smith, 2008), even though some state plans indicate that general education teachers are responsible for such instruction. Rather, other general educators (e.g., math tutors, reading coaches, or intervention teachers) conduct almost all of the Tier 3 interventions described in the current literature (Bender, 2009a; Fuchs et al., 2010; Gibbs, 2009; Hoover & Patton, 2008; Johnson & Smith, 2008).

The Tier 3 level of intensive intervention is frequently described as one-to-one instruction and is designed to meet the needs of the remaining 5 percent of students with intensive instructional needs (Fuchs et al., 2010; Fuchs & Fuchs, 2007). Given a class size of twenty-four students, one might expect that only one or two students may require this level of intensive intervention, and research has shown that many of those students will respond positively to highly intensive instruction (Fuchs & Fuchs, 2007).

Finally, students whose needs are not met by intensive Tier 3 instruction are typically referred for consideration for special education services. As this indicates, most RTI efforts take place prior to eligibility considerations, and in that example, data generated from these RTI procedures may be used to help determine the eligibility of some students for special education programs (Bender, 2009a; Fuchs & Fuchs, 2007).

As can be seen in the preceding discussion, there are many open questions about the applicability of the initial three-tier pyramid RTI model. Nevertheless, this model provides the basis for most state models of RTI, and as such, this broad model will be used in this book. Throughout this discussion, we will show caveats, modifications, or questions about the applicability of this model. However, regardless of these recent concerns and questions, educators should make no mistake: the three-tier pyramid of intervention is one of the most influential instructional innovations in recent decades, and this model will drastically refocus how almost all teachers conduct their classes within the next decade.

*The three-tier RTI pyramid is one of the most influential changes in education in decades, and this model of instruction will drastically refocus how almost all teachers conduct their classes within the next decade.*

### Common RTI Elements

As stated already, virtually every state has now adopted or recommended some type of RTI model, and some states have described the tiers in various ways that differ from the preceding general description (Berkeley et al., 2009; Hoover et al., 2008; Hoover & Love, 2011). However, in spite of these state-to-state differences, there are a number of common elements to most if not all RTI models (Bender, 2009a; Bender & Shores, 2007; Kame'enui, 2007). These are presented in Box 1.1.

#### Box 1.1 Common Elements in Most RTI Models

- Emphasis on universal screening three times each year in Tier 1
- Emphasis on a set of increasingly intensive interventions, structured into intervention levels that are referred to as *tiers*
- Emphasis on the use of research-based curriculum in each tier
- Frequent progress monitoring of each individual's performance in each tier
- Data-based decision making
- Team-driven determinations on students' placement in the RTI tiers

First, all RTI models include some emphasis on universal screening to identify students struggling in various subjects. Most states have focused on reading initially, though RTI procedures to assist students in mathematics and improving behavior are also common (Bender, 2009a; Bender & Crane, 2010). Universal screening in any of these areas is typically the responsibility of the general education teacher, and most states now require such universal screening in reading at least three times each year in the primary and elementary grades.

Next, all of the RTI models present some concept of increasingly intensive education interventions that are, as indicated, referred to as *intervention tiers* (Bender & Shores, 2007; Kame'enui, 2007). In the literature, it is clear that proponents of RTI assume that students will progress through these tiers in numeric order, such that struggling students are placed in Tier 2 interventions prior to Tier 3 interventions, and so on (Bender & Shores, 2007; Berkeley et al., 2009; Hoover et al., 2008; Kame'enui, 2007).

Next, all RTI models require the use of a research-based curriculum as the basis for instruction provided within the various intervention tiers. Further, frequent progress monitoring of each student's performance in each tier is also required to document the efficacy of the intervention for each student (Kame'enui, 2007). Again, this aspect of RTI implementation



represents the actualization of one of the imaginings in the Introduction. This performance monitoring becomes critically important should students not have their needs met in the various tiers and subsequently be considered for special education. Finally, data-based decision making by a collaborative team should be used to interpret the child's progress relative to curricular standards (Bender & Shores, 2007; Kame'enui, 2007).

## A CASE STUDY: HELPING ALFONSO IN MATHEMATICS

The following case study of an RTI procedure for an individual student helps demonstrate how the RTI initiative is not only making a big difference for individual students but also restructuring instructional procedures throughout the school in rather profound ways. This example describes RTI in elementary mathematics. In this case study, Alfonso is a fourth-grade student who is struggling in mathematics, a subject in which he was performing well below grade level. His parents move frequently, and both Spanish and English is used in the home. Because he rarely remained in a single school for an entire year, he had never been placed in special education. Box 1.2 presents the multistep RTI process as well as the necessary documentation for this RTI procedure.

### **Box 1.2** An RTI Procedure for Alfonso

Pupil Name: Alfonso Gomez Age: 10 Date: 9/14/2011  
Teacher: Ms. Carol Antoine School: Tidioute Charter School—Grade 4

#### **Statement of Academic/Behavioral Problem:**

*Alfonso is from a home in which both Spanish and English are used, but Spanish is the primary language. He is a good student who has some difficulty in reading, but his primary problems seem to be in mathematics. He doesn't seem to know the lower times tables, and doesn't know some of the higher times tables at all. These times tables are introduced in Grade 2, and most students master the times tables by the middle of Grade 3. That is why it concerns me that Alfonso has not learned the times tables. This delay leads to problems in almost every other aspect of math. His testing scores (from another state) for the last year indicated a grade equivalent of 2.8 in mathematics. He will need an intensive intervention, initially aimed at mastering these math facts.*

*(Continued)*

*(Box 1.2 Continued)*

*I have shared a written synopsis of these concerns and the intervention plan below with our mathematics coach for the fourth grade, Ms. Amy Wise.*

Signature: Ms. Carol Antoine Date: 9/14/2011

### **Tier 2 Intervention Plan**

*As a Tier 2 intervention, I will provide Alfonso with supplemental instruction on multiplication math facts, while stressing the concept that multiplication is merely repeated addition of the same value. I will work with Alfonso and five other students that need help with multiplication math facts three times each week for at least twenty minutes each time, using mathematics exercises from the textbook. During that time, my teaching assistant will supervise the class in a small-group science project. For progress-monitoring purposes, I will use a set of timed math facts problems that focus on automaticity in times tables. At the end of each instructional period, I will chart the number of times tables facts from the fours, sixes, sevens, eights, and nines tables that Alfonso completes correctly in one minute. We will skip the fives times tables, as Alfonso knows that set of math facts. The data completed on each Friday will be charted to monitor Alfonso's progress during this intervention. We plan to begin the intervention on next Monday, 9/18/11, and continue it throughout the next six-week grading period. I've sent a letter to Alfonso's parents informing them of this intervention.*

Signature: Ms. Carol Antoine Date: 9/14/2011

### **Observation of Student in Tier 2 Intervention**

*I observed Alfonso in his Tier 2 math intervention on the times tables. Ms. Antoine used several practice worksheets from our state curriculum, as well as a math facts callout activity. She then completed a one-minute timing worksheet that included the fours, sixes, and sevens times tables (she has not yet begun work on the eights and nines times tables with this group). Alfonso completed nineteen problems correctly.*

Signature: Amy Wise, Math Coach Date: 10/12/11

### **Tier 2 Intervention Summary**

*During this six-week intervention, Alfonso mastered the fours times tables but continued to have difficulty on the higher times tables. He was making little progress, and his weekly assessment data (presented in Figure 1.2) show that he will need more intensive instruction in mathematics. On*

*11/15/08, Ms. Wise and Ms. Lockhardt, two members of our student-support team, and I discussed these data and concluded that this intervention for Alfonso had not worked well enough to allow Alfonso begin to catch up in mathematics. Then we discussed a Tier 3 intervention.*

Signature: Ms. Antoine Date: 10/30/11

### **Tier 3 Intervention Plan**

*Because I serve as the mathematics instructional coach for the middle grades at Tidoute School, I usually do most of the Tier 3 interventions in mathematics. In my math lab, I have several computers and computer-based instructional programs in math that we use for Tier 3 interventions.*

*We decided that an intensive intervention of thirty minutes daily was needed for Alfonso, which focused initially on multiplication tables and higher-level multiplication operations (e.g., two- and three-digit multiplication). Our software allows us to target specific skills of this nature. Therefore, Alfonso will receive his Tier 1 math instruction in Ms. Antoine's class daily, and in the afternoon he will come to the math lab for thirty minutes of intensive software-based instruction on the specific skills he needs. We will then reconsider Alfonso's further needs for math assistance.*

Signature: Ms. Amy Wise, Math Coach Date: 11/2/2011

### **Tier 3 Intervention Summary**

*The student-support team reviewed Alfonso's performance in his Tier 3 intervention (see Figure 1.3) and concluded that Alfonso is making good progress in mathematics. However, he has not yet mastered all of the times tables and thus is not yet at grade level. The team recommends continuation of his work in the instructional lab for another grading period, and the team will review his progress then.*

Signature: Ms. Amy Wise, Mathematics Coach Date: 12/14/2011

## **Statement of the Skill Deficit**

This RTI case study follows a general format developed by Bender and Shores (2007) and includes the necessary documentation, summary of screening data, precise descriptions of interventions, and other essential components of the RTI process. As the summary in the first section of this form indicates, Ms. Antoine, the fourth-grade teacher, describes the specific problems demonstrated by Alfonso and relates those to his overall

mathematics achievement. Ms. Antoine indicates that a skill deficit on the higher times tables is likely to negatively impact Alfonso's progress during Grade 4, and thus there is a need for this supplemental, Tier 2 intervention.

At the outset, it seemed clear that Ms. Antoine believed that some supplemental instruction would greatly assist Alfonso, since she did not note any other extreme difficulties in his mathematics work. Of course, research on RTI procedures in mathematics documents the overall efficacy of Tier 2 interventions (Ardoin, Witt, Connell, & Koenig, 2005; Bryant et al., 2008; Fuchs, Fuchs, & Hollenbeck, 2007), so Ms. Antoine had every reason to anticipate success based on the planned Tier 2 intervention. Many times, students need only a bit of supplemental assistance to master new or different subject matter in either reading or mathematics, and a supplemental Tier 2 intervention for several weeks may be all that is required.

### **The Tier 2 Intervention Plan**

This type of highly specific plan for a targeted intervention for Alfonso represents one change that resulted from RTI implementation. When RTI is implemented, targeted, intensive interventions are provided for all students who need them, as was the case in this example. This represents one distinct change that occurs when RTI becomes the instructional model within a school, and this type of systematic, targeted-intervention support was not occurring only a few years ago in any subject area (Bender, 2009a).

This is not to say that teachers were not assisting students less formally, perhaps by additional tutoring on particular topics; effective teachers have always provided such assistance. However, under an RTI framework, this type of assistance tends to be much more structured, and many more of the resources of the school are marshaled to provide Tier 2 and Tier 3 intervention assistance as needed. Thus, these RTI interventions are much more intensive and are typically provided over a longer term for struggling students.

In this example, the Tier 2 intervention planned by Ms. Antoine is aimed directly at mastering multiplication math facts, the exact difficulty noted in the problem statement found in Box 1.2. Further, a great deal of detail is provided in this intervention plan to document what the exact intervention is, how frequently it will take place, and how the instruction time will be used. This documents the intensity of the supplemental instructional intervention at the Tier 2 level.

In Box 1.2, we should note that Ms. Antoine informed both the parents and the mathematics coach at Tidioute Charter School of her planned Tier 2 intervention. Such notification, while not required by most state regulations, is typically encouraged by local schools and school districts, and we certainly encourage a free flow of information on Tier 2 and Tier 3 interventions to the parents. Note also that in this example, Ms. Wise, the mathematics coach, actually observed Ms. Antoine delivering the Tier 2 intervention to Alfonso and the other members of her small group. Ms. Wise noted that Ms. Antoine followed the prescribed lesson plan

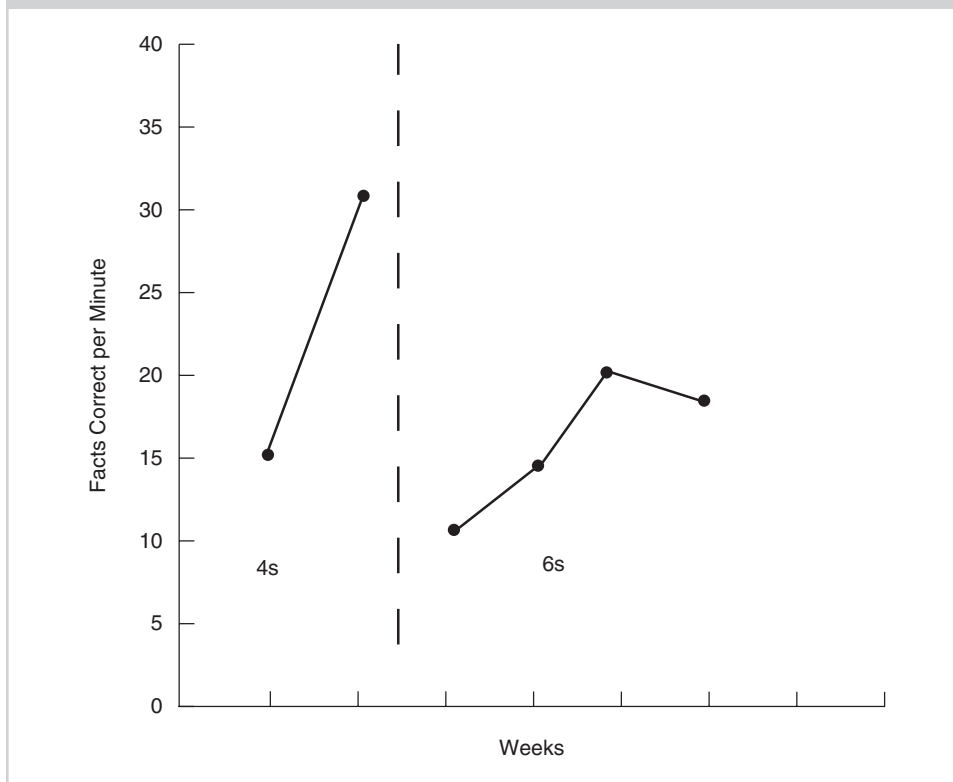
and also noticed that Alfonso was experiencing some success. Thus, that observation served both as initial documentation of RTI and as a check on overall instructional fidelity; in short, that observation showed that Ms. Antoine was teaching this skill in an effective manner, using a research-proven instructional procedure.

### Data-Driven Decision Making in RTI

The RTI process is a data-driven one that allows teachers to make meaningful and practical decisions based on a student's actual performance (Bender & Crane, 2010). Charted data that show how a student responds to instruction is mandated by the RTI process, and in this instance, the progress monitoring data from the Tier 2 intervention demonstrated that Alfonso was progressing in learning the times tables, but was progressing quite slowly.

In this example, the data chart (see Figure 1.2) and the written summary of the Tier 2 intervention presented in Box 1.2 indicated that the Tier 2 intervention worked only to a degree. It is often the case that the intervention data will show some increase, but that the increase in performance may not

**Figure 1.2** Tier 2 Performance Data for Alfonso



be significant enough to help a student like Alfonso catch up with his peers. In such a case, a Tier 3 intervention might be necessary, as it was here.

### The Tier 3 Intervention Plan

As discussed previously, Tier 3 interventions are almost always conducted by someone other than the general education teacher (Bender, 2009a). In this case, Ms. Wise, the mathematics coach, delivered the Tier 3 intervention, so she developed the Tier 3 intervention plan presented in Box 1.2. Note once again that the intervention plan is highly specific and detailed. Also, the intensity of the intervention increased as Alfonso moved upward from Tier 2 to Tier 3. For example, the Tier 2 intervention involved Alfonso working in a small group with a four-to-one pupil/teacher ratio. That intervention was conducted for twenty minutes, three days per week. In contrast, the Tier 3 intervention involved individualized computer-based work targeted exactly to Alfonso's needs and was delivered daily for thirty minutes. Clearly, the Tier 3 intervention was much more intensive than the Tier 2 intervention.

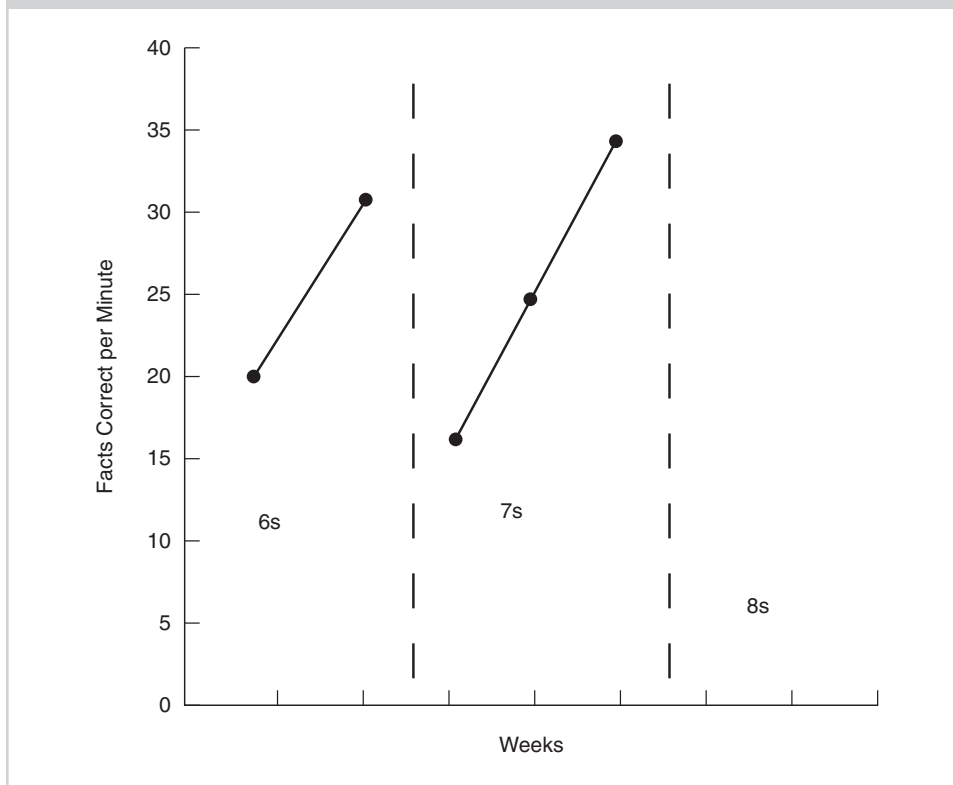
### Tier 3 Results

The results of this Tier 3 intervention are presented in the data chart in Figure 1.3. Like the Tier 2 data, these data indicated that Alfonso was learning his times tables but again was learning them very slowly. Still, his pace of progress did speed up considerably, and based on those data, the decision was made to continue this level of intensive intervention for Alfonso through the next grading period, or until he masters the times tables.

Next, the student-support committee noted that the data from these two interventions indicated that Alfonso was progressing. In this case, it is clear that Alfonso was responding to appropriate, intensive instruction, and thus under the new definitions, he would not be considered a student with a learning disability. In fact, nearly 90 percent of students exposed to Tier 2 and Tier 3 interventions are assisted by those interventions (Bender, 2009a); thus, RTI is significantly improving our educational endeavors for those students.

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Finally, in this example, a computer-based instructional program was used, which has become quite common in our experience. Even in poorly funded schools, various computer applications are typically involved in RTI, often for documentation of efficacy of interventions (e.g., use of AIMSWeb software, as discussed later in the book), if not for actual delivery of targeted instructional interventions as was the case here. This is one area of cross-fertilization of RTI and technology, and because this is so

**Figure 1.3** Tier 3 Performance Data for Alfonso

common, it makes little sense to us to discuss RTI without some mention of the various technology applications that facilitate it. At various points in this book, we will suggest technology applications that are in frequent use around the nation.

## CHANGE THAT MAKES A DIFFERENCE!

### Teacher Advocacy for RTI

As the case study makes clear, RTI involves a considerable amount of work, and after full RTI implementation in reading, mathematics, and behavior, teachers will be devoting substantial time to assisting struggling students. This represents a significant change in how classrooms operate, and such change will not come easily. In fact, school reform efforts over the years have shown that unless teachers buy in to the change process, in this case, the new emphasis on RTI, then significant improvements in instruction are neither possible nor likely (Duffy, 2007; Gibbs, 2009; Orosco & Klingner, 2010). In particular, all members of the leadership team or the professional learning community at the school should serve as advocates of RTI for RTI to be a meaningful and substantive reform effort.

Specifically, advocates of RTI must be prepared to address the question, “Why should we do RTI?”

Fortunately, the answer to that question is both simple and direct: RTI works! RTI has been proven by research to be one of the most effective instructional options available today for struggling learners (Fuchs & Fuchs, 2007; Gibbs, 2009; Johnson & Smith, 2008; Katz, Stone, Carlisle, Corey, & Zeng, 2008; Legere & Conca, 2010; Stewart et al., 2007). The caveats of this research are summarized here so that all educators can have immediate access to this information on the effectiveness of RTI; these data provide a compelling rationale and justification for RTI implementation and should be shared broadly with all educators.

*RTI has been proven by research to be one of the most effective instructional options available today.*

Further, in our experience conducting hundreds of workshops with teachers across the country on RTI, we have realized that some teachers are initially quite nervous about this innovation in teaching. When teachers initially hear of their increased responsibilities as RTI is implemented (e.g., universal screening, conducting Tier 2 interventions, etc.), they are sometimes reluctant to jump into the RTI instructional approach. However, we can also state that once teachers experience the success that RTI brings for their students, they become “sold” on the RTI model. This section presents some of the research supportive of RTI, and this is presented for one simple reason: to allow all educators to become advocates of RTI as one of the most important teaching innovations in recent decades (Fuchs & Fuchs, 2007; Gibbs, 2009; Johnson & Smith, 2008; Stewart et al., 2007).

*All educators are encouraged to become advocates of RTI, one of the most important teaching innovations in recent decades!*

### **RTI Works With Struggling Learners!**

First, and most important, research has consistently shown that RTI works for students who are struggling in basic skills such as reading and mathematics, including many students who are already placed in special education (Duffy, 2007; Legere & Conca, 2010; Lolich et al., 2010; Stewart et al., 2007). RTI procedures were initially implemented in the primary and elementary grades in reading, and extensive research in that area has shown that RTI is extremely effective in curbing early reading problems and in helping students get back on track toward reading success (Hoover et al., 2008; Katz et al., 2008; Legere & Conca, 2010; Mahdavi & Beebe-Frankenberger, 2009; Stewart et al., 2007; Vaughn et al., 2009). Further, early research on the efficacy of RTI in middle and high schools suggests similar success in the upper grade levels (Deshler, 2010; Gibbs, 2009; Johnson & Smith, 2008; Rozalski, 2010). Nationwide, educators have embraced the RTI initiative



because research has shown that RTI works for almost all students struggling in reading. Thus, RTI represents not only the most recent innovation in education but perhaps also the very best way to teach!

*RTI represents not only the most recent innovation in education but perhaps also the very best way to teach!*

However, more recent research has provided even more justification for implementing RTI. For example, research has consistently shown that when students are struggling in reading, the provision of intensive supplemental instruction for relatively brief periods of time can alleviate the reading problems and put students back on track toward long-term reading success (Denton, Fletcher, Anthony, & Francis, 2006; Lolich et al., 2010; Simmons et al., 2008). In some cases, computer-based Tier 2 or Tier 3 interventions presenting only a six- or eight-week intervention have resulted in reading gains of one, two, or even three years (Bender & Waller, 2011). Thus, a little intervention effort seems to go a long way in decreasing long-standing academic problems.

*A little intervention within the intensively focused RTI model seems to go a long way in decreasing long-standing academic problems.*

While results vary significantly, the broad body of available research from primary and elementary grades suggests that between 40 percent and 60 percent of students who are struggling in reading or mathematics will have those academic problems alleviated or eliminated by a Tier 2, intensive, supplemental reading intervention (Hughes & Dexter, 2008; Simmons et al., 2008; Stewart et al., 2007; Torgesen, 2007). Further, additional research has demonstrated that many students who do not respond positively to a Tier 2 intervention will respond positively to a more intensive Tier 3 intervention (Rozalski, 2010; Vaughn et al., 2009). Taken together, the available research suggests that provision of multiple tiers of interventions in an RTI process seems to alleviate reading problems for something like 75 percent to 90 percent of the students who initially struggle in reading (Hughes & Dexter, 2008; Torgesen, 2007). Thus, RTI represents an option that could drastically reduce school failures over the years.

*Research suggests that provision of multiple tiers of interventions in an RTI process seems to alleviate reading problems for 75 percent to 90 percent of the students who initially struggle in reading.*

### **RTI Reduces Disproportionality**

*Disproportionality* is a term used to describe a disproportionately high number of African American children placed in special education classes (Artiles, Kozelski, Trent, Osher, & Ortiz, 2010; Bender & Shores, 2007).

The concern over disproportionality has been a recurring one, and no instructional idea or innovation seemed to address this problem. However, recent research on the impact of RTI suggests that it might alleviate the problem of disproportionality (Abernathy, 2008; Donovan & Cross, 2002; Duffy, 2007; Hosp, 2010).

In a pilot study from New Hanover County, NC, Abernathy (2008) reported that prior to RTI implementation, African American students were 1.7 times as likely to be placed in special education classes. However, after RTI was implemented, that ratio was reduced to 1:1 in only one year. Other similar reports have been presented recently showing the same general result: RTI seems to reduce disproportionality (Donovan & Cross, 2002; Duffy, 2007; Hosp, 2010). While these reports do not represent controlled scientific experiments, this is nevertheless an important finding. This RTI model may help solve an ongoing problem that previously seemed unsolvable.

### **RTI Helps Schools Meet Statewide Assessment Goals**

Some schools in the nation have struggled to make adequate progress toward meeting their annual goals, goals that are typically stated in terms of meeting or exceeding state standards in reading, mathematics, and other subjects (Bender, 2009a). However, research has shown that RTI is highly effective in assisting several groups of students who typically have difficulty meeting these goals. For example, research has demonstrated the efficacy of RTI procedures for students who traditionally struggle in reading, such as students with disabilities or students who are English learners (Denton et al., 2006; Linan-Thompson, Vaughn, Prater, & Cirino, 2006; Lolich et al., 2010; Lovett et al., 2008; Rinaldi & Samson, 2008; Simmons et al., 2008), and these are the very subgroups that, in some cases, fail to meet the state assessment standards. For example, at one RTI pilot school in Montana, only 49 percent of students were meeting yearly assessment goals in 2006 prior to the implementation of RTI. After only two years of RTI implementation, however, 76 percent of the children were meeting their assessment benchmarks for reading (Mahdavi & Beebe-Frankenberger, 2009). Therefore, if schools wish to have all of their students meet and exceed assessment standards, those schools should rigorously implement RTI in each of basic skill areas.

*If schools wish to have all of their students meet and exceed assessment standards, those schools should rigorously implement RTI in each of the basic skill areas.*

### **RTI Empowers Teachers**

Many teachers feel empowered when they implement the RTI process (Bender & Crane, 2010; Lolich et al., 2010) because they see the academic

success that RTI brings for struggling students. In RTI, teachers implement instruction for exactly the difficulty that is slowing students down, and this results in teachers feeling empowered: They sense they are making more of a difference in the lives of their students (Lolich et al., 2010).

For those of us who have taught, this sense of empowerment is completely understandable. Virtually every veteran of the classroom has felt, at one time or another, a desire for just a bit more time to help a struggling student, and implementation of RTI provides exactly that. RTI is a mechanism for providing sustained, systematic, and intensive help for struggling students in their exact area of difficulty. Further, additional resources can sometimes be marshaled to assist with Tier 2 and Tier 3 interventions so that all students receive the instructional assistance they need (Bender, 2009a; Duffy, 2007; Gibbs, 2009).

### Using RTI Research as an Advocacy Tool

RTI benefits not only targeted students but also whole schools in their improvement efforts (Bender & Crane, 2010; Stewart et al., 2007). To create meaningful change in education, the school faculty must be made aware of the advantages of the change, and nowhere is that more important than in the implementation of RTI. Research results, such as those reported here, should be shared quite broadly among teachers and parents to solicit active participation in the RTI process. Implementation of RTI is typically a multiyear endeavor; some proponents suggest a three- to five-year time frame for complete RTI implementation (Bender, 2009a; Duffy, 2007), and certainly mistakes will be made during that extended implementation process. However, these research results provide a strong basis of advocacy for RTI, and these data should motivate educators to spend the time to implement this innovation across the grade levels.

## HOW DOES RTI IMPACT SCHOOLS?

With these research conclusions in mind, educators must next consider how implementation of these newly developed RTI procedures is likely to change our current instructional practices. If this RTI initiative, coupled with differentiated instruction and modern teaching technologies, is to revolutionize education, it behooves us to consider exactly what that revolution might entail. As shown already, full implementation of RTI in reading, in mathematics, and for behavioral problems will drastically impact how many teachers teach, and listing the changes in instruction in a school that fully implements RTI for reading, mathematics, and behavior across the grade levels pointedly shows these changes. Those are presented in Box 1.3.

*Full implementation of RTI in reading, in mathematics, and for behavioral problems will drastically impact how many teachers teach.*

**Box 1.3** How RTI Changes Instruction

Typical Instruction Practices in 2005	School Operating Under Full RTI Implementation Today
Only state assessments were used by most teachers.	Teachers conduct universal screening three times per year in reading, math, and behavior.
Teachers assisted students with individual or small-group work as time allows.	Targeted interventions are planned and delivered to address every student's deficits.
Teachers providing assistance to student did so on their own time in general education.	Resources of the entire school are marshaled to make Tier 2 and Tier 3 interventions available.
Teachers assessed students in need less.	Progress monitoring is undertaken for all Tier 2 and Tier 3 students.
Teachers frequently made instructional decisions alone based on data from classwork and error analysis.	Data-based instructional decisions are made by a team of educators based on actual data on a student's performance on repeated measures over time.
Teachers addressed student need individually or with school-based assistance teams.	Students' academic and behavioral needs are addressed more systematically, and this improves student performance more quickly.

One rather dramatic change resulting from RTI implementation is the fact that many primary and elementary teachers are now conducting universal screening three times each year in reading and mathematics. In the future, it seems reasonable to expect that such universal screening might be implemented in reading, mathematics, behavior, and possibly writing across the grade levels, which would clearly be a major shift in emphasis in educational assessment. Previously, most educators relied on statewide or district assessment data—data that might have been one to three years old—to identify students with serious deficits. The use of more frequent universal screening procedures prevents some students from slipping through the cracks. In short, today's universal screening procedures identify problems much more quickly, and this represents a change from previous practice.

Another positive change resulting from RTI is the provision of targeted interventions that are planned and delivered much more frequently once a school has implemented RTI (Bender, 2009a). While teachers have, for many years, assisted students with individual or small-group tutorial

assistance directed at certain topics, RTI implementation means that such assistance is likely to be much more systematic and intensive than it was previously. One of the imaginings presented earlier dealt with assessment practices that were highly sensitive to student needs, and we are moving toward that goal with the RTI initiative.

During RTI implementation, school faculty frequently reconfigure available resources to make certain that all students receive Tier 2 and Tier 3 interventions as needed (Bender, 2009a). In that sense, RTI represents the marshaling and possible redistribution of all the resources of the school to provide immediate help for students who need it, and this process frequently results in significant changes in overall instructional procedure. Resources can be marshaled and redistributed in a wide variety of ways to make RTI happen. In different situations around the country, teachers have found their instructional responsibilities modified to include Tier 2 and Tier 3 interventions (Hoover & Patton, 2008), or paraprofessionals are reassigned to assist the general education teacher find the time for Tier 2 instruction with a small group of struggling students (Bender, 2009a). In fact, schools have been amazingly creative in redistribution of existing resources to make RTI happen for those students who need supplemental instruction. This is a rather dramatic change in educational procedures, and faculty today are highly involved in those decisions in the schools that are currently implementing RTI.

The emphasis on data-based decision making has grown over the last two decades, and while that emphasis was not directly linked to the RTI initiative initially, it has certainly become a main focus of RTI efforts across the states. It is not an overstatement to suggest that RTI was founded on collaborative, team-driven, data-based decisions concerning each student's educational needs, and in that sense, every teacher in the building (not only department chairpersons, team leaders, or administrators) is emphasizing data-based decision making. Further, in Tier 2 and Tier 3 interventions, an individual child's progress is monitored weekly or every other week (Bender, 2009a), making this instructional approach highly sensitive to the student's ongoing education needs. Data-based decision making is at the very core of the RTI efforts.

Finally, as the research data clearly show, RTI is working to improve students' academic and behavioral performance (Fuchs & Fuchs, 2007; Johnson & Smith, 2008; Katz et al., 2008; Legere & Conca, 2010; Stewart et al., 2007). Even for groups of students who have consistently underperformed, RTI seems to make a positive and impressive difference, as shown by the research reported previously for students with special needs and for English learners.

For these reasons, it is safe to say that RTI has transformed education; RTI has resulted in the teaching of reading in a more highly responsive fashion in nearly every primary and elementary class in the nation, and again, the research shows that this works. To paraphrase a recent

presidential candidate, this is change we can believe in! Further, the more the nation's educators focus on RTI, the more significant and impactful this instructional change seems to become. As stated by the National Association of State Directors of Special Education (East, 2006), RTI represents a profound change in how general educational classes operate.

*RTI has transformed education; it has moved far beyond an eligibility documentation procedure and has resulted in the teaching of reading in a more targeted, highly responsive fashion in nearly every primary and elementary student in the nation.*

## CONCLUSIONS

As shown repeatedly in this chapter, the RTI process alone promises to restructure instructional practices in elementary, middle, and high school classrooms in a profound manner (Johnson & Smith, 2008; Lolicich et al., 2010; Rozalski, 2010). Educators can be confident that instruction in all classrooms either has changed or will be changing substantially over the next few years, based on RTI implementation (Bender, 2009a).

We believe that it is prudent to consider RTI in the context of the other emerging changes in education, including an increased emphasis on technology and increasing differentiation in the classroom. Again, we believe that these “three sisters of change” will reformulate instructional practices in ways never before envisioned, and the impact of these factors is presented in the next two chapters. Also, Chapter 5 in this text provides several planning procedures and suggestions for school faculties to consider in preparing to implement these changes.