CHAPTER 1

Introduction

In a classic article on education reform, the late Glenn Latham (1988) described the state of education as continual change in ideas and practices, in search of continuous improvement. In sincere efforts to improve student outcomes, administrators bring in new educational innovations—initiatives or programs promising to improve instruction or other aspects of schooling—with great fanfare and excitement. The launch of these new initiatives brings equal measures of enthusiasm and new materials, including shiny binders and new buzzwords, with a host of acronyms to be memorized and used to describe how the daily tasks of teaching and learning are to be done differently.

Unfortunately, just as predictably as these educational innovations are installed, last year's promising innovations, regardless of their effects on student outcomes, are abandoned to make room for the new teams, trainings, and practices required for new initiatives. Last year's innovations are relegated to the dusty supply closet, and in a year or 2, today's new initiative, the one that was touted as the answer to every educational problem, will join the others.

The result of this process, one that Latham called "the birth and death cycles of educational innovations," is a predictable pattern of constant surface change, but with no discernible deep change in the way schools work (Coburn, 2003). It is easy to see how this process leads to wasted resources at a time when resources are scarce and quality education is desperately needed. Perhaps the most damaging part of these wasted resources is not the loss of money used to buy new programs or the loss of time spent training school personnel to use new forms and processes, but rather the loss of enthusiasm and willingness to try new approaches in education. The term *initiative fatigue* describes a common problem in education today: the feeling of being overwhelmed by innovation, resistant to new initiatives, and pessimistic about the feasibility of educational change (Greenberg, Weissburg, & O'Brien, 2003). It's easy to become jaded about educational reform when one sees so many promising initiatives come and go, with no end in sight to this cycle. If a teacher is skeptical of a particular new district initiative, he or she can simply ignore it until the next initiative takes its place. And unfortunately, teachers are often the

first to be blamed when new initiatives fail to take root, even when such failure is almost certain (Valli & Buese, 2007).

This may seem to be a rather depressing and pessimistic way to open a book about a new educational innovation, one that brings its own new set of acronyms, forms, and processes. However, it is actually this challenging context of implementation—with its threat of poor implementation and abandonment—that makes a new approach so needed. How can adopting a new initiative break the challenge of initiative fatigue? Rather than adding yet another initiative to crowd out the to-do lists of teachers and administrators, what is needed is an approach that can help to connect existing efforts and systems across domains and integrate the support that is already provided to students into a seamless whole. This book attempts to do so by relying on the important connections between academics and behavior (i.e., social–emotional behavior), as opposed to the common approach of treating them as unrelated issues, with separate initiatives. At the same time, we promote a *strategic* approach to the integration of academic and behavior support systems, with careful consideration of where integration best works to improve student outcomes.

MULTI-TIERED SYSTEMS OF SUPPORT

The term *multi-tiered systems of support*, or *MTSS*, has recently gained prominence in conversations about education reform. Our literature search of the ERIC and PsycINFO databases yielded 24 publications focusing on MTSS, only one of which was published before 2009. Any rapid increase in the popularity of a model should provoke concerns that it is a fad designed to make money for consultants or a poorly conceived media buzzword. But is it an entirely new model to learn, one that is designed to replace current practice, or something else? The answer lies in the widespread adoption of two popular and effective approaches to education.

Academic and Behavior Response-to-Intervention Systems

Recently, two approaches—academic response to intervention (RTI; Brown-Chidsey & Steege, 2010) and schoolwide positive behavioral interventions and supports (PBIS; Sugai & Horner, 2009a)—have been implemented on a scale of social significance that has evaded many previous attempts at school reform. For example, the National Center on PBIS supports over 21,000 U.S. schools implementing PBIS. Considering that many schools also implement PBIS in the absence of formal support from the center, we conservatively estimate that at least one in five schools in the United States are implementing PBIS.

With respect to academic RTI, a recent survey found that 68% of schools were in some stage of districtwide RTI implementation, with 24% stating that RTI was part of their typical practices (GlobalScholar, 2011). However, most schools reported implementing RTI only for reading and only at the elementary level. In that survey, 51% of elementary schools reported full implementation of RTI for reading, and 20% reported full implementation of RTI for behavior. In secondary schools, 13% reported full implementation in reading, and 8% reported full implementation for behavior. With so many schools implementing one or both of these approaches, it is difficult to identify any other comprehensive school reform initiatives in this day and age that are in use in so many schools.

So why have these approaches been so widely adopted and sustained, when countless other educational practices have been abandoned, sometimes before they were even implemented (Cook & Odom, 2013)? One simple reason is effectiveness: They result in improved student outcomes when implemented by typical school personnel. Regarding PBIS, research from multiple universities, including multiple randomized controlled trials (in which some schools implement and others continue as usual), show reduced disruptive behavior, reduced bullying, increased academic achievement, increased school safety, improved teacher climate and perceived self-efficacy, increased social competence, and increased emotional regulation (Bradshaw, Koth, Thornton, & Leaf, 2009; Bradshaw, Waasdorp, & Leaf, 2012; Horner et al., 2009; Kelm & McIntosh, 2012; Nelson, Martella, & Marchand-Martella, 2002; Waasdorp, Bradshaw, & Leaf, 2012). For academic RTI, there is evidence that implementation, especially in the area of early literacy, can improve academic achievement overall and for struggling learners, improve neurological functioning, and decrease referrals and eligibility for special education services (Gunn, Biglan, Smolkowski, & Ary, 2000; Shaywitz et al., 2004; Simmons et al., 2002; VanDerHeyden, Witt, & Gilbertson, 2007; Vaughn, Linan-Thompson, & Hickman, 2003; Vellutino et al., 1996).

Integration into MTSS

Given the extensive spread and effectiveness of these two approaches, there has been considerable informal discussion of how these approaches could be integrated into a coherent, unified system, sometimes referred to as *multi-tiered systems of support,* or *MTSS* (Sugai & Horner, 2009b). Some have described MTSS as a comprehensive approach to *one* domain of education (e.g., literacy), incorporating instruction, assessment, and decision making within a tiered model of service delivery, as opposed to a narrow conceptualization of RTI as simply a special education eligibility process (Kansas MTSS Project, 2012). This distinction is helpful in that it focuses attention on the broader context of education, as opposed to a particular educational decision-making process, often completed or led by a school psychologist (Baker, Fien, & Baker, 2010). However, in this book, when we refer to MTSS, we are specifically describing *integration of a number of multiple-tiered systems into one coherent, strategically combined system meant to address multiple domains or content areas in education* (e.g., literacy and social-emotional competence). Table 1.1 provides an overview of academic RTI, PBIS, and integrated MTSS models.

Components of Academic RTI and PBIS

Both academic RTI and PBIS rely on a few shared, foundational principles that are so important that they govern many aspects of their delivery. These concepts are similar, if not identical, when applied to academic or behavior systems for prevention and optimization of learning. These components are shared briefly here and shown in Figure 1.1.

Shared Components

It is not a coincidence that academic RTI and PBIS have such similarities. Many of their components are based on elements of quality instruction and effective systems change principles (McIntosh, Goodman, & Bohanon, 2010; Stollar, Poth, Curtis, & Cohen, 2006; Sugai & Horner, 2009b). For example, academic RTI and PBIS have at their core a focus on the prevention of

TABLE 1.1. Systematic Approaches to Academic and Behavior Support: Definitions

For clarity, we use the following definitions:

Academic response to intervention (RTI)

Academic RTI is a preventive systems approach to improving schoolwide and individual achievement through high-quality universal instruction and additional tiered supports provided in response to student need. It includes collaborative teaming across general and special education. Decisions in academic RTI are based on data from validated screening and progress monitoring tools. These data may be used as part of the special education eligibility determination process, but academic RTI includes *all* academic instruction systems, including core classroom instruction.

Schoolwide positive behavioral interventions and supports (PBIS)

Schoolwide PBIS is a framework for implementing evidence-based practices, providing a three-tiered continuum of support to students, using systems to support staff in implementation, and using data for decision making. As such, PBIS is considered an RTI approach for social and emotional behavior. PBIS emphasizes an instructional approach to behavior support, prevention through environmental change, adaptation to the local context, and using the science of applied behavior analysis to achieve outcomes that are valued by staff, students, and families.

Integrated multi-tiered systems of support (MTSS)

An integrated MTSS model provides all students with the best opportunities to succeed both academically *and* behaviorally in school. MTSS focuses on providing high-quality instruction and interventions matched to student need across domains and monitoring progress frequently to make decisions about changes in instruction or goals. It is not simply the implementation of both academic RTI and PBIS systems. There is a systematic and careful integration of these systems to enhance the efficiency and effectiveness of all school systems.

student challenges (be they academic or behavioral) that drives the selection and implementation of interventions, as well as the allocation of effort. Both approaches rely on a philosophy that preventing problems is more effective, for more students, than treating them as they arise. In addition, this prevention focus includes intervention for *all students*, regardless of risk, and a continuum of support provided for those who need more assistance to be successful. The goal for both academic and behavior systems is to enhance valued outcomes for students both in school and beyond by providing them with the skills needed to access reinforcement for their actions, be it being able to read content in their interest area, deal with setbacks, or establish and maintain friendships. Prevention and intervention in each system has an instructional focus, and instruction is based on principles of effective instruction, with an emphasis on differentiated instruction as a means of providing that continuum of support. Finally, just as the instructional delivery is based on effective practices, both systems share a commitment to evidence-based practices—that is, to those practices that have been shown to work across a range of classrooms and for more students. These elements of practice are discussed in Chapter 4.

The focus on a systems-based delivery of interventions also looks similar across the two domains. Academic RTI and PBIS are fundamentally *data driven*. Data—such as fidelity of implementation, student screening or benchmarking data, and progress monitoring data—inform both instruction and the implementation of the systems themselves. Data for both types

of systems, as well as for integrated systems, are discussed in Chapter 3. Academic RTI and PBIS are also fundamentally *team driven* (Gersten et al., 2008; Sugai & Horner, 2009a). Implementation is undertaken and monitored by teams that use the aforementioned data, as well as formal action planning procedures, to enhance the quality of implementation and student effects over time. Teaming is discussed in Chapter 5. In addition, the team-based approach extends to collaboration across systems in schools. Whole-school initiatives require collaboration across general education, special education, administration, and school- and district-level support staff. As a result, effective academic RTI and PBIS teams include representatives from each of these groups to maximize the extent to which all educators in the school are actively involved in establishing, planning, and sustaining these initiatives.

Differences in Components

However, despite these strong similarities, there are a number of notable differences that help distinguish academic RTI from PBIS. Some differences are small, such as terminology. In terms of curriculum, Tier 1 support in academic RTI refers to the core curriculum, whereas Tier 1 PBIS describes universal, or schoolwide, instruction. Other differences refer to the drive to implement. Because of legislation, academic RTI is often developed based on a mandate to change the process of special education eligibility determination. PBIS is more likely to be implemented based on concerns regarding overall school climate or levels of disruptive behav-
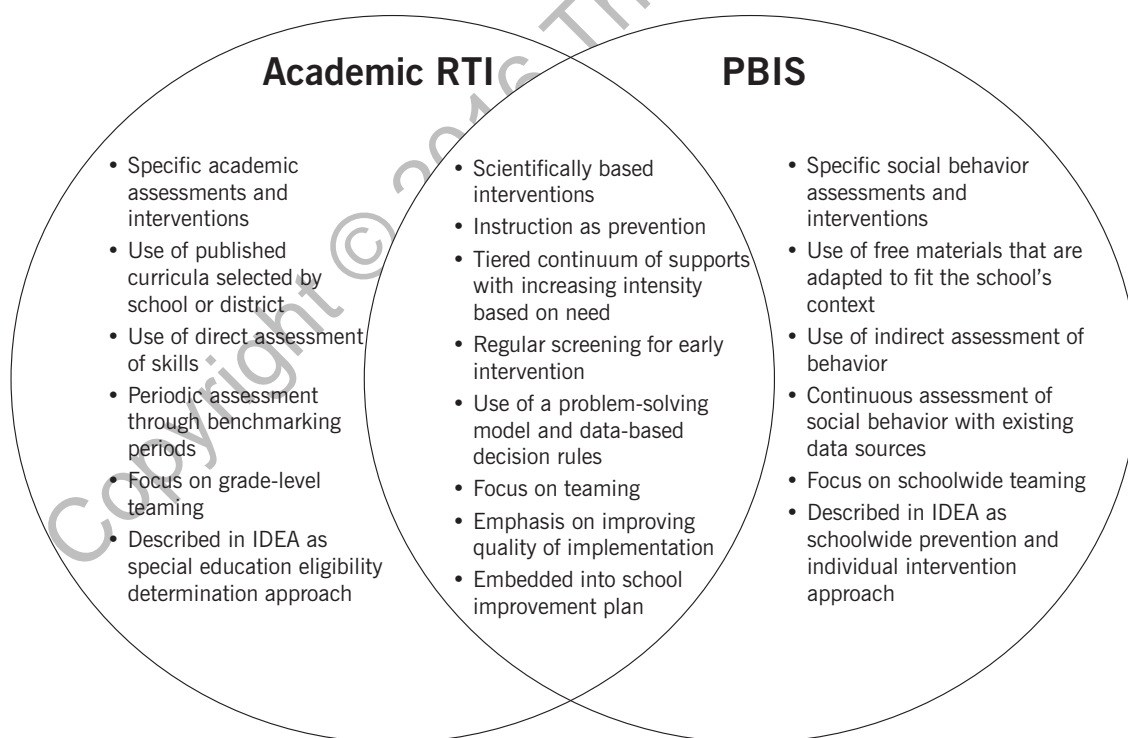

Academic RTI — **PBIS**

Academic RTI
- Specific academic assessments and interventions
- Use of published curricula selected by school or district
- Use of direct assessment of skills
- Periodic assessment through benchmarking periods
- Focus on grade-level teaming
- Described in IDEA as special education eligibility determination approach

(shared)
- Scientifically based interventions
- Instruction as prevention
- Tiered continuum of supports with increasing intensity based on need
- Regular screening for early intervention
- Use of a problem-solving model and data-based decision rules
- Focus on teaming
- Emphasis on improving quality of implementation
- Embedded into school improvement plan

PBIS
- Specific social behavior assessments and interventions
- Use of free materials that are adapted to fit the school's context
- Use of indirect assessment of behavior
- Continuous assessment of social behavior with existing data sources
- Focus on schoolwide teaming
- Described in IDEA as schoolwide prevention and individual intervention approach

FIGURE 1.1. Similarities and differences between academic RTI and PBIS. Based on Sugai and Horner (2009).

ior. As a result, academic RTI may have more of a focus (at least initially) on evaluation and special education support. PBIS implementation generally starts with Tier 1 systems. Hence, the initial focus often occurs at different levels of the support provided. Academic RTI may have initial effects on special education and roles, and PBIS may have an initial, more noticeable effect on schoolwide climate, which can assist in implementation, as initial efforts are reinforced through visible results (Andreou, McIntosh, Ross, & Kahn, 2015). In addition, because of this focus on school climate and culture, PBIS may require more adaptation of practices to fit with the local context, which makes implementation more complex, but also possibly more appealing, as school personnel can modify their systems to meet the needs of their staff, students, and families.

Systems for implementation and delivery can also differ between academic RTI and PBIS. It is obvious that the student performance assessments will differ (e.g., academic skills vs. social competence), but the data systems themselves are fundamentally different. In academic RTI, one of the strengths of assessment is that it relies on direct measurement of skills. PBIS data present challenges because direct measures (i.e., direct observation) are costly, and so teams rely on indirect measures (e.g., office discipline referrals, teacher ratings of behavior). Direct academic measures also benefit from well-established and clear trajectories and benchmarks for skill development, but the same quantitative standards for social and emotional development are not currently available (McIntosh, Frank, & Spaulding, 2010). In addition, the assessment in academic RTI is periodic, whereas PBIS assessment may be periodic (e.g., fidelity assessment, screening) or continuous (e.g., office discipline referrals, suspensions). These differences affect the functioning of teams and the time points for decision making, with decision making happening quarterly more often in academic RTI (to coincide with benchmark data or trimester grades), and monthly more often in PBIS (to react to or prevent patterns of unwanted [i.e., challenging] behavior continually). The teams themselves are also different, with teaming in academic RTI occurring more often at the grade level, and teaming in PBIS more often a schoolwide endeavor. Finally, coaching for implementation may vary. The process of coaching itself may not be different, but the difference in content-area expertise required for coaching in each domain may necessitate different coaches, unless coaches are comfortable providing assistance with both sets of knowledge.

When compared to the similarities, these differences are not monumental, and the divide is easily bridged. It is important to note these differences, nevertheless, for two reasons. First, knowing them can help us avoid making incorrect assumptions about practices. Second, these different perspectives might inform and strengthen efforts in the other domain. In many senses, learning from these differences may help counter weaknesses in a single approach. For example, the quarterly meetings in academic RTI that assess student grouping may be a good opportunity to assess the general effectiveness of Tier 2 behavior support interventions, which may be better assessed periodically rather than briefly in monthly reports or during annual action planning.

Not Just Literacy and PBIS

It is also important to mention that our conceptualization of MTSS does not simply encompass reading and behavior. Although most current integrated MTSS systems include a focus on early literacy and behavior (and most of our examples are the same), MTSS is not limited to these two domains. Instead, the general MTSS process we describe can be applied to a wide range of

domains, including other academic domains (e.g., mathematics) and varying aspects of behavior (e.g., resilience, emotional competence). Moreover, MTSS can incorporate other systems-level approaches that are used in schools or related agencies. For example, school–family partnership initiatives have been integrated into MTSS (McCart, Wolf, Sweeney, & Choi, 2009; Sullivan & Daily, 2013, March). Wraparound support and parenting support have also been conceptualized as components of MTSS (Eber, Hyde, & Suter, 2011; Stormshak, Fosco, & Dishion, 2010). More recently, mental health supports have been linked with PBIS systems in an interconnected systems framework that recognizes the overlap across approaches and views isolated, parallel efforts as less effective than integrated ones (Barrett, Eber, & Weist, 2013). Specific initiatives such as dropout prevention efforts can also be incorporated (Legters & Balfanz, 2010).

Our main point is that any tiered support system or form of interagency collaboration can be integrated into an MTSS. Our primary focus in this book is on integrating academic instruction and RTI systems with PBIS because these are two commonly used systems, and there has been considerable success in doing so. However, this book can be used as a general case example of how to integrate *any* tiered systems related to education.

In addition, even stand-alone academic RTI and PBIS systems are often already integrated approaches of their own. For example, school teams may complete an audit of existing practices to identify which ones are already being implemented to support achievement or behavior (Sugai, Horner, Algozzine, et al., 2010; Sugai, Horner, & Lewis-Palmer, 2001). Within a comprehensive PBIS approach, schools may use a program such as Promoting Alternative Thinking Strategies (PATHS; Kusché & Greenberg, 1994) as a universal (Tier 1) curriculum for enhancing social and emotional learning for all students, the FRIENDS for Life program (Barrett, 2004) as a Tier 2 intervention for supporting students with subclinical (i.e., moderate) levels of anxiety, and restorative practices as alternatives to suspension at Tiers 2 and 3. Likewise, in literacy, schools may adopt different packaged curricula and instructional approaches to provide the most effective continuum of support across each tier.

Why Consider Combining Systems?

Although it sounds logical to combine existing systems into an integrated approach, one would likely feel daunted by the considerable steps and possible conflicts among passionate and well-intentioned leaders. After all, it is all well and good to think theoretically about combining initiatives, but merging two well-articulated sets of training and technical assistance is not easy. Moreover, the will to collaborate, even among like-minded colleagues, is often tested to the extreme when budgets become shared. In many senses, George Batsche's analogy of a blended family is relevant. One might think aloud, "Why should we consider combining systems if our separate systems are already working well?"

The push for integration of these systems comes primarily from three assumptions. First, there is an established literature base documenting a strong relationship between academic skills and problem behavior, which we describe in detail in Chapter 2. As such, separate systems of intervention for interrelated problems may not be as effective as combined approaches (Stewart, Benner, Martella, & Marchand-Martella, 2007). This combined approach can also provide more seamless support, as opposed to separate systems, wherein a student might slip through the cracks. For example, a student with moderate challenges in both academics and behavior might not receive needed support if no one is looking at both sets of data to see the elevated risk

for negative outcomes. In addition, integrating these systems can avoid the common challenge presented by silos of responsibility, in which different departments or teams accept responsibility for parts of the student, and no group takes a shared responsibility for the student as a whole.

Even more important, "siloed" academic and behavior systems themselves may work at cross purposes, because practices that seem effective for students in one system may be detrimental in another. For example, some schools regularly use behavior interventions that remove students from the classroom to reduce problem behaviors (e.g., time-out, cool-down rooms, restorative circles). These interventions are used in behavior systems because they often reduce problem behaviors in the short term. However, overuse of these interventions can reduce access to academic instruction, leading to improved behavior but worse academic achievement (Benner, Nelson, Sanders, & Ralston, 2012; McIntosh, Horner, Chard, Dickey, & Braun, 2008). Similarly, setting rigorous academic standards schoolwide can improve academic achievement (Jussim, 2013), but it may also increase rates of dropout and unwanted behavior. As a result, it is critical to consider both academics and behavior when implementing practices for either domain.

Second, as described above, academic RTI and PBIS share many common features and underlying theories. As a result, implementing practices in one area may make implementing the other practices more efficient. Once school personnel gain knowledge and experience in one area, the concepts, systems, and even intervention skills learned in that one area can build the capacity to make implementation in another area easier. In one sense, an MTSS lens teaches us that effective approaches to service delivery can be used for intervention in any domain of student learning. One need only change the target of intervention to build skills and ameliorate challenges.

Third, integrating academic and behavior support efforts may lead to more efficient use of resources and protection against multiple competing initiatives, enhancing the sustainability of both approaches (McIntosh, Horner, & Sugai, 2009). In an educational system where teachers are continually being asked to do more with less, bringing in new initiatives is more expensive than keeping old ones (Latham, 1988; Tyack & Cuban, 1995). When districts engage in several major initiatives concurrently (e.g., academic RTI and PBIS), the expense of coaching systems and limited time for inservice professional development can threaten both systems. Multi-tiered systems are commonly built as separate but parallel systems. The concept of parallel (or siloed) systems has been around as long as there have been systems, and if you are in education, you are most certainly familiar with the challenges that this parallel work brings, including initiative overload, inefficient use of resources, competition among initiative coordinators for professional development time, confusion among school personnel, and separation of instruction that allows students to fall through the cracks. This situation is even more frustrating considering how similar these initiatives are in both theory and practice.

As an alternative, combining these efforts can save the district in terms of funding, and more important, in capacity-building efforts for school personnel. Explicitly showing how these two initiatives address interrelated challenges (as seen in Chapter 2) can make a strong case for increasing or maintaining funding for an integrated model, whereby efforts in both areas can be sustained (McIntosh, Goodman, et al., 2010). In addition, an integrated model that includes multiple content areas may feel less like "one more thing on the plate" than implementing separate initiatives. Given this point and the previous points, there is considerable interest from

implementers, researchers, and policymakers in how these complimentary approaches can be integrated, even when considering the serious challenges that may arise through the integration process.

CONCEPTUAL ORIGINS OF RTI, MULTI-TIERED SYSTEMS, AND INTEGRATED MODELS

As noted, one of the compelling arguments for integrating academic RTI and PBIS is the shared foundational principles that permeate the daily practices of implementation. These systems are both focused on prevention, with the underlying concepts of assessing response to intervention and a tiered approach for service delivery. Considering how foundational these ideas are for both approaches (and education in general), it may be helpful to examine their origins and evolution, with an eye to how the history of these concepts might inform daily practice in an integrated MTSS model.

Response to Intervention

With so much discussion regarding RTI, the systems and policies designed to promote it, and a logic that inherently fits with teaching, it is difficult for some to think of the educational system before RTI emerged. Many point to the 2004 U.S. federal reauthorization of the Individuals with Disabilities Education Act (IDEA; 2004) as the birth of RTI as we know it. Although that legislation certainly allowed the practice of RTI to scale up on a national level, the elements of RTI can be traced back many years.

The inclusion of academic RTI into the IDEA legislation had its origins in a workshop held by the National Research Council, which focused on alternatives to identifying specific learning disabilities through the ability–achievement discrepancy (L. S. Fuchs, personal communication, April 9, 2013). As had been noted by a number of researchers at the time (e.g., Reschly, 1988; Reynolds, Wang, & Walberg, 1987), the approach of identifying learning disabilities through comparing cognitive abilities and academic achievement has a number of drawbacks, including methodological, theoretical, and practical challenges. Probably the most salient drawbacks for educators were the lack of treatment validity (the extent to which the assessments indicated specific interventions to use) and having to wait until a significant discrepancy appeared before students became eligible (often until grade 3). This commonly termed *wait-to-fail* approach was viewed as harmful because students could not receive needed services that could potentially prevent their challenges, and the developmental window when remediation is most effective would rapidly be closing, leaving larger gaps and a persistent experience of failure (either academic or behavior) that could cause additional challenges (McIntosh, Horner, et al., 2008).

In place of the ability–achievement discrepancy, leading scholars proposed that special education eligibility decisions could be made through monitoring response to additional intervention (L. S. Fuchs, 1995). This scholarly work was supported by outcomes from districts and regions that had been implementing noncategorical special education delivery, such as the Heartland Area Educational Agency in Iowa (e.g., Reschly, 1995; Tilly, Reschly, & Grimes, 1998), Kansas State Department of Education (Kansas MTSS Project, 2012), and Minneapolis

Public Schools and the St. Croix River Education District in Minnesota (D. Miller, personal communication, June 4, 2013). According to this theory, an adequate RTI would indicate both that (1) a disability was not present and (2) the intervention provided was an effective support for that student's learning. On the other hand, an inadequate RTI would signal (1) the need for more intensive intervention (perhaps specially designed for that individual) and (2) the presence of a disability, based on the lack of growth in response to an intervention that has been shown to be effective for similar students (L. S. Fuchs & Fuchs, 1998). The rise in research in curriculum-based measurement in the previous decade made it possible for educators to assess this growth in a practical manner (Deno, 1989; Deno & Mirkin, 1977). Eventually, the combination of technical and theoretical advances culminated in the Office of Special Education Program's 2001 Learning Disability Summit (Bradley, Danielson, & Hallahan, 2002), leading to policy proposals and changes in federal special education law that instituted RTI as educational policy.

Although RTI currently seems to be firmly rooted in the domain of academic support and eligibility for specific learning disabilities (especially in early literacy), the term was used in the area of behavior and behavior disorders even earlier than for early literacy. In 1991, Gresham proposed the term *resistance to intervention* as a new method of assessing behavior disorders. The methodology was rooted in the applied behavior analysis literature, especially functional behavior assessment. The important foundational notion was that problem behavior could be conceived as adaptive (i.e., a student's best attempt to get his or her needs met), instead of simply maladaptive. As a result, Gresham noted the importance of environmental change (including interactions with adults) as critical to changing behavior. A specific unwanted behavior would be classified as resistant if it persisted even after effective intervention was applied. As an aside, it is interesting to note that the term *response to intervention* is now preferred because it places focus on the success of the support provided, not on individual characteristics, and it carries no implication that a lack of response is due to "willful" resistance by the student.

Some believe that the idea of RTI started even prior to 1991. In 1957, Cronbach proposed an ambitious agenda of merging two disparate bodies of research: the experimental research from behavioral psychology (focusing on intervention effects) and the correlational research from developmental psychology (focusing on individual differences). His thinking was that by examining intervention effects based on individual characteristics, one might uncover aptitude-by-treatment interactions. With knowledge of these interactions, educators could then select interventions based on student characteristics and feel confident that they would be effective. However, after over a decade of intensive research, Cronbach (1975) had found little to no evidence of aptitude-by-treatment interactions that could guide intervention. In reference to the difficulty of matching treatments based on student traits, he famously noted, "once we attend to interactions, we enter a hall of mirrors that extends to infinity" (p. 119). Instead, his research favored a process he called *short-run empiricism*, in which interventions are tested and modified for each individual based on formative assessment. In his words, "one monitors response to the treatment and adjusts it" (p. 126). In essence, he described the process of *response to intervention*.

Yet in reality, the origins of RTI may go back much further, far before the term *RTI*, Cronbach's hall of mirrors, or our modern educational system. In its essence, noting a student's response to an intervention is just a component of good instruction; delivering a lesson that is designed to be effective, identifying whether enough learning occurred for the lesson to be considered successful, and changing instruction as needed to ensure learning. Through this lens,

RTI can be viewed as a very natural way to teach and, in many ways, the complex systems and structures involved in implementing RTI are simply methods of ensuring that all students can learn.

A Tiered Approach to Service Delivery

Another core concept of multi-tiered systems is right in the name. In fact, if you know anything about multi-tiered systems, chances are that you are familiar with the ubiquitous triangle. There are many variations of the triangle, but it's most commonly shown with three colors (green, yellow, and red), representing not groups of students, but rather levels of prevention (primary, secondary, or tertiary), types of support for students (universal, targeted, or intensive), curricula (core, strategic, individualized), or tiers of instruction (Tier 1, Tier 2, Tier 3). These labels for the tiers are generally interchangeable, in that they all describe the function of multiple tiers. In this book, we use the numbered tiers as our labels.

One of the reasons for the widespread popularity of the triangle, or its "stickiness" (see Gladwell, 2006), is its simple and straightforward presentation of the notion that school personnel can use as a general framework for unifying separate interventions. By using the triangle, teams at the school, district, and state levels can organize their support along a continuum that ranges from support for all students (universal support) to support for some students (targeted support) to support for the few students who require (intensive support). Each of these interventions has a separate target population and purpose, but the triangle allows us to see how these can work together to provide seamless systems of support for all students.

Although there are many stories regarding how the triangle came to be, most education researchers note that the multi-tiered approach came from the field of public health (Walker et al., 1996). Some identify the origin of the three-tiered model as from Caplan and Grunebaum (1967), although Gordon (1983) noted that by then, the model was used so widely in medical textbooks that a single originator is unlikely, and different groups added and subtracted the number of tiers as fit their context. In the same way, the model became widely translated for work in education by many practitioners and researchers. The first major publications describing the application of a multi-tiered model specifically to education (both academics and behavior) came in a text edited by Simeonsson (1994). However, officials from the Ministry of Education in Saskatchewan, Canada, claim that they were using the model as far back as the 1970s (Sanche, 1976; see also McIntosh et al., 2011). In reality, it was most likely a case of the convergent evolution of an idea that may have sprung from, and was elaborated by, many contributors, as was true in the public health field.

Going back to the history of this public health model is actually helpful for us to understand multi-tiered systems work. In the middle of the last century, public health researchers were struggling to support the health of individuals at the population (i.e., large-scale) level. Knowing that some diseases were largely (but not completely) preventable but still affected a sizable population who had to live with and manage their illness, medical researchers and practitioners adopted a theoretical model that could address multiple goals for large groups. As Gordon (1983) described, Tier 1 services are intended to be universal, for all individuals, regardless of their health (i.e., need). The goal of Tier 1 support is to prevent a particular condition from occurring. Tier 2 services (often described as *selected* in the clinical literature) are intended for those who do not have the condition but are at increased risk for contracting it, possibly based

on demographics or location. The goal of Tier 2 support is to reduce the chances of individuals contracting the condition. Tier 3 services (*indicated*) are used for individuals who have already contracted the condition. The goal of Tier 3 support is to lessen the effect (or symptoms) of the condition, or cure it, if possible.

Using this public health lens can help us to understand the use of multi-tiered models in education. Let's take influenza, or the flu, as an example with which most of us are familiar. Tier 1 support for flu prevention includes universal hygiene practices. Everyone is encouraged to wash hands regularly and cough or sneeze into one's elbow to avoid transmission of the flu, and you can see signs posted in restrooms, hospitals, and even schools as a universal public health campaign. Adherence to this type of support should prevent most (but not all) people from contracting the flu. Tier 2 support for flu prevention provides additional intervention for those who are more likely than average to contract the flu. Those with compromised immune systems, such as the elderly or children, or those who may have regular contact with those with the flu, such as health care professionals, are strongly recommended to receive a flu vaccine before the start of flu season. This intervention is intended to help those who have more risk factors, and therefore may not receive enough support from universal hygiene practices or general public appeals to get a flu shot. Tier 3 support then addresses those who have already caught influenza and need medical attention to lessen its severity. Interventions include bed rest and fever reducers, possibly under close medical supervision for those with the most intensive needs.

It's easy to see how this model applies to education, but with some helpful alterations. For example, we think of core curricula as universal interventions. In reading, an effective, well-sequenced reading curriculum, delivered effectively, is intended to prevent challenges in learning how to read (and behave, as we discuss in Chapter 2). In the domain of behavior, we teach students expectations and provide them with the skills they need to be successful socially and emotionally to prevent patterns of unwanted behavior or anxiety. Environmental manipulations, such as signs to remind students to use prosocial behavior or routines to manage traffic, help to encourage prosocial behavior, much like signs to wash hands or the sight of hand sanitizer dispensers at convenient locations help with universal hygiene. However, universal interventions can do more than simply prevent problems; we can also view them as opportunities to optimize learning or cultivate students' strengths (Seligman, 2002). For example, we may use academic instruction to expand students' interest areas and develop their curiosity for academic learning, or teach responsibility in a manner that not only discourages problem behavior but also teaches effective skills to intervene with others to promote social justice.

At Tier 2 in schools, we provide additional instruction, structure, or opportunities to practice to avert students from trajectories toward learning or behavior challenges. We may identify students based on demographic risk (e.g., the use of Title I programs in disadvantaged schools) or based on progress monitoring measures. In the medical field, growth charts or blood pressure tests provide quantitative measures of risk by identifying trajectories toward cutoffs for significant challenges (e.g., failure to thrive, hypertension). In schools, we use similar measures that assess trajectories toward healthy academic growth (e.g., curriculum-based measures, unit tests) or negative social outcomes (e.g., office discipline referrals, attendance, behavioral screeners, and high school early warning systems). These tests may tell us that more instruction, more opportunities to experience success, or developing a caring relationship with another adult in the building could help improve the quality of universal support.

Once a student is identified for Tier 3 support, measures have identified that a student is on track toward negative outcomes, and our data may tell us that the generic Tier 2 support (i.e., additional support provided in the same way for all students) has not been enough to prevent significant challenges. At this point, individualized plans (perhaps formally, in the form of an individualized education plan, or IEP, or informally, in the form of general education support plans) are needed to support the student to be successful. It is here that our medical analogy can lose some relevance. Many of the conditions we try to avoid in schools (i.e., learning disabilities, behavior disorders) are socially constructed, in that there is not a clear test for the condition, but rather a point of functioning at which policies declare that a disability exists (Tilly et al., 1998). In this way, Tier 3 support may be alternatively viewed as a treatment to cure the disability (i.e., bring the student's functioning to within typical limits) or as a plan to mitigate the effects of the disability (e.g., teach functional skills, teach Braille, keep the student engaged in school as long as possible). In many support plans, there are elements of both approaches, with the best goals determined through close partnership with families. In either approach, special education services might or might not be part of Tier 3 support.

MTSS Misrules

A public health lens can also help us consider some of the misrules and myths surrounding multi-tiered systems. Let's return to that analogy of the flu. One misrule of multi-tiered systems is that each tier is a separate system, so that students receive either Tier 1, 2, or 3 support. Instead, each tier of support is *layered on* to the previous tier's support (e.g., Tier 1 *and* Tier 2 support together), so that students receive additional support, not support that replaces or supplants what preceded it. For example, we would never tell elderly patients that when they receive a flu shot, they can stop washing their hands! In the same way, a key aspect of an MTSS approach is that Tier 2 support is more effective when delivered in addition to core classroom instruction, instead of in place of it (Baker et al., 2010). This layering approach is also helpful when removing support when students are successful. For example, aligning expectations in Tier 2 behavior interventions to the Tier 1 (schoolwide) behavior expectations may allow for a more successful transition to only Tier 1 support when Tier 2 support is removed (Campbell & Anderson, 2011).

Similarly, some have noted that a tiered approach implies that students must go through each tier in succession before they can receive the level of support they need (D. Fuchs, Mock, Morgan, & Young, 2003). If a patient already has the flu, there is little reason to provide a flu shot. In the same way, if we were relatively certain that a generic approach is not going to provide the level of academic or behavior support that is needed for a particular student, it would be foolish to insist that the student first fail in order to receive more support. However, in less extreme cases, it may be worthwhile (in terms of resources and the undesirability of providing unnecessary support) to weigh the harms against the possible benefits (i.e., support in the least restrictive environment).

Another misrule is that multi-tiered systems are specific to certain programs or approaches to learning. Multi-tiered systems can be applied as a unifying framework to nearly any approach in education, much in the way that a tiered approach to flu prevention could include both traditional Western medicine (e.g., flu shots) and complementary medicine (e.g., herbal supplements,

stress reduction techniques). In the same manner, a universal reading curriculum may include elements of explicit behavioral instruction, cognitive strategy instruction, and student-directed learning. Practices should be selected based on their effectiveness in improving student outcomes, not their philosophy.

A final common misrule regarding multi-tiered systems is that they are just another system used to label students. In contrast, multi-tiered systems are used to describe the level of support that a student requires at that time, not something inherent in that student. Support within multi-tiered systems is intended to be fluid and responsive to student progress, not a label that identifies a "red zone kid." Such thinking leads us to assume that all of a student's needs are intensive (e.g., across all content areas), and it confuses a within-child trait with the need for support at that moment. We don't keep patients on bed rest or in the hospital once they have recovered from the flu!

A History of Integrated Models

Because this book focuses specifically on integrated systems, it is helpful to examine a brief history of such systems. Like RTI and tiered approaches, it is unlikely that there was one sole originator of integrated systems, but one federal grant competition did serve as a serendipitous pivotal point in the development and proliferation of structures for integrating systems. In 2000, the U.S. Office of Special Education Programs (OSEP) released a request for proposals for model demonstration projects focusing on K–3 behavior and reading intervention models. Although the proposal required a schoolwide focus on behavior *or* reading, four local education agencies applied and received grants for a schoolwide focus on behavior *and* reading. These were the Bethel School District (Oregon), the Lancaster Lebanon Intermediate Unit (Pennsylvania), the Ottawa Area Intermediate School District (Michigan), and the Tigard–Tualatin School District (Oregon). These model demonstration projects were crucial in providing the initial funding and infrastructure for integrating systems, and many of these projects continue to this day (see Part III for case studies).

These successful projects also set the stage for further development: two national OSEP K–3 research centers on reading and behavior in 2001 at the University of Kansas and the University of North Carolina at Charlotte (the University of Oregon was also awarded separate reading and behavior centers). These efforts led to a range of research papers (e.g., Ervin, Schaughency, Goodman, McGlinchey, & Matthews, 2006; McIntosh, Chard, Boland, & Horner, 2006), as well as an influential concept paper describing the logic for an integrated approach to reading and behavior (Sugai, Kame'enui, Horner, & Simmons, 2002). In addition, state professional development grants (SPDGs) became a common funding resource with which some states built capacity for implementing integrated MTSS models. Further, a number of conferences have consistently provided dedicated content on integrated systems (e.g., Goodman, 2005; McGlinchey, Goodman, & Schallmo, 2005; McIntosh, 2007, June; Sadler, 2003), especially the RTI Innovations Conference (see *www.rti-innovations.com*).

Today, over a dozen years after these initial grants, there are a number of exemplar initiatives that demonstrate that integrating both approaches is both possible and sustainable (Ervin et al., 2006; McIntosh et al., 2006; Sadler & Sugai, 2009). However, there remains little research in this area to guide implementers (Stewart et al., 2007), and even fewer resources available for

those interested in integrating approaches (McIntosh, Goodman, et al., 2010). This gap can lead to spotty and ineffective integration, in which the logic and intent are strong, but the actual implementation lacks guidance and sufficient articulation.

ORIENTATION TO THIS BOOK

Purpose and Intended Readership

The purpose of this book is to provide a resource for integrating existing systems in academic RTI and PBIS into a comprehensive MTSS approach or for implementing an integrated system in schools that have neither system in place. Although some background information is provided, we assume that readers have at least some knowledge and experience implementing academic RTI or PBIS (or both) in their settings. As such, the book does not describe academic or behavior systems in detail, but rather the process and systems needed to integrate them. Readers in search of foundational resources for the basics of academic RTI or PBIS are referred to the references in Table 1.2. We recommend that readers follow this book with that background information already in hand so that we can focus on the real purpose here of *providing explicit guidance for integrating existing approaches into a coherent, empirically based process*. This resource is intended to help bridge the gap between integrated MTSS as a good idea in theory and integrated MTSS as an implementable, practical innovation in today's schools.

A key message to which we return throughout this book is that quality integration requires a careful and logical approach. It is important to avoid what we call "parallel play": the simultaneous implementation of two separate systems, one to support academic development and one to support behavior development, with little interaction except to compete for priority and funding. However, it is equally important to avoid integration for integration's sake or integrating components systems that may work better separately. Our goal is not integration—our goals are efficiency and effectiveness. Integration, then, is a means to achieve efficiency and effectiveness, but not an outcome in of itself. We need to let logic guide what to integrate because complete integration may not necessarily be better than separate systems. This book is intended to provide guidance on what aspects of MTSS integration would make both systems more efficient and effective.

The primary intended readers for this book are school-level teams that are integrating academic and behavior systems at the K–12 school level, or district-level teams that are supporting multiple school teams in their implementation. Although these practices are conceived and implemented at the school level and our examples and forms are also school level, it is clear from research that schools require district-level support to function effectively, especially when it comes to sustaining practices over time (McIntosh et al., 2013). Thus, district administrators need to have a deep understanding of how MTSS works at the building level to identify the supports needed for quality implementation, and school team members need to know what kinds of support to request in order to install durable systems that will outlast their involvement as school team leaders. In addition, regional- and state-level administrators may design better policy when they are knowledgeable about what schools need to implement MTSS.

Although district and state support will greatly enhance the ease and durability of MTSS implementation, school teams working on their own will still find the information needed to

TABLE 1.2. Foundational Resources

Resources for academic RTI

Websites

www.rtinetwork.org

This website provides a range of articles on RTI, its principles, and helpful guidance for implementation by nationally regarded experts in the field. The site also includes some articles on MTSS.

www.progressmonitoring.org

This website from the Research Institute on Progress Monitoring provides information on tools for measuring formative growth in academic skills.

www.interventioncentral.com

This site provides a wealth of free resources on interventions (primarily academic, but also behavior) for students within a three-tiered model.

www.fcrr.org

The website for the Florida Center for Reading Research has a range of resources for teachers, administrators, and researchers on implementing effective literacy instruction.

Books

The ABCs of CBM, Second Edition: A Practical Guide to Curriculum-Based Measurement (Hosp, Hosp, & Howell, 2016)

This book is an approachable and informative resource on academic assessment within an RTI model. It provides step-by-step guidance for implementing screening and progress monitoring systems for academic skills across content areas.

RTI in the Classroom: Guidelines and Recipes for Success (Brown-Chidsey, Bronaugh, & McGraw, 2009)

This text begins with determining readiness to implement RTI along with background information of the RTI model. Emphasis is placed on evaluating and developing strong Tier 1 systems. Additional chapters provide interventions on content-area interventions (e.g., math, reading, writing, social behavior).

RTI Applications: Volume 1. Academic and Behavioral Interventions (Burns, Riley-Tillman, & VanDerHeyden, 2012)

This text begins with an overview of evidence-based interventions and how to match intervention to student need based on stages of learning (acquisition, fluency, generalization, and adaptation). Additional chapters describe academic or behavior interventions based on assessing students' stages of learning.

RTI Applications, Volume 2. Assessment, Analysis and Decision Making (Riley-Tillman, Burns, & Gibbons, 2013)

This follow-up companion volume provides guidance in the selection of assessment measures and evaluation of effectiveness of interventions within an RTI model. The book applies a problem-solving approach to help ensure that the educational system is meeting student needs.

TABLE 1.2. *(continued)*

Resources for PBIS

Websites

www.pbis.org

The U.S. Office of Special Education Programs Center on Positive Behavioral Interventions and Supports is a comprehensive site featuring introductory articles and videos, practice examples, evaluation briefs, and free tools for training schools, assessing fidelity of implementation, and monitoring student outcomes. The PBIS Implementation Blueprint includes an overview of PBIS systems and common practices, as well as a flexible approach for designing state and district systems to support school-level implementation.

www.pbismaryland.org

This site offers an expansive (and ever-growing) set of tools and examples for implementing PBIS at the elementary, middle, and secondary levels.

miblisi.prg

This website, from the Michigan Integrated Behavior and Literacy Supports Initiative, provides helpful content for both academic RTI and PBIS.

Books

Positive Behavior Support in Secondary Schools: A Practical Guide (Young, Caldarella, Richardson, & Young, 2012)

This text provides guidance for high school leadership teams in implementing PBIS. Background information is provided on the key principles of PBIS and the unique characteristics of the high schools. Information on planning for implementation, addressing Tier 1 support, and using data for effective intervention is provided.

Responding to Problem Behavior in Schools, Second Edition: The Behavior Education Program (Crone, Hawken, & Horner, 2010)

This book provides an overview and detailed steps for implementing, monitoring, and troubleshooting a commonly used Tier 2 system called the *behavior education program* (also known as check-in/check-out, or CICO).

Building Positive Behavior Support Systems in Schools, Second Edition: Functional Behavioral Assessment (Crone, Hawken, & Horner, 2015)

This book details the steps and tools required to conduct individualized assessments and intervention plans at Tier 3. It walks the reader though the process of identifying the function of problem behavior and aspects of the environment that can be altered to prevent unwanted behavior and teach functional, prosocial skills.

implement MTSS at their schools. In fact, schools may only be able to garner such support *after* showing that MTSS systems can be implemented effectively and improve student outcomes in their schools.

Structure

This book is organized into four parts. In Part I (including this chapter), we provide the context needed to understand the MTSS logic and convince others why integrating separate systems into an MTSS model may be a beneficial pursuit. Chapter 2 reviews the research on how academic skills and behavior are interrelated. This body of evidence provides an empirical rationale for integrating systems. Part II goes into detail regarding the common components of academic and behavior RTI systems and the steps and strategies that comprise implementation. Chapters 3 through 6 provide in-depth descriptions of steps and strategies for implementing the various aspects of an integrated MTSS, including the data structures, practices, teaming, and district systems needed for quality implementation. With this information at hand, Chapter 7 then provides details on the specific processes, structural considerations, and policies needed to achieve a logical integration of entire systems. Each of these chapters concludes with useful, reproducible school- and district-level team checklists to guide implementation. As a complement to the content in Part II, Part III provides three examples of implementation of MTSS. Each of these chapters covers examples and structures from different MTSS initiatives, including descriptions of implementation, outcomes, and lessons learned. Taken as a whole, these case studies demonstrate common themes in MTSS and show how implementation varies according to the specific context, with a key lesson that function is more important than structure. Part IV concludes the book with new directions for research and practice.