TIERED INTERVENTIONS IN HIGH SCHOOLS

USING PRELIMINARY 'LESSONS LEARNED' TO GUIDE ONGOING DISCUSSION

National Center on Response to Intervention
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FOREWORD

Response to Intervention (RTI) is a potentially powerful framework for organizing, allocating, and evaluating educational resources to meet the instructional needs of all students and to prevent long-term school failure. Much of our knowledge of the components of RTI and their successful implementation is based on experiences in elementary schools. However, given the structural and organizational differences between elementary schools and high schools, this evidence has its limitations when implementing RTI at higher grade levels. The essential components of RTI may be the same, regardless of grade level or context, but how they are translated into effective practice and integrated into a high school's processes may differ from elementary school models.

A growing body of substantive research on secondary-level RTI and on tools for implementing RTI in high schools is available. The Learning Disabilities Research Centers, funded by the National Institute of Child Health and Human Development (see www.nichd.nih.gov/research/supported/ldrc.cfm for more information), are currently researching RTI and are including older students. Other researchers are examining the use of effective intervention strategies in content area classrooms. Findings to date are preliminary and focus largely on literacy, though in time, this research will likely become an important source of guidance for high school implementers of RTI.

In the interim, however, high school practitioners need information to guide planning and implementation efforts and to inform and evaluate their practice. A rich source of this knowledge is the collective and continuing experiences of high schools that have already ventured ahead with RTI. These information resources typically take the form of anecdotal reports, case studies, or professional wisdom, and although they are not a substitute for more rigorous forms of inquiry, they can provide insight into the challenges that high schools implementing RTI faced, the strategies they used to respond to the challenges, and their success in overcoming obstacles to effective implementation.

Terminology

Readers may note the use of two phrases, "RTI" and "tiered interventions," throughout this document. Although seemingly similar or interchangeable, the use of each phrase is intentional.

- "RTI" addresses specific aspects of the Response to Intervention framework, or research related to Response to Intervention.

- "Tiered interventions" describes the types of tiered supports observed during site visits. When we began this work, we purposely avoided using the term "RTI" with schools to obtain as large as sample as possible of schools who were implementing components of RTI but who may not self-identify themselves as implementing the framework as a whole.

In response to the high school practitioners' need for information and guidance, this report—the initial work of the High School Tiered Interventions Initiative (HSTII), a collaborative project of three federally funded technical assistance centers—summarizes what we have learned thus far and how those lessons learned can advance the ongoing discussion about effective RTI implementation in high schools. This report is grounded in available research and the professional wisdom of leading researchers and practitioners, including staff members from eight high schools implementing tiered interventions.

This document is not an implementation guide and, as such, does not provide concrete steps or tools for implementing RTI; however, the HSTII team hopes that this resource provides valuable information for technical assistance providers, researchers, state education agency personnel, and practitioners at the district and school level.

This report is divided into three main sections:

1. "Response to Intervention" provides a brief description of the RTI framework and the essential components of RTI.

2 "Applying the RTI Framework at the High School Level" illustrates how the essential components of RTI were implemented at the eight visited schools.

3. "High School Contextual Factors That Affect Tiered Intervention Implementation" highlights contextual factors unique to high schools and examines how these factors can affect school-level implementation of tiered interventions.

Who We Are

The High School Tiered Interventions Initiative (HSTII) is a collaboration among the National High School Center, the Center on Instruction, and the National Center on Response to Intervention to enhance understanding of how tiered intervention models are emerging in high schools across the country. The National High School Center and the Center on Instruction, funded by the Office of Elementary and Secondary Education and the Office of Special Education Programs (OSEP), are two of five national content centers supporting the Regional Comprehensive Centers. The National Center on Response to Intervention is a national technical assistance center funded by OSEP.

RESPONSE TO INTERVENTION

RTI FRAMEWORK

RTI is a framework that extends a public health prevention model (Caplan, 1964) to the prevention of academic and behavior difficulties (Vaughn, Wanzek, & Fletcher, 2007; for

more information on RTI and the prevention of behavior difficulties, see the "Positive Behavioral Interventions and Supports" sidebar). Like the public health prevention model, RTI addresses the needs of most students through primary instruction, providing secondary interventions for students not meeting certain criteria and reserving tertiary interventions for students with the most significant instructional needs.

Various models of RTI exist; however, they all are based on the same conceptual framework. RTI is not a specific curriculum or program; rather, it is a framework for promoting access to high-quality core instruction and providing increasingly intensive educational interventions in a timely manner for students who struggle in core instruction. RTI provides educators with systematic measures of student progress that yield data used to make important educational decisions (Batsche et al., 2006) and provides states, districts, and schools with a framework for allocating instructional services and resources in response to students' needs.

Implicit in this prevention framework is the idea that the least intense (or primary) level of services addresses the needs of most learners and delivers high-quality instruction that is culturally and linguistically responsive to the student population. For students who demonstrate the need for additional support, more intensive, targeted services are available. The effectiveness of those supports are monitored frequently and consistently to determine whether (a) the intervention is working and is no longer needed, (b) the intervention is working and should be continued, or (c) the intervention is not working and therefore a different (and perhaps more intensive) intervention should be implemented. Data are used to guide these decisions. Interventions are commensurate to a student's demonstrated need and are changed or intensified if they are found ineffective.

Positive Behavioral Interventions and Supports

Positive Behavioral Interventions and Supports (PBIS) is the application of the RTI framework for the prevention of behavior difficulties. PBIS requires the use of continuous monitoring, data-based decision making, and an intervention continuum (Horner, 2009). With effective implementation of PBIS, the majority of students demonstrate appropriate behavior within the general education classroom without additional supports, thus saving the more intensive interventions (e.g., social skills classes, individualized behavior interventions) for the students who require these interventions. For more information on PBIS, visit the OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports Web site: www.pbis.org.

RTI PRINCIPLES AND ESSENTIAL COMPONENTS

The HSTII team considers the following principles to be key to RTI implementation in any *academic* or *behavioral* domain and at any grade level:

1. The majority of students' educational needs are met through research-driven instructional (academic and/or behavioral) practices within core, or Tier I, instruction.

2. Students are screened to identify those in need of more intensive instruction, provided in the form of interventions.

3. Progress monitoring yields data to assess students' learning and academic performance and to determine whether a specific intervention is effective for a particular student.

4. Interventions increase in intensity in proportion to students' instructional needs, and interventions are monitored to ensure that they are delivered with high levels of fidelity.

5. Using data from screening and progress-monitoring measures, schools can assess both the students' responses and the interventions' effectiveness. These data may also be used in the special education eligibility process.

For the purposes of this document, the key components of RTI will be defined as high-quality Tier I/core instruction, universal screening, ongoing progress monitoring, tiered interventions, and data-based decision making. For more information on essential components of RTI, see the National Center on Response to Intervention's *Essential Components of RTI—A Closer Look at Response to Intervention* (http://www.rti4success.org/images/stories/pdfs/rtiessentialcomponents_042710.pdf).

APPLYING THE RTI FRAMEWORK AT THE HIGH SCHOOL LEVEL

This HSTII investigation is grounded in the assumption that implementation of tiered interventions in high school includes the same set of essential components as the RTI framework commonly implemented in elementary schools but that actual strategies for implementation may look very different due to high school's unique culture, structure, and organization (Duffy, 2007). This assumption helped us conceptualize RTI in high schools and informed the questions we asked, the information we gathered, and the interpretation of that information. For further details on how we collected information from participating high schools, see Appendix A, "Our Approach." Site visits to high schools implementing tiered interventions confirmed both research and professional wisdom that the conceptualization, implementation, and translation to practice of these essential components, as well as their integration into a high school's structure and operations, differ greatly from elementary school models.

GOALS OF TIERED INTERVENTIONS AT THE HIGH SCHOOL LEVEL

The scope and focus of a school's tiered intervention framework help to frame the implementation of the essential components of RTI, including the choice of screening and progress-monitoring measures and the development of appropriate and effective tiered interventions. While reviewing the observed schools' selected implementation methods below, it is important to keep in mind the unique school culture and contextual factors and their influence on the development of a tiered intervention framework. In other words, the implementation methods that one school selects may not be suitable for another school, even if the demographic makeup of the schools is similar; for example, schools that readily embrace innovation may take a different approach to implementation from schools that are more resistant to change.

Frequently, the school implementation team or district or state instructional leaders determine the scope and focus of a high school's tiered intervention initiative. All high schools observed indicated that they were implementing either a three- or four-tiered framework to increase student achievement; that is, schools noticed that too many students were failing multiple classes and state-mandated tests and/or that too many students were dropping out. Several schools also reported a more specific RTI focus, such as increasing student attendance, increasing literacy skills, or improving grades or test scores. Only one observed school identified decreasing the number of referrals to special education as an explicit purpose of its initiative.

Within these common purposes, multiple variations in targeted grade levels, content areas, behavior modifications, and skill development were observed. Most schools chose to focus their tiered intervention frameworks on 9th and/or 10th grades and in the content areas of English and/or mathematics. Several schools also provided explicit interventions for English language learners (ELLs) and/or implemented PBIS frameworks.

IMPLEMENTATION OF THE ESSENTIAL COMPONENTS

This section briefly describes how observed high schools implemented a system of tiered interventions, including essential components of the RTI framework. For a full description of each school's implementation, see Appendix B, "School Profiles." Additional resources for implementation are listed in Appendix C, "Supplemental Resources." For more information on scaling up evidence-based practices, including RTI, visit the State Implementation & Scaling-up of Evidence-based Practices (SISEP) Web site: www.scalingup.org.

Tier I/Core Instruction. Tier I is high-quality, evidence-based primary, or core, classroom instruction provided to *all* students. In the elementary school context, an abundance of research exists to guide the development of a strong core curriculum in most content areas, especially in reading. The development of a strong Tier I in high schools is challenging, given the paucity of research in content areas other than adolescent reading. What does evidence-based instruction look like in algebra, biology, or economics? In the absence of systematic research in these areas, practitioners are drawing guidance from research on

school improvement, alignment, and features of effective instruction and applying this knowledge across all content areas.

For instance, several visited high schools emphasized the alignment of instruction with state standards. This is a useful strategy, considering that research indicates a positive relationship between this alignment and student achievement (Kurz, Elliot, Wehby, & Smithson, 2009). In addition, content area teachers were taught how to weave research-based instructional strategies, such as scaffolding, differentiated instruction, and ongoing formative assessment, into their instruction. Finally, several schools embedded literacy strategies (e.g., use of graphic organizers, summarization strategy instruction) in all content area classrooms.

Universal Screening. Although a substantial amount of research exists indicating that screening and progress monitoring are effective practices at the elementary level (e.g., Fuchs & Fuchs, 1986; Fuchs & Fuchs, 2002; Shapiro & Ager, 1992; Thurber, Shinn, & Smolkowski, 2002; VanDerHeyden & Burns, 2005), studies examining these practices at the high school level are only now emerging. Despite the lack of empirical evidence, professional guidance and wisdom continue to emphasize the importance of ongoing data collection to overall school improvement (e.g., National Association of State Boards of Education, 2006; National High School Center, 2008; Reschly & Wood-Garnett, 2009).

Several visited schools used results from measures (such as state tests or other standardized achievement measures in reading and/or math) given at the end of eighth grade to determine the placement of students into an appropriate level of intervention at the beginning of ninth grade. These schools also administered additional testing (using standardized achievement measures or curriculum-based measures) at the beginning of ninth grade to verify student placement.

Another method schools used was the examination of "multiple failures"—that is, identifying students who failed one or more English and/or algebra classes. Although this approach differs substantially from traditional screening methods employed in elementary schools, high school completion data indicate that passing grade 9 algebra and English classes places students on a positive trajectory and that not passing these classes is significantly correlated with dropping out (Christenson et al., 2008; Jimerson, Reschly, & Hess, 2008). In lieu of more sophisticated screening measures developed specifically for high school use, this method has the potential to be effective.

Progress Monitoring. Progress monitoring varied among the observed schools. Schools used a wide range of measures, including diagnostic measures (such as the Scholastic Reading Inventory), curriculum-based measures (CBMs; such as maze passages), class grades, class quizzes and tests, and high school graduation tests (including practice or benchmark tests given throughout the year). Selection of the most appropriate measure or combination of measures for each school was dependent on (a) the school's RTI scope and focus and (b) available resources—staff members, budgeted funds, and other resources such as technology. The frequency of progress monitoring also varied due to similar

contextual factors (such as staff availability) but, overall, occurred at least twice a month in secondary and tertiary interventions using CBMs and standardized progress-monitoring measures. Diagnostic tools were typically administered less frequently (e.g., once a semester) in intensive interventions to examine general cognitive processes and inform instruction.

Tiered Interventions. All observed high schools used tiered interventions to address skill deficiencies preventing students from independently mastering the core content knowledge. Most schools implemented tiered interventions in reading, English/language arts (LA), and mathematics, and some schools provided interventions for ELLs (e.g., using explicit vocabulary-building strategies linked to authentic text reading and writing). One school was at the beginning stages of implementing an intervention for science classes.

Roughly half of the schools provided Tier II and Tier III interventions during separate class periods, commonly scheduled in lieu of electives. When interventions were scheduled in this manner, students received the intervention for an entire semester in order to receive proper course credit. However, some intervention teachers reported that if a student had mastered all intervention content before the semester was over, the teacher would gather other instructional materials and teach directly to the student's skill level until the student could be exited from the intervention in the next semester. In order to distinguish interventions from traditional tracking, several of the visited schools ensured that as students mastered the content, they were able to exit interventions during semester breaks.

Other schools provided tiered interventions through mechanisms already built into the master schedule, such as co-lab classes, seminars, or other academic supports that were available to students throughout the day.

Tier II interventions differed from Tier III interventions in (a) the number of students receiving instruction at one time and (b) the instructional focus. Tier II was frequently provided through large-group instruction or through smaller groups within a larger intervention classroom; a specialized teacher usually provided Tier III interventions to small groups or individual students. Tier III interventions observed at various schools addressed more basic skills than the Tier II interventions. For instance, a Tier III reading intervention focused predominantly on phonics and decoding, while a Tier II intervention in English/LA concentrated on vocabulary, comprehension, and study skills. Observed Tier III interventions also frequently involved the use of published intervention programs.

Data-Based Decision Making. Data collected through screening and progress monitoring were used initially to determine student placement within the schools' tiered instructional system (e.g., Tier I only, Tier I plus Tier II). Later, they were used to determine whether students needed to be moved to a more intense level of intervention or withdrawn from the intervention altogether. This decision making typically took place in data meetings with a range of stakeholders present, including teachers, instructional coaches, and administrators.

Several schools asked students to participate in problem-solving meetings and solicited students' input in intervention design. This direct student participation can increase motivation, leading to better intervention design and greater commitment to intervention implementation (Reschly & Wood-Garnett, 2009). Such student participation illustrates one key difference between implementation of RTI at the elementary school level and that at the high school level.

In addition, some schools examined progress-monitoring data to differentiate instruction within the intervention class itself. For example, one algebra intervention class included approximately 30 students who all demonstrated a need for intervention. These students were further divided into smaller groups, based on how quickly they mastered the curriculum. One group of students moved to a new chapter while another group reviewed a previously taught skill, and yet another group received a teacher-generated CBM to check for mastery of skills. These groups were fluid, constantly changing on the basis of progress-monitoring data.

FACTORS THAT SUPPORT IMPLEMENTATION OF THE ESSENTIAL COMPONENTS

During interviews and site visits, several common factors emerged that support implementation of the essential components of RTI or a system of tiered interventions. These factors included leadership, intervention providers, professional development and coaching, and evaluation. The following paragraphs briefly discuss how these factors supported RTI implementation. For more information on implementation, visit the National Implementation Research Network Web site: www.fpg.unc.edu/~nirn.

Leadership. Leadership teams at high schools could include a variety of stakeholders, including administrative-level personnel (principals, assistant principals, disciplinary deans, etc.), content-level leads (department chairs, in addition to coaches and specialists), school psychologists, social workers, and special and general education teachers. The purpose of a high school's RTI model often drives the membership of leadership teams,

PBIS Implementation

Several of the observed schools implemented a PBIS framework, in addition to academic supports and interventions. These schools created a positive learning environment by posting behavioral expectations throughout the school and explicitly teaching these strategies to students. For Tier I instruction, one school concentrated on a few key schoolwide rules highlighted at monthly school assemblies. Office referrals were often used in the screening process—students with high numbers of office referrals were provided with individualized interventions. Students whose behavior improved (as measured by overall number of referrals and by grades) were rewarded with enrollment in a study hall period that allowed for peer interaction and the use of technology.

which typically include members of stakeholder groups that support that purpose. For example, a school that identifies dropout prevention as a key outcome of its RTI implementation should include on its leadership team individuals directly involved with students at risk for dropout.

Leadership teams at the observed high schools were tasked with duties such as creating staff consensus, delivering professional development, implementing evaluation procedures, allocating resources, making data-based decisions, and creating sustainable processes. In addition, leadership teams promoted the potential of the RTI framework as an "umbrella" for coordinating, managing, and evaluating other school-level initiatives.

Intervention Providers. Regardless of which teachers implement RTI, schools may need to devote time and resources to obtaining staff consensus for the overall framework and to teaching effective collaboration strategies among teachers. Teacher preparation is crucial to the success of any framework's implementation (Reschly & Wood-Garnett, 2009).

The staff members who implemented the tiered interventions varied considerably among the observed schools. This variation was due to the focus of each school's specific framework and contextual factors, including available resources and the master schedule. Because most schools targeted their system of tiered interventions toward 9th and/or 10th grade, the 9th and 10th grade content teachers primarily implemented tiered interventions. Interventions typically did not occur within the general education classrooms; rather, interventionists or specialists provided interventions outside of regular core instruction duties. In two schools, however, general education teachers provided the interventions through the use of a seminar period. Typically, the provider of the intervention was responsible for collecting progress-monitoring data as well.

Professional Development/Coaching. Research supports the need for authentic, embedded, and sustained professional development (PD), including teacher coaching and modeling, as a way to increase students' overall progress (Vaughn et al., 2007). Therefore, district and school administrators should consider the type of support teachers need after their initial introduction to RTI to implement tiered interventions with success.

A wide range of PD occurred at the observed high schools. Most schools conducted PD specifically on the RTI framework, as well as on research-based instructional strategies and specific intervention strategies for each tier of support. This PD was offered to the entire staff or to the teachers specifically involved in the tiered instructional delivery. Coaching and modeling of instructional strategies was common, typically provided to teachers by a content or behavior specialist.

Additionally, some observed schools received assistance from universities, including university-sponsored PD sessions. Other schools received PD from their state education agency or regional PD organization.

Evaluation. Collected data are useful not only for making student-level decisions, but also as an important source of program-level information. By linking these data to the purpose of the RTI framework and by aggregating data across participating students over time, school officials can make decisions about what works, for whom, and under what circumstances. For instance, in the earlier example of the school focusing on dropout prevention, collecting and charting data (e.g., line graphs with each data point representing a group average) on graduation and attendance for participating students would provide a useful heuristic for identifying trends and making informed decisions.

At the visited sites, staff members collected data to evaluate the effectiveness of their schools' tiered intervention implementation and the programs and procedures that accompanied that implementation.

COMMON IMPLEMENTATION CHALLENGES

The eight HSTII high schools noted several common challenges: staff capacity, scheduling, resources, and measuring fidelity of implementation.

Staff Capacity. Building staff capacity is a multifaceted task that involves helping teachers to recognize the need for change and to embrace RTI as an effective framework for all students. Building this capacity includes developing teachers' knowledge of RTI and research-based instructional strategies that enhance the effectiveness of Tier I, as well as supporting their implementation attempts. School-level systems and supports are critical in this respect. Providing teachers with time to problem-solve, consult with colleagues, and provide or receive structured training and coaching is important. PD on the overall framework, as well as the individual components and evidence-based practices, must be ongoing.

Almost all visited schools reported struggling with building adequate staff capacity. At least one participant pointed out that RTI, at its most basic level, involves ongoing learning: to use information to gain insight, to improve and evaluate practice, and to identify areas in need of additional planning and work. Administrators and teachers at several schools commented that follow-up training on the overall RTI framework was beneficial in terms of building and maintaining adequate staff capacity.

Scheduling. Schoolwide (or departmentwide) scheduling of instruction and intervention are common challenges at the elementary school level, and it is not surprising that secondary schools also struggle, given the far greater complexity that characterizes a typical school day in high schools. These complexities may not be of magnitude only; they may differ qualitatively. In other words, "solutions" at the secondary level may involve more than merely scaling up what worked for elementary schools facing similar difficulties.

Specifically, visited schools noted a lack of time for analyzing and discussing student data and for planning instruction and intervention. Schools also recognized the complexity of creating flexible schedules to allow for student movement across tiers. The key, according

to several of the visited sites, was to acknowledge these challenges and to be creative in adapting the master schedule to meet student and staff needs. In addition, observed schools addressed scheduling challenges by identifying the problem areas in their master schedules; developing and implementing modified schedules; monitoring their impact; and refining, revising, or redeveloping a new schedule, as necessary.

Resources. Although resources may first appear limited, schools can often find creative ways to leverage resources for maximum educational impact. For some schools, this leveraging may include making decisions about how to allocate funds—investing more money in ongoing staff development, for instance, than in supplies. Existing resources already committed to other initiatives (e.g., Advancement via Individual Determination [AVID] and programs geared toward reaching overage students) can often be integrated into a school's RTI model, reducing the need to add work to what is already in place. This integration may be particularly important, given the large number of initiatives on many campuses. Overall, implementing RTI provides a unique opportunity for schools to effectively allocate and integrate resources and develop a systematic method for providing the most effective instruction for all students.

Despite the use of existing resources, all of the observed schools reported challenges with accessing appropriate and adequate resources (assessment, intervention, and fiscal).

Fidelity. Not only is there a lack of tools available for use at the high school level to assess fidelity (adherence to the implementation of all aspects of RTI as intended), but also the domain-specific knowledge required of the assessor is significant and poses an additional challenge. The coordination of the numerous components involved in RTI implementation is especially complex at the high school level and thus lends itself to lower fidelity of implementation, making the need for careful observation of instruction and communication among staff members nonnegotiable.

All observed high schools identified the measurement of fidelity of implementation as a challenge. One principal acknowledged his reliance on observational data and formative assessment data to measure fidelity in lieu of more rigorous fidelity assessment methods. Principals at schools in the early stages of implementation noted that the demands of beginning implementation often were so great that monitoring and evaluating fidelity was a goal for the coming years.

The remainder of this paper will examine some of the factors that make RTI implementation in high schools particularly complex.

HIGH SCHOOL CONTEXTUAL FACTORS THAT AFFECT TIERED INTERVENTION IMPLEMENTATION

Through our conversations with practitioners during phone interviews and site visits, several factors specific to high schools emerged: focus, school culture, instructional organization, staff roles, student/family involvement, graduation requirements, and intervention resources. These issues all affect one other; for example, staff roles and structure affect the focus of a school's implementation of tiered interventions. Table 1 describes the unique challenge each theme/issue presents at the high school level and offers several questions that high schools might consider regarding each issue. These considerations represent a sample of questions that schools, districts, and states may choose to ask themselves prior to or during RTI implementation.

Table 1: Contextual Factors Particular to Tiered Interventions at the High School Level

High school contextual factors	Considerations
Focus: The design and implementation of all the essential components are dependent on a school's focus for tiered interventions. Tiered interventions at the high school level may not always include all students or all content areas, as is often the case in elementary RTI frameworks. Each school needs to determine its purpose and scope of tiered interventions, keeping in mind that no standard application of the framework exists at the high school level. Schools may already have in place some initiatives that support tiered intervention implementation.	• What will be the purpose and scope of tiered interventions in our school? • How will existing initiatives fit into the tiered interventions framework? • How will we align current special education and instructional support practices with tiered interventions? • Will other initiatives hinder the implementation of tiered interventions? • For schools using the academy structure: How will our academies affect the focus of the tiered interventions framework?
Culture: School culture plays an integral role in the adoption and implementation of any new initiative. A school's culture provides implicit (and sometimes explicit) guidance about beliefs, behaviors, and what is acceptable within the organization. Adopting a tiered framework in high school may require a significant shift in a school's culture. For example, staff members may need to collaborate in new ways, examine data together regularly and think about implications for instructional practice, and agree that the success of all students is the responsibility of all staff members.	• In what ways will current practices, beliefs, and behaviors align with the goals and purposes for our tiered intervention framework? • Where did the motivation for adopting the framework originate, and how might that affect the buy-in of staff? • How will current prevention efforts map onto a tiered framework? • What changes might be required for staff to collaborate, examine student data, and act on what they learn from those data? • What changes might be required to ensure that the needs of all students are addressed?

High school contextual factors	Considerations
Instructional organization: The instructional organization of high school can create challenges and require flexibility in the scheduling and delivery of interventions for students and collaborative time for teachers. Single-period and block (extended or double-period) schedules enable different strategies for delivering tiered interventions within a classroom or in concurrent classrooms. The master schedule, as well as the school calendar, should be addressed when implementing tiered interventions.	• How will the staff create and/or adapt a master schedule that allows – student access to tiered supports, – time for teachers to collaborate, – time for teachers to discuss data, and – movement between tiers for students? • How will single class periods, block scheduling, or a combination of the two best support our focus and the delivery of tiered interventions? • Will any obstacles arise, given our current infrastructure? • Will we provide additional instructional interventions through extended days, Saturdays, and summer programs? • How will we support teachers in designating time to collaboratively make data-based decisions?
Staff roles: High school teachers often view themselves as teachers of content and not necessarily equipped to teach struggling students, students with disabilities, and/or English language learners (ELLs). Small schools may have less access to instructional specialists. Determining which staff member is best qualified to deliver the additional interventions and how to train teachers to deliver high-quality instruction in Tiers I, II, and III depends on a school's available staff and its purpose for implementing tiered interventions.	• Who will provide the additional interventions? How will we support this new role? • How will special education, ELL, and behavioral specialists support the implementation of tiered interventions? • If tiered interventions are implemented in more than one content area, how will we support content teachers in becoming more than "teachers of content"? • What supports, if any, will teachers need to deliver Tier I, II, or III instruction?
Student involvement: With assistance, high school students could help select appropriate interventions and monitor their progress, resulting in students feeling more involved in their educational experience.	• How will students be involved in the implementation of tiered interventions? • How will students be involved in the monitoring of their progress? • What role will students play in determining movement between tiers? • How will students be informed about the tiered interventions framework?

High school contextual factors	Considerations
Graduation requirements: A goal of high schools is for students to graduate and successfully pursue postsecondary education and career opportunities. How interventions are credited on transcripts is a unique concern at the high school level.	• What impact will additional tiered interventions have on graduation requirements? • What credit will students receive for the intervention classes? • How will the tiered interventions framework support career and postsecondary education pathways?
Stakeholder engagement: High schools frequently engage a variety of external stakeholders, including parents and family members, community and business partners, tutors, and volunteers, in supporting instructional and extracurricular activities. Some students also receive "wraparound" services from social service agencies. These various stakeholders can provide valuable support for a school's tiered interventions framework.	• How will we involve parents and stakeholders in the design and implementation of tiered interventions? • How will we ensure that parents and appropriate stakeholders are engaged early enough to ensure buy-in for the tiered interventions framework? • Will in-school and wraparound services for students with disabilities be aligned and coordinated? • What types of training and support will be needed to engage and prepare parents and stakeholders?
Implementation and alignment: With the numerous other initiatives and activities being implemented simultaneously in many high schools, it is critical to align efforts that can support and accelerate the implementation of tiered interventions. A detailed scaling-up plan may be useful for incrementally expanding the focus and scope of the framework.	• What current or planned instructional and student support initiatives could be integrated to support the focus of tiered interventions? • How could these efforts be aligned with the tiered interventions, especially in Tiers II and III? • What options will exist for scaling up the implementation of tiered interventions over time to broaden the number of students, content areas, and/or interventions? • How could existing human and fiscal resources be leveraged to facilitate the implementation and scaling up of tiered interventions? • How will district departments (Curriculum and Instruction, Special Education, Title I, etc.) be involved in the implementation of tiered interventions at the school level?

High school contextual factors	Considerations
Instruction and assessment resources: A paucity of research on the efficacy of core, supplemental, and intensive instruction with struggling learners in grades 9–12 exists. Similarly, few measures appropriate for screening or progress monitoring purposes have been validated for use with high school students.	• How will school leaders and teachers measure the quality of Tier I instruction? • How will school leaders select interventions? • What data will support the use of particular interventions in the high school? • What evidence will inform the selection of data sources for screening and progress monitoring? • How will we determine whether selected measures are reliable and valid? • How will educational technology be used in assessment or interventions?

CONCLUSION AND NEXT STEPS

This document provides brief snapshots of how eight schools across the country implemented tiered interventions, including the essential components of RTI. It is important to note that each of the schools viewed its implementation as a work in progress. Through visits with the schools and conversations with experts, it became clear that implementing tiered interventions at the high school level involves more than the "cutting and pasting" of the essential components of RTI from elementary to high schools. Although the essential components and guiding principles of RTI are the same at the elementary and secondary levels, high schools are complex entities that present a unique set of contextual factors that affect why and how the framework is applied. These contextual factors, such as focus, instructional organization, and culture, varied greatly among the eight schools; therefore, each school's tiered intervention implementation differed to such an extent that any in-depth synthesis might lead to inaccurate conclusions.

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The HSTII team will host a series of webinars focusing on particular components and aspects of tiered intervention implementation at the high school level. The webinars will be open to the public, and archives will be posted on the Secondary Schools page of the National Center on Response to Intervention Web site (www.rti4success.org) and the Web sites of the Center on Instruction (www.centeroninstruction.org) and the National High School Center (www.betterhighschools.org).

As the implementation of RTI and tiered interventions in high schools moves forward, teachers, schools, and districts will need assistance in identifying evidence-based instructional practices, curricula, and assessment tools. To accomplish this goal, all stakeholders must collaborate to increase teacher preservice training on effective instructional strategies within all content areas, engage in research that examines the effectiveness of various RTI frameworks in high schools, and establish model demonstration sites.

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APPENDIX A: OUR APPROACH

To further the knowledge base and understanding of tiered intervention frameworks at the high school level, the High School Tiered Interventions Initiative (HSTII) team investigated emerging and current practices and tapped the knowledge of leading researchers and practitioners. To increase the understanding of how Response to Intervention (RTI) is being implemented at the campus level, the HSTII team asked the network of Regional Comprehensive Centers (RCCs) and Regional Resource Centers (RRCs), as well as select state education agency personnel, to nominate high schools that were implementing some form of tiered interventions.

Twenty schools, of the 51 identified and contacted, indicated their willingness to participate in 45-minute phone interviews with HSTII team members. This sample included schools that had been implementing RTI for varying durations (1 to 8-plus years); using tiered interventions in academics, behavior, or both; and implementing the standard treatment protocol, problem-solving, or a hybrid of models to select and design interventions. The sample also included schools with variations in demographics (suburban/urban/rural, percentage of students served in the National School Lunch Program [free and reduced price lunch], percentage of English language learners [ELLs], etc.), student population size, and structural elements, such as schedule. All interviewed schools were given the opportunity to review and provide feedback on written summaries of the interviews; the HSTII team modified the interviews, based on the schools' feedback. On the basis of the information gleaned from those conversations, the HSTII team selected eight schools for site visits to learn more about the schools' frameworks and to gather any RTI-related artifacts.

Next, the HSTII team convened a Technical Advisory Group (TAG) to assist in deepening the team's understanding of tiered interventions at the high school level. The TAG consists of practitioners and leading researchers in a variety of content areas. During a face-to-face meeting, the TAG guided the selection of sites and development of protocols for site visits and provided input on HSTII deliverables.

The following is a complete list of TAG members and their areas of expertise:

- **Joy Eichelberger,** RTI state lead and director of intervention services at the Pennsylvania Training and Technical Assistance Network in the Pennsylvania Department of Education, provides expertise in supporting schools from the state level.

- **Anne Foegen,** professor at Iowa State University, provides expertise in special education, specifically using progress monitoring in mathematics.

- **Evelyn Johnson,** professor at Boise State University, provides expertise from her experience in numerous policy and research efforts at the state and national levels,

including accountability for students with disabilities in high-stakes assessment systems, RTI, and the identification of students with learning disabilities.

- **Pamela Jones,** high school principal, provides the perspective of a school principal implementing tiered interventions.

- **Douglas Marston,** administrator of research, evaluation, and assessment for special education in the Minneapolis Public School District and member of the National Advisory Committee for the National Center on RTI, provides expertise at the district level on progress monitoring.

- **George Sugai,** professor at University of Connecticut and co-director of the Center on Positive Behavioral Interventions and Supports, provides expertise on the potential implementation of tiered behavioral interventions.

APPENDIX B: SCHOOL PROFILES

The following tables reflect the observations of HSTII team members during site visits to eight high schools across the country. The tables include general school information and illustrate how each school attempted to implement the essential components of Response to Intervention (RTI).

Table 1: School A

General school information	• Western state • Urban area • 3,400 students • 65% Hispanic/Latino, 18% African American, 9% Filipino, 3% Asian, 3% Pacific Islander, 2% White; 74% socioeconomically disadvantaged; 28% English language learners (ELLs); 8% students with disabilities • Six-period day (55-minute periods)
Framework overview	• Three tiers in the areas of English/language arts (LA), algebra, and some science classes • Hybrid of problem solving and standard protocol • Participation in Advancement via Individual Determination (AVID) an important aspect of core instruction • Small learning communities to facilitate connections among students and among students and teachers
Purpose and scope of framework	• To curb trend of many students failing multiple classes • To increase all student achievement • To increase numbers of students enrolled in the sequence of classes required for enrollment at local state universities • To improve the passing rate for students taking the state exit exam for the first time • To create systemic, schoolwide approach to RTI components already being implemented
Length of implementation	Was in the 1st year of implementation
Screening	• Measures: Gray Oral Reading Tests (GORT; given at the end of eighth grade), class grades, state standards test scores, attendance data • Failure of at least one class • Failure to pass the state exit exam on its the first administration • All screening data used to determine who qualifies for Tiers II and III

Tier I/core instruction	• Explicit, research-based instruction provided to *all* students • Ongoing formative assessment used to monitor student progress; common assessments developed in mathematics and common writing prompts were in development for English/LA • All instruction aligned with state standards • AVID strategies incorporated into all core classes • Whiteboards commonly used in mathematics to engage all students and check for correctness
Tiered interventions	**Tier II** • Interventions in English/LA and algebra • Interventions provided during a class period to a group of students on the same reading level (fourth to eighth grade) or mathematics level • Algebra 1 divided into two yearlong courses (algebra A/B and C/D) • Students in two algebra 1 sections who struggle after the first 6 weeks reassigned/placed together in one section that provides different supports • Interventionists serve as classroom teachers and support persons • Tier II interventions one semester long • Other interventions: tutoring, reteaching, Saturday school • Differentiated instruction for each student within intervention; observed by HSTII staff in one algebra 1 class • Explicit and systematic instruction • After-school reteaching opportunities provided by science teachers for students who struggle with particular units **Tier III** • Lindamood-Bell Learning provided to students reading at third-grade level or below • Students with multiple behavior problems (referral, suspensions) placed in a self-contained classroom • No Tier III for mathematics at the time of observation • Credit recovery was available in evening high school twice a week for 2.5 hours per session
Progress monitoring	• Common assessments given in core mathematics every 6 weeks • Common writing prompts in development for English/LA at time of observation • Tier II progress monitoring in algebra at least once a week through teacher-created probe containing mathematics problems linked to specific standards taught

Progress monitoring (continued)	• Tier II progress monitoring in English/LA • Tier III reading monitored with GORT, Peabody Picture Vocabulary Test (PPVT), Woodcock-Johnson Word Attack subtest, Wide Range Achievement Test (WRAT); daily reading data recorded by the teacher during instruction
Data-based decision making	• Data reviewed during department and small learning community (SLC) monthly meetings; modifications made to interventions to ensure that instruction was at appropriate levels for students • Data used by teachers to differentiate instruction within the intervention • Two algebra teachers monitored progress during first 6 weeks of the quarter to reassign students according to their level of need; students in those reassignments for the remainder of the year • Data examined at the end of the semester to determine whether the student exits or enters intervention

Table 2: School B

General school information	• Southeastern state • Metropolitan area • 2,200 students • 70% African American, 24% White; 1%ELL; 52% FRL • 6-period day
Framework overview	• State-designated four-tier achievement pyramid; problem-solving approach • Effective Behavioral and Instructional Supports (EBIS) and collaborative teaching
Purpose and scope of framework	• To reduce number of ninth-graders struggling academically and number of referrals for special education • To improve overall school achievement
Length of implementation	Was in the 2nd year of implementation, with 1 year of the comprehensive systematic approach with a designated EBIS supervisor (2007–2008)
Screening	• Review of student grades during the summer by administrators • Students failing two or more classes (checked every 6 weeks) identified for the EBIS process
Tier I/core instruction	• Standards-based instruction in the general education classroom for 80% of students • Tier I interventions considered general "good practice," and teachers encouraged to develop their own interventions
Tiered interventions	**Tier II (EBIS)** • Provided in addition to general education instruction • In collaborative teaching classes delivered by a content teacher and support person; included mathematics test preparation • EBIS meeting with student and other stakeholders when student entered Tier II; student helped design the intervention; stakeholders met every 20–45 days to look at data and discuss progress **Tier III (Student Support Team [SST] special education comprehensive evaluation referral)** • Provided to a small group of students or individual students • Provided in addition to Tiers I and II • Could occur anytime during the school day • Examples: working on a mathematics concept with several students after school, reward program for attendance

Tiered interventions (continued)	**Tier IV (special education)** • Referred for special education after "demonstrating significant issues in Tier III" • Pull-out instruction provided • Targeted, specialized instruction provided by collaborative teachers
Progress monitoring	• Tier I—every 4 weeks • Tier II—every 2–3 weeks • Tier III—every week • Conducted through weekly tests and quizzes, district benchmarks, end-of-course tests, end-of-course grades, high school graduation test, and short probes from Intervention Central
Data-based decision making	• Data shared within subject areas where teams do item analysis on benchmark tests • Data system allowing EBIS coach to see who is failing and may need Tier II; every 6 weeks

Table 3: School C

General school information	• Midwestern state • Suburban area • 2,000 students • 65% White, 3% Black, 22% Hispanic, 7% Asian/Pacific Islander, < 1% American Indian, 3% Multiracial/Ethnic; 11.7% ELL; 15.3% FRL • A/B block schedule with a seminar block every other day
Framework overview	• Three tiers for reading, mathematics, and science instruction, and behavioral interventions • A/B block schedule with an "academic seminar" for 90 minutes every other day for students to receive support without missing classes • State-mandated RTI • RTI seen as an essential component of school's framework; includes professional learning teams, social/emotional learning, teacher leadership, and continual quality improvement • Teachers noted "synergy" between current practice and RTI language
Purpose and scope of framework	• RTI mandated when the school was struggling to focus on performance • District goals: to reduce Ds and Fs, increase attendance, increase test scores
Length of implementation	Was in the 8th year of implementation of the school framework and the 3rd year of focusing on RTI
Screening	• Freshman core team (case manager, psychologist, counselor, teachers) met once per week; data mostly anecdotal ("stories from the classroom") • Students identified as needing additional interventions/supports on the basis of grades • Used uniform screening measure and was developing a procedure and process for early intervention teams at the time of observation • Screening process with multidisciplinary core teams had been in place since before RTI mandate—referrals passed from the Early Intervention Team (EIT) to screening team (dean, social worker, psychologist, nurse; a subset of the EIT)
Tier I/core instruction	• No specific focus on core instruction at time of observation • Academic seminars for which content teachers referred students to receive specific support

Tiered interventions	**Tier II (EIT)**
	• Conceptualized in groups—looking at the demographics for need, conducting early intervention, and defining and developing interventions for groups in need
	• Based on teacher referral
	• Academic Support Center (a specific academic seminar) for "students who don't know how to do school," including school expectations and preparedness
	• Language Arts Department and Mathematics Department co-taught with special education—based on composite scores from the EXPLORE Assessment in eighth grade
	  – Districtwide, a cut score of 12 or below led to additional student support within the core curriculum block, an additional 90-minute block that was half-reading and half-mathematics; students received instruction in both subjects, regardless of whether they tested well in one subject and not in the other
	  – Students who scored below a cut score of 12 took a science skills class for one semester instead of biology; because these students were struggling readers and would probably have difficulty in biology, they could take the skills class for content recovery
	
	Tier III (Professional Learning Team [PLT])
	• Conceptualized at an individual level—managed by special education department even if students were in general education
	• Behavior Disorder (BD) Center for issues with behavior and schoolwork; students placed there by special education for a specific content area or a "bad situation in a block"; operated during every block; students could leave if they demonstrated improvement; students who read at a second-, third-, fourth-, or fifth-grade level; accounted for 10% (~40 students) of each grade level at the school
	• Included Academic Achievement Seminar

Progress monitoring	• Conducted by teachers; varied by course, included formative/summative assessments and weekly grade data
	• Teams worked with data from:
	  – Screening
	  – Tier I/core instruction (for freshman)
	  – EIT
	  – PLT (consisting of counselors)

Progress monitoring (continued)	• Types of data used by specific teams:
	  – Tier I/core instruction: anecdotal observations of students
	  – EIT: formative/summative assessments, grades, disciplinary data, attendance records, anecdotal observations of students
	  – PLT: formative/summative assessments, grades, teacher recommendations, and AIMSweb for mathematics
	• No team followed each strand the whole way through

Data-based decision making	• Team met to get data report; majority of data sharing at the PLT level—data sharing within a core group
	• Most of the movement to higher tiers based on Fs and incomplete work; students returned to their regular seminars if they were completing their work
	• Teams used benchmarks provided at least quarterly to determine whether intervention was working
	• Data used:
	  – Formative and summative classroom assessments based on content area data
	  – ACT's Educational Planning and Assessment System (EPAS)
	  – Multiple-choice tests at the end of each unit (could assign skills and standards to each question)
	  – AIMSweb (for baseline data)

Table 4: School D

General school information	• Midwestern state • Suburban area • 1,100 students • 95% White; 1% ELL; 10%–15% FRL • 4 x 4 modified block schedule
Framework overview	• Three tiers focused on English, mathematics, behavior interventions, and dropout prevention
Purpose and scope of framework	• District requirement with professional development and materials available from the district • Extensive internal development of protocols and data management procedures • Goal to educate *all* students • Need for framework to provide support to at-risk students
Length of implementation	Was in 7th year of implementation
Screening	• Mostly with incoming students, additional data collected for screening if specific issues arose with these students • Measures of Academic Progress (MAP) in fall, winter, and spring for students in Tier II or III academic programming • Middle school meetings in spring to identify students needing additional academic and/or behavioral support • Truancy specialist identified incoming students with red flags • Review of cumulative file • Interviews with parents, teachers, and students • State tests, curriculum-based measures (CBMs), observations
Tier I/core instruction	• Instruction in Tier I classrooms by content teachers • PBIS: behavioral expectations defined and taught to all students through daily advisement
Tiered interventions	**Tier II** • RTI English 9 and 10 (team-taught by curriculum teacher and intervention specialist), Pre-Algebra/Mathematics Lab, Science Topics • Check and Connect program (intervention specialist) **Tier III** • Any individual academic interventions (pull-out) and special education • Individualized behavior support plans (behavior support paraprofessional)

Progress monitoring	• Integrity checks for progress monitoring during data review meetings • Interventionist at the data review meeting (helped with problem solving) • Academic data points: CBMs (oral reading fluency, MAZE, written expression, math applications) and MAP testing for at-risk students • Momentary time sampling (behavior observations) • Tools selected using recommendations from education district

Data-based decision making	• Data team:
	  – Student Assistance Team: review data from individual academic and behavioral interventions, plus Check and Connect, one time per month; included an instructional coach (from the education district to assist with more difficult cases), a school psychologist, the assistant principal, school counselors, a truancy specialist (from the district), a paraprofessional, a Check and Connect interventionist
	  – RTI English 9 and 10 Team: review data for individual and class-wide interventions two times per term; included RTI 9 and 10 curriculum teacher and intervention specialists, an instructional coach (from the education district), a school psychologist, the assistant principal, school counselors
	  – Pre-Algebra/Mathematics Lab Team: review data for individual and class-wide interventions two times per term; included Pre-Algebra curriculum teacher and mathematics lab instructor, a school psychologist, the assistant principal, school counselors
	  – All teams used data to problem solve the progress of each "flagged" student
	• Use AIMSweb to manage academic data; use SWIS to manage discipline referral behavior data; use excel to manage other behavioral data specific to interventions

Table 5: School E

General school information	• Southern state • Rural area • 450 students • 33% White, 67% Black; > 1% ELL; 70% FRL • 7-period day
Framework overview	• Three tiers in reading • Mainly focused on 9th- and 10th-graders, but overage students in state program (Press Forward) also participated
Purpose and scope of framework	• Part of a state pilot program that focused on the district's literacy instruction to struggling students (one feeder middle school part of the district pilot) • Assessment of other middle school students (not in the pilot) conducted by literacy coach
Length of implementation	Was in 2nd year of implementation
Screening	• Fall, winter, and spring with all grades • Scholastic Reading Inventory (SRI) and Maze scores from the end of eighth grade • Specific scores on Maze and SRI identified students for additional testing (iSTEEP oral fluency measure)
Tier I/core instruction	• Core classes in the morning in all subject areas for all students • Emphasis on embedding literacy strategies in all content areas
Tiered interventions	**Tier II for 9th-graders** • Reading Voyager • One teacher for each intervention class of 12–15 students **Tier II for 10th-graders** • Reading Advantage and Six-Minute Solutions, used to supplement Reading Voyager **Tier III** • Reading interventions (including Read as Detective, Six-Minute Solutions, Pleasurable Reading, and Power Tools for Success) in small groups, taught by former special education teacher • Interventions scheduled during electives in the afternoon

Progress monitoring	• Quick check-in with intervention teachers every Tuesday and Thursday • Weekly oral reading fluency measures from Six-Minute Solutions and monthly measures from Maze (Tiers II and III)
Data-based decision making	• Used data from end-of-course tests in content areas, SRI, and state assessments; was developing potential use of iPLAN! data at time of observation • Tier II teacher shared class-level data with students • Core teachers given data reports at the beginning of the year from SRI and Maze • No formal system for moving students in and out of tiers at the time of observation, but students were informally monitored

Table 6: School F

General school information	- Western state - Suburban area 810 students 69% Latino, 28% White, 1% Black, 1% American Indian, 1% Asian; 46% ELL; 62% FRL 6-period day
Framework overview	- Three-tiered model focusing on literacy for ninth-graders - The University of Kansas' Content Literacy Continuum (CLC) model
Purpose and scope of framework	- Influenced by principal's previous experience with using Strategic Instruction Model in middle school - Principal convened staff development team to find a new model that did not focus on just English/LA to address "dismal" test scores - Tier I provided to all students; ninth-graders targeted for Tiers II and III
Length of implementation	Was in 5th year of implementation
Screening	- State assessment scores and Gates-MacGinitie test to determine which ninth-graders should be enrolled in Tier II for reading; additional pretesting (e.g., oral word lists) during the first 2–3 weeks of Tier III to ensure that students are placed appropriately - State assessment scores and a public state university test used for mathematics; students scoring at basic and below basic on the state assessment typically assigned to receive algebra intervention
Tier I/core instruction	- Content area teachers in grades 9–12 used routines and strategies from the CLC model in all classes, including physical education, building construction, drama, and graphic arts - English and mathematics instruction provided in Tier I for all students, including those in Tier II and Tier III
Tiered interventions	**Tiers II and III** - During elective periods **Tier II** - Daily meeting of academic strategies II (literacy course) and algebra intervention for one period for a year - Typically for 9th-graders; some 10th-graders enrolled if it was felt "that they [need] another year"

Tiered interventions (continued)	**Tier III** • Students reading below the fourth-grade level on the Gates-MacGinitie test enrolled in academic strategies I • Corrective Reading curriculum • Taught by paraprofessionals in small groups of 3–5 students while a special education teacher monitored implementation; instruction occurred in the special education classroom • No Tier III intervention for mathematics
Progress monitoring	• Student data monitored by students' teachers and not shared with other teachers • Data occasionally shared with the site literacy team as a way to discuss challenges or pacing • Data previously shared with the entire staff as a way to "highlight" what was occurring in Tier II, "as it was new"; this practice had been discontinued at the time of observation

Data-based decision making	• Mathematics, Science, and Social Studies departments were working to create unit organizers for every course
	• Monthly, 60-minute site literacy team meeting topics:
	  – Student interview data (of more than 36 students) regarding the use of the strategies (e.g., how teachers made learning exciting and challenging, whether students felt that particular routines or strategies had helped)
	  – Anecdotal data regarding how the routines and strategies were being implemented in classrooms shared by content and intervention teachers
	  – Intervention plans for students who mastered content on the tests but failed classes due to not turning in assignments

Table 7: School G

General school information	• Midwestern state • Rural area • 1,700 students • 45% White, 28% Black, 9% Hispanic, 19% other; 3% ELL; 39% FRL; 13% special education; 33% student mobility; 10% staff mobility • Alternating block schedule (four classes on one block, three classes on the other, with 90-minute seminar) • Freshmen academy; three other academies for grades 10–12
Framework overview	• Three tiers in English/LA and mathematics for grades 9–12 • A pilot site for a state supported framework, with funds provided for a literacy coach
Purpose and scope of framework	• To influence how other schools implement state recommended framework • Tiered support for mathematics, English/LA, ELLs, and students with individual education plans (IEPs) offered during seminar time and Read180 is provided in lieu of an elective
Length of implementation	Was in 5th year of implementing mathematics intervention during seminar time; was in 2nd year of implementing state mandate supports
Screening	• State formative assessments • Holt McDougal • Gates-MacGinitie Reading Tests • ACT's PLAN and EXPLORE
Tier I/core instruction	• Same core curriculum classes for all ninth-graders • No specific emphasis on core instruction
Tiered interventions	• Literacy coach determined supports for each student based further diagnostic testing • Organized around seminars, some specific for ELLs and students with IEPs; additional supports provided on an as-needed basis for any content area during seminar time **Tier II** • English/LA: approximately 20 minutes of either Read for Me (a variation of Sustained Silent Reading taught by any content area teacher), or multisyllabic work curriculum or fluency curriculum or comprehension practice (by "literacy-friendly" teachers) during seminars. • Mathematics: almost schoolwide lesson plan during first portion of seminar; all content area teachers taught; mathematics department provided support (video of instruction with tips) and explicit activities

Tiered interventions (continued)	**Tier III** • English/LA: Read 180 class (taught by special education teachers and/or English teachers) in lieu of an elective; Wilson Reading class taught by special education • Mathematics – Focused seminar provided foundational supports (taught by mathematics teachers) – Additional supports based on state standards during the remainder of seminar time • Two to three formative tests every 9 weeks
Progress monitoring	• By individual teachers • Students graphed their progress in Tier III English/LA support (built in to Tier III support with Read 180) – SRI given three to four times a year • No emphasis on schoolwide, systematic progress monitoring • At time of observation, discussions on use of Holt McDougal benchmark tests in future • SRI used three to four times a year for progress monitoring • Formative tests were given in September and December
Data-based decision making	• Literacy coach shared general data from formative tests with entire staff; teachers were shown the data from their classes (in an Excel spreadsheet with categories of indicators and scores by student) • Literacy coach worked with teachers and students to establish a plan of action • Teachers called in individual students during seminar for extra instruction if minor difficulties arose • Mostly one-on-one discussions between teachers and literacy coach to review data; coach needed permission from teacher to use his or her planning time • Freshman academy team meetings held

Table 8: School H

General school information	• Northeastern state • Suburban area • 565 students • 89% White, 6% Black, 3% Latino, 2% Asian; 1% ELL; 33% FRL • Hybrid block schedule (9 periods); science labs, foreign language, and public speaking blocked on some days
Framework overview	• Elements of tiered interventions in academics and behavior • District-mandated PBIS and academic interventions
Purpose and scope of framework	• Academic interventions offered to 9th- through 12th-graders in each content area and reading • Some Tier II interventions expanded from what began as an alternative education program to serve a larger population • Tiers I and III PBIS for all grades
Length of implementation	Was in 3rd year of implementing academic interventions and 5th year of PBIS implementation (subsequently scaled back)
Screening	• Academic: teacher, parent, and self-referrals; eighth-grade state tests; end-of-course exams • Behavioral: number of office referrals
Tier I/core instruction	• Core instruction in the general education classroom for all students • PBIS: behavior expectations posted throughout the school, monthly assemblies focused on the three rules, a common study hall as a reward

Tiered interventions	**Tier II**
	• Guided study hall for reteaching core content and focusing on four main content areas
	  – Three certified teachers
	  – Varied number of students by period (12 maximum)
	  – Typically, 40 minutes every day (for some students, every other day or twice a day, as needed)
	  – Instruction provided according to what was being taught in Tier I
	• Academic Intervening Services (AIS)
	  – Content teacher provided small-group instruction in the core content area
	  – Multiple teaching techniques and strategies used
	  – Purpose is to reteach content, offer homework help, and/or provide test preparation
	  – Intervention given in groups of six or fewer students
	  – Occurred during a study hall or elective
	• No Tier II interventions for behavior

Tiered interventions (continued)	**Tier III** • No Tier III interventions offered in academics • Behavior: the two PBIS coaches offered all individualized interventions
Progress monitoring	• Every 5 weeks • Coursework and grades on progress reports/report cards
Data-based decision making	• Academics: not all data shared among teachers, AIS, and guided study hall; students exited AIS upon passing the necessary test; students could stay in guided study hall for years • Behavior: used StarWeb at the time of observation; planned to begin using the School-Wide Information System (SWIS) • Monthly meetings of AIS teams held to share notes with the entire school • Frequent meetings of PBIS team (student intervention team) held

APPENDIX C: SUPPLEMENTAL RESOURCES

CENTER ON INSTRUCTION

The Center on Instruction supports a national network of Regional Comprehensive Centers as they serve state education leaders in helping schools and districts meet the goals of No Child Left Behind (NCLB)—to close the achievement gap and improve teaching and learning for all students. To that end, the Center on Instruction offers information on NCLB; best practices in reading, math, science, special education, and English language learning instruction; syntheses of recent scientific research on instruction; and opportunities for professional development.
➲*Web site: www.centeroninstruction.org*

NATIONAL CENTER ON RESPONSE TO INTERVENTION

The National Center on Response to Intervention's mission is to provide technical assistance and dissemination about proven and promising models for Response to Intervention (RTI) and Early Intervening Services (EIS) to state and local educators, families, and other stakeholders. The Center works in four areas: (a) knowledge production, which involves a technical review committee of experts who independently evaluate the scientific rigor, conditions for successful implementation, and cultural and linguistic competence of all identified models (and components); (b) implementation supports, which involve training and follow-up activities to scale up RTI and EIS on a broad scale; (c) information dissemination, which involves forming communities of practice to improve the likelihood that consumers will adopt RTI models; and (d) formative evaluation, which involves an assessment of the quality, implementation, impact, and cost effectiveness of the services offered.
➲ *Web site: www.rti4success.org*

NATIONAL HIGH SCHOOL CENTER

The National High School Center serves as the central source of information and expertise on high school improvement for a national network of Regional Comprehensive Centers. Millions of high school students—particularly those with disabilities, with limited proficiency in English, or from low-income backgrounds—need additional support to succeed. To address this challenge, the National High School Center promotes the use of research-supported approaches that help all students learn and become adequately prepared for college, work, and life. The National High School Center identifies research-supported improvement programs and tools, offers user-friendly products, and provides technical assistance services to improve secondary education.
➲*Web site: http://betterhighschools.org*

IDEA PARTNERSHIP

The IDEA Partnership is dedicated to improving outcomes for students and youth with disabilities by joining state agencies and stakeholders through shared work and learning.
➲*Web site: www.ideapartnership.org*

IRIS CENTER FOR TRAINING ENHANCEMENTS

The IRIS (IDEA and Research for Inclusive Settings) Center for Training Enhancements—a national effort, serving college faculty members working in preservice preparation programs—aims to ensure that general education teachers, school administrators, school nurses, and school counselors are well prepared to work with students who have disabilities and with their families. IRIS is the nation's only faculty enhancement center established for this purpose.
➲*Web site: http://iris.peabody.vanderbilt.edu*

NATIONAL CENTER ON STUDENT PROGRESS MONITORING

The mission of the National Center on Student Progress Monitoring is to provide technical assistance to states and districts and to disseminate information about progress-monitoring practices proven to work in different academic content areas for kindergarten through fifth grade. Educators and families receive information about the effectiveness of progress monitoring that encourages them to adopt the practice. Teachers and other practitioners receive support in translating progress-monitoring research into easily implemented classroom strategies. Technical assistance on progress monitoring transfers knowledge in ways that accommodate differences in teachers' background, training, and beliefs, as well as differences in the nature and philosophy of the instructional programs and practices already in place.
➲*Web site: www.studentprogress.org*

OSEP TECHNICAL ASSISTANCE CENTER ON POSITIVE BEHAVIORAL INTERVENTIONS AND SUPPORTS

The OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports (PBIS), funded by the Office of Special Education Programs (OSEP), was established to address the behavioral and discipline systems needed for the successful learning and social development of students. The Center provides capacity-building information and technical support about behavioral systems to assist states and districts in the design of effective schools.
➲*Web site: www.pbis.org*

RTI ACTION NETWORK

The RTI Action Network is dedicated to the effective implementation of RTI in school districts nationwide. Its goal is to guide educators and families in the large-scale implementation of RTI, so that each child has access to quality instruction and that struggling students—including those with learning disabilities—are identified early and

receive the necessary supports to be successful. The RTI Action Network is a program of the National Center for Learning Disabilities, funded by the Cisco Foundation, and in partnership with the nation's leading education associations and top RTI experts.
➲*Web site: www.rtinetwork.org*

STATE IMPLEMENTATION & SCALING-UP OF EVIDENCE-BASED PRACTICES

The OSEP-funded State Implementation and Scaling-up of Evidence-based Practices (SISEP) focuses on smart and strategic implementation strategies. It works to improve state capacity to carry out implementation, organizational change, and systems transformation strategies to maximize achievement outcomes for all students.
➲*Web site: www.fpg.unc.edu/~sisep*

TECHNICAL ASSISTANCE COORDINATION CENTER

The Technical Assistance Coordination Center (TACC) supports the efforts of OSEP to maintain and increase ongoing communication, collaboration, and coordination among the 40-plus centers in OSEP's Technical Assistance and Dissemination (TA&D) Network, and to expand activities between OSEP's centers and other relevant federally funded TA&D centers, national professional organizations, and a broad spectrum of stakeholders. The goal of this work is to ensure that states have high-quality, coordinated technical assistance focused on improving educational results and functional outcomes for infants, toddlers, children, and youth with disabilities and their families.
➲*Web site: www.taccweb.org*