

Establishing a Multi-Tier System of Supports in Secondary Schools, Part 1

December 11, 2013 3:00 PM - 4:00 PM

About this Talk

THE TALK HAS CONCLUDED.

SCROLL BELOW FOR QUESTIONS AND ANSWERS.

Join Dr. Rebecca Sarlo as she answers your questions about establishing a multi-tier system of supports (MTSS) at the secondary level and provides specific tips for how school teams can work together to introduce and sustain MTSS. Dr. Sarlo will also offer examples to illustrate how an MTSS framework can improve the academic skills and postgraduation outcomes of students.

Read more about [Rebecca Sarlo, Ph.D.](#)

Transcript



Becky Greene

Our high school is working to create a framework and list of evidence-based strategies/supports for students with chronic attendance issues. Can you direct us to some resources?



Rebecca Sarlo, Ph.D.

In my opinion the best resources available to guide your work can be found at the [EveryOne Graduates Center](#) at John Hopkins University.



J. Tietjen

In a recent article you indicated that in Tier 2, problem analysis is relatively low level. What would that look like in a high school setting?



Rebecca Sarlo, Ph.D.

Secondary school educators typically need significant support to comprehensively analyze student engagement and achievement problems. Without such support school teams often have difficulty moving past student motivation and parent involvement barriers. This way of thinking often leaves school faculty and staff feeling helpless to improve student outcomes and the result is decreased consensus, implementation fidelity, and less frequent and valid data collection and analysis. We have found that the needed support includes sending a clear message about the importance of and expectations for problem analysis. In addition to a clear expectation, school teams will need tools and resources for collecting relevant data for problem analysis. We have found that a combination

A of common assessments and student, parent, and teacher surveys and focus groups is the most comprehensive approach to gathering the data needed to understand barriers to teaching and learning. There are several survey instruments available to collect information regarding barriers to and facilitators of student engagement. A review of 21 high quality student engagement instruments can be found at: [IES's Regional Educational Laboratory Program](#) website. Our protocol is to conduct focus groups following the analysis of survey data in order to drill further down and collect stakeholders' ideas regarding strategies for addressing the barriers. Finally, monitoring and providing feedback regarding the effectiveness of problem analysis activities and evaluating the link between planned interventions and identified barriers is critical.

Q **Melanie Kahler**

Do you have suggestions for scheduling that would help a secondary MTSS system to work as efficiently as possible?

A **Rebecca Sarlo, Ph.D.**

The most efficient way to provide multi-tier intervention supports within secondary schools is to build a master schedule with a built in Intervention/Enrichment (I/E) period. Master schedules with I/E periods allow for the provision of timely, directive, and responsive intervention programs. Incorporating a variety of interventions, considering both type and intensity, during the I/E period will allow school teams to more precisely match interventions to student needs and permit students to transition from one intervention to another as their needs change. Many examples of master schedules with I/E periods exist. Additionally, there are several high quality resources to assist schools with the scheduling process. An excellent resource with many free scheduling tools and examples can be found at the [School Scheduling Associates website](#).

Q **Hallie Thoele**

I would like to know how RTI has been implemented or best practices for implementing RTI at the high school level (block schedule).

A **Rebecca Sarlo, Ph.D.**

RtI at the secondary school level requires specific infrastructure and support for implementation. Unlike elementary RtI where we have advised districts and schools to begin with consensus then build infrastructure and then implement, secondary RtI implementation requires a slightly different approach. Instead of trying to achieve consensus before beginning implementation efforts, we advise our middle and high school leaders to begin with commitment to

- achieving the school's mission, vision and student outcome goal;
- working collaboratively to continually improving systems, practices, and outcomes;
- utilizing a data-based planning and problem solving process to guide improvement efforts;
- and providing students with multi-tiered instruction matched to student needs.

A In other words, the commitment is to the improvement process and to maximizing student outcomes in the most efficient and effective means possible. We have found that consensus is built through implementation. With that being said, there are specific infrastructure components that are critical for effective RtI implementation. The most critical infrastructure components include the following:

- Effectively functioning School-Based Leadership Team that meets regularly to problem solve large scale (e.g., school or content-wide) barriers to teaching and learning.
- Clear mission, vision and aligned goals that define what the school is trying to achieve in clear and measurable terms (preferably specifically defined by CCR for all students).
- Effective teaming organization and processes that allow school teams to work together as a system to accomplish school goals (All teams are overtly aligned with school goals, have norms and team member roles and responsibilities, and have the skills and/or support to engage in data-based planning and problem solving).
- Assessment and data systems that provide the readily available data needed by school teams to effectively remove barriers to student engagement and learning, with Early Warning Systems data being of particular importance.
- Master schedules that allow for multi-tiered instruction during the school day (typically most efficiently and effectively accomplished through the addition of an Intervention/Enrichment block).
- Professional development and coaching to support teams? engagement in data-based problem solving including: the use of Early Warning Data to identify students and systems in need of support; the identification and understand barriers to student engagement and learning; the design and implementation of strategies and supports to remove or lessen the impact of identified barriers, and the use of data to monitor student progress and evaluate the effectiveness of instruction and interventions.

It is important to stress that the above described infrastructure do not have to be in the most ideal form to initiate implementation. In fact, implementation efforts often reveal areas of infrastructure that need to be address to improve the school?s continuous improvement capacity. For instance, it is common in our schools for issues with accessing, managing, and analyzing data to be fully understood only after implementation efforts have begun (e.g. School Leadership Team attempts to engage in data-based problem solving). With this in mind, I recommend that you initiate implementation on a small scale such as with a grade level or content area. If possible focus initial implementation on improving student outcomes during the transition year (e.g., 6th, 9th), as this approach typically results in faster and more significant outcomes than beginning in upper grades. Once your team feels comfortable supporting the continuation of initial implementation effort, other grade-levels and content areas can be added. The added benefit to this approach is that the initial successes achieved through implementation will be your most powerful tool for building consensus, particularly as teachers begin to hear from other teachers about the benefits of implementation.

Q *Nancy Hahn*

I teach a reading intervention class for 7th and 8th graders reading more than 2 yrs below grade level. What can I do to support them/ensure they are supported in other classes?

A *Rebecca Sarlo, Ph.D.*

Ensuring student success within their core instructional classes will require ongoing communication and collaborative planning between you and core teachers. Aligning intervention strategies and supports to help students manage core instructional material and content when it is most relevant to what they are learning within their core classes will provide your students with the support needed to benefit from core instruction. Integrating core instructional materials into intervention can also go a long way to help students feel and be more prepared to receive core instruction. Further, through your communication with core teacher, you can assist them to understand intervention strategies that are effective you're your students and integrate intervention strategies and supports into their own instruction. This approach will reinforce students' use of effective strategies and the idea that the strategies are effective across multiple learning contexts.

Q *Karen Neifer*

Will you also discuss integrating behavior and academic systems? That seems to be a HUGE stumbling block...many schools I work with see them as two distinct systems. Thank you!

A *Rebecca Sarlo, Ph.D.*

In my experience, the most effective way to integrate academic and behavior systems is to focus on student engagement. Student engagement is the bridge or link between academic achievement and appropriate student behavior. Engaged students do not typically demonstrate behavioral problems and student academic achievement is largely dependent on how engaged students are in the learning process. Another advantage to focusing on engagement lies in the tendency for secondary school educators to more readily accept or even embrace responsibility for providing engaging instruction, curriculum, and learning environment than addressing student behavior which is often viewed as a parent responsibility. Although student engagement is often viewed as a student trait with students either being motivated or not, student engagement is actually multi-dimensional and complex and significantly impacted by instructional, curricular, and environmental variables. It is important to develop a comprehensive and collective understanding of what student engagement is as well as the instructional, curricular, and environmental variables that impact it. We have adopted a four-domain student engagement model (academic engagement; behavioral engagement; psychological engagement; social engagement), which has helped us to tease apart student engagement issues and better understand the variables that impact it. This knowledge has allowed us to design much more specific, targeted and effective Tier 1, 2, and 3 student engagement support plans. Further, we have found that the more the educators at our schools understand student engagement and the alterable variables, and thus strategies and supports, that impact it, the more empowered they feel to address student engagement issues. The student engagement domains are described below.

A Academic Engagement

Academic engagement refers to the amount of time students are actively engaged in instruction and learning. This domain has been referred to as the “I can” domain of student engagement and is significantly impacted by the availability of high quality instruction, differentiation and intervention which provide the strategies and supports necessary to allow students full access to the instruction and curriculum. Many instructional, curricular, and environmental variables impact academic engagement, as do specific learner variables. Examples of instructional variables related to high levels of academic engagement include the presence of bell to bell instruction, the explicit teaching of academic strategies (e.g., reading comprehension strategies) and the implementation of a gradual release of responsibility. Examples of curricular variables that are related to high levels of academic engagement include student access to leveled texts or technology supports when materials are above their independent reading level as well as the use of structured note-taking and critical thinking supports (e.g., 2-column notes, graphic organizers). Examples of Environmental factors related to high levels of academic engagement include variables such as the amount of time devoted toward instruction in a particular area (e.g., 50 minutes versus 90 minutes), the amount of time spent transitioning within the classroom, and student access to resources and supports outside of the school day. Specific student/learner variables which are related to academic engagement include student reading, writing, math skills, digital literacy, and productivity skills. These variables and others interact with student/learner variables and result in higher and lower levels of academic engagement. Manipulating any or all of these variables will likely impact students’ academic engagement.

Behavioral Engagement

Behavioral engagement is known as the “I will” domain of student engagement and involves student attendance and participation in school. As with academic engagement, many instructional, curricular, and environmental variables impact students’ behavioral engagement. Instructional variables which are related to high levels of behavioral engagement include defining and teaching expectations for school common areas and classrooms, consistently reinforcing appropriate/expected behaviors, and re-teaching expected behavior when students demonstrate inappropriate behavior. Examples of curricular variables related to behavioral engagement are the implementation of an evidence-based behavioral curriculum and classroom rules and expectations which are aligned with school-wide expectations. Examples of environmental variables related to student engagement include public posting of common-area and classroom expectations and clear and consistently applied school and classroom procedures and protocols for communication, asking for and offering help, participating in classroom activities, and managing materials. Student/learner variables which are related to behavioral engagement include students’ understanding of expectations and reinforcement/consequence systems and student skills related to self-management and monitoring, impulse control, and anger and stress management.

Psychological Engagement

Psychological engagement is known as the “I want to” domain of student engagement. It encompasses students’ perceptions of competency and control (choice and voice) within the educational setting. It also includes students’ future orientation and goals as well as their

A perception of the relevancy of instruction to meeting those goals. Examples of instructional variables which are related to students' psychological engagement include beginning lessons by priming background knowledge and by communicating clear lesson objectives and learning goals, embedding goal setting and progress monitoring into every lesson cycle specific to learning goals, and engaging in data chats with students which link instruction and student performance therein to the students' personal goals. Examples of curricular variables which impact psychological engagement include the extent to which students are provided with choice of assignments, tasks, topics, and texts within their classes and whether the materials and texts chosen by the teacher relate to the students' backgrounds and interests. Environments which stress compliance and performance goals instead of purpose, mastery, and autonomy have been found to produce reduced psychological engagement. Environments which provide opportunities for mastery learning, service-learning, and project-centered learning have been found to be related to significant increases in psychological engagement. Student/learner variables which impact psychological engagement include levels of self-awareness and future planning (e.g., self-efficacy, college and career planning) and decision making skills (e.g., planning and problem solving skills, goal setting, progress monitoring).

Social Engagement

Social engagement is often referred to as the "I belong" domain of student engagement. This domain involves students' affiliation with school and perceptions of belonging, peer support for learning, and the quality of adult-student relationships at school. Examples of instructional variables which impact this component include providing structured opportunities for students to act as instructional resources for one-another, providing opportunities for students to work as inter-dependent, collaborative groups, and linking instruction intentionally to students' prior knowledge, interests, and goals. Examples of curricular variables related to social engagement include utilizing culturally inclusive and responsive curricula and allowing students to select topics and texts which they find personally relevant. Examples of environmental variables that impact social engagement include implementing a zero tolerance, bully prevention program, implementing a range of social and academic clubs and social activities which appeal to a wide range of students, implementing a community building program, enacting a small learning community structure, and implementing a school-wide peer and adult mentoring program. Learner variables which are related to this variable include students' skills related to perspective taking, appreciating diversity, interactive communication, collaboration and teaming, conflict resolution, and seeking and providing help

Q **Judy Fuhrman**
What do we do for students who have basic foundational reading skills and do not require an intensive intervention (such as R180), but have gaps interfering with success in a core ELA/literature class?

A **Rebecca Sarlo, Ph.D.**
My initial response is that it is likely that middle and high school students who continue to

A demonstrate foundational reading skill gaps will most likely require intensive intervention to have their needs met. When determining which students need intensive intervention, it is critical to identify students who have an intense (i.e., performance is significantly different than expected levels of performance) AND severe (i.e., performance gap has been resistant to intervention). It is likely that secondary students with foundational reading gaps would meet these criteria. When we consider the needs of students who require intensive intervention, we must consider both strategies and supports provided during core instruction to ensure core instruction is accessible and engaging AND Tier 3 interventions aligned with core instruction. The application of Universal Design for Learning (UDL) principles to core instructional planning and implementation offers great promise for maximizing student engagement and achievement within core instructional environments. Additional information on UDL can be found at the [National Center on Universal Design for Learning](#) and the [CAST](#) websites.

Q **Doug**
At the high school level should the focus be on skill development in the identified skill deficit area or should it be about providing flexible support services to assist students in acquiring credits to graduate?

A **Rebecca Sarlo, Ph.D.**
Ideally, multi-tier interventions address student skill deficits AND simultaneously support student success within credit generating courses. When designing multi-tier interventions, it is important to begin with the idea that the purpose of all instruction (Tier 1, 2, and 3) is to ensure students achieve core (Tier 1) instructional goals and expectations. With this in mind, multi-tier intervention programs should be built to accomplish three important goals: 1) remediate previously acquired knowledge and skill gaps, 2) prevent the acquisition of new knowledge and skill gaps by addressing student proximal needs (i.e., provide just in time instruction aligned with core instruction to ensure access and achievement with current grade level/course content), and 3) promote and maintain high levels of student engagement within all tiers of instruction. There are several best practice approaches to accomplishing these goals. First, ensure core (Tier 1) instruction and intervention teachers (Tier 2 and Tier 3) have sufficient time and support to communicate and plan collaboratively. Core teachers can help inform intervention design by providing intervention teachers with information regarding the focus of current and upcoming instruction (e.g., focus-standards, lesson plans, topics, texts and materials, etc.). They can also provide information regarding common barriers to learning specific content, as well as, specific barriers to engagement and/or learning for students being served through tiered intervention. With this information, intervention teachers can plan intervention strategies and supports to specifically align with core instruction, focusing on removing high probability barriers to student engagement and learning. Struggling students often possess an abundance of knowledge and skill gaps. Addressing the gaps that are most relevant to what students are responsible for learning within core instruction will increase student access and engagement with core instruction and improve student outcomes. For instance, if core math instruction is focused on teaching students to divide fractions and students have not yet mastered multiplying fractions, interventions should be designed to review, reteach,

A and reinforce how to multiply fractions and pre-teach how multiplication of fractions is related to the division of fractions. This approach increases student perception of intervention relevancy, thereby increasing engagement, and student confidence, engagement, and success with core instructional content. Integrating core instructional subject matter and materials into intervention will intensify the positive impact on student engagement and achievement with core content, particularly when the content and materials are utilized within a pre-teach/preview intervention model. Consider the following examples: Intervention teachers support students to comprehend and process the novel they are expected to read for English Language Arts; intervention teachers utilize a content-area primary source to teach a reading comprehension strategy; intervention teachers intentionally build student background knowledge related to core content; and intervention teachers utilize content-area vocabulary to teach vocabulary acquisition strategies and word study. On the other side of the house, core teachers work to integrate effective strategies and supports taught to students during intervention back into core instruction. The benefits to this are great. Integration of strategies learned during intervention will increase student access, engagement, and success with core instruction. Additionally, the integration will help send the message that the strategies taught and the supports being provided during intervention are not ?test prep? as they are sometimes conceived but learning strategies that can and should be used to support learning across content areas.

Q **Mary Howell**
How do high schools account for Tier 2 and 3 courses within the RTI framework in light of graduation requirements and credits?

A **Rebecca Sarlo, Ph.D.**
There are two important considerations when implementing multi-tier instruction while ensuring students remain on-track for graduation. The first thing to consider is whether or not current tiered interventions are credit-generating. For instance, in Florida we have roughly ten credit-generating courses that are not directly tied to specific academic standards. One example of such a course is Critical Thinking. Thus, students can be enrolled in a Critical Thinking course focused on their area of need (e.g., Critical Thinking for Mathematics). It goes without saying that ensuring students receive credit for intervention courses requires interventions to be scheduled during the school day and be attached to credit-generating course numbers. We definitely do not want students to become off-track for graduation as a result of participation in intervention courses.

The second thing to consider is a less straightforward but incredibly important. This consideration involves the alignment of intervention programming with core instruction. Effective interventions result in successful student performance within the core instructional environment (i.e., master core content and earn course credit) ?interventions should only be considered completely successful when this is the case. Ultimately, the biggest threat to at-risk students becoming off-track for graduation is the failure of core content courses, resulting in insufficient credit accrual and GPAs less than 2.0. Ensuring interventions are specifically and overtly aligned with core instruction in terms of scope and sequence and integrating core content materials into intervention

A are best practices for ensuring interventions result in improved performance in core instructional environments. When intervention takes on a pre-teach/preview model (e.g., pre-teaching content area vocabulary; building relevant background knowledge, deconstructing ELA text prior to initial instruction) rather than a re-teach/review model the results can be magical. With this approach, struggling students feel and are more prepared to receive core instruction, are significantly more engaged in and benefit more from core instruction.

Q *Jill Koenitzer*

What are some early warning indicators to use to identify students who are/are not college and career ready? (indicators in addition to ACT/SAT)

A *Rebecca Sarlo, Ph.D.*

The [National High School Center](#) published a guidance document in 2012 entitled [College and Career Development Organizer](#) which is an excellent resource for determining both college and career readiness (CCR) screening indicators and program evaluation indicators that are most helpful for determining how on-track students are for achieving CCR and how effective our current programming is for ensuring CCR for all students. The Center provides guidance on the most important indicators for both middle and high schools. We have adopted these indicators and adapted them to meet our needs in Florida. For instance, we added an indicator related to passing end of course exams (EOCs) required for graduation and scoring college and career ready on our Post-Secondary Readiness Test (PERT) which is administered typically in 11th grade. Since adopting and adapting the indicators, we have worked to support our districts and schools to integrate the indicators into their early warning systems which previously focused primarily on on-time student progression and graduation and supported their efforts to use the new data to feed their data-based problem solving efforts. The two tables below represent our adopted CCR indicators:

MIDDLE SCHOOL INDICATORS OF COLLEGE AND CAREER READINESS (CCR)

Academic Performance and Engagement Indicators for CCR

- Demonstrates successful credit earning behavior (earns sufficient credits for on-time progression)
- Successfully passes both math and ELA courses
- Earns Grade Point Average at or above 2.0
- Attends school regularly- misses less than 10% of the available instructional time due to attendance and/or behavioral issues
- Participates in a course of study that places student on-track for participation in accelerated learning programs and/or college- and career-ready courses of study in high school
- Scores proficient or highly proficient on standardized assessments of middle school core content/standards (middle school end of course exams and FCAT exams)

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Postsecondary Planning Indicators

- Successfully completes Career and Education Planning Course including the creation of personal, professional and educational goals and plan

HIGH SCHOOL INDICATORS OF COLLEGE AND CAREER READINESS (CCR)

Academic Performance and Engagement Indicators for College and Career Readiness

- Accrues sufficient credits for on-time progression and graduation
- Achieves Grade Point Average 2.0 or high
- Attends school regularly- misses less than 10% of the available instructional time due to attendance and/or behavioral issues
- Participates in accelerated learning programs and/or college- and career-ready courses of study
- Successfully completes Algebra 1 by 9th Grade
- Scores proficient or highly proficient on standardized assessments of high school core content/standards (Post-Secondary Education Readiness Test (PERT), high school end of course exams and FCAT exit exams)
- Achieves CCR score on ACT/SAT/CPT exams

Q

Jill Koenitzer

Please describe a variety of different tier two interventions you have seen to be successful at the high school level?

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Rebecca Sarlo, Ph.D.

Along with how to schedule multi-tier instruction, questions regarding the most successful interventions are amongst the most common inquiries I receive. A complete response requires a three-part answer.

First, it is important to begin with the understanding that the most successful interventions are those that are designed to address the specific barriers to student engagement and learning at your school. Developing a comprehensive understanding of the barriers that have or could prevent students from achieving engagement and learning goals and expectations requires identified problems to be thoroughly analyzed. The most effective interventions for improving student engagement and achievement issues are designed to remove or lessen the impact of barriers which constitute the root cause of the problem. Common student engagement and achievement problems such as nonattendance and course failures are symptoms of underlying (root cause) issues and therefore intervention planning cannot stem from the problem itself but must focus on addressing underlying barriers. For instance, two school with the same problematic attendance rate (e.g., 30% of students miss more than 10% of school) may have very different root causes of

A the attendance issue (e.g., adult-student relationship issues versus transportation issues). In this scenario, implementing the same intervention program in both schools would be a mistake. If the intervention program focused on improving student engagement (in this case attendance) by improving adult-student relationships, only the school for which adult-student relationships constituted a root cause of student nonattendance would improve its attendance rates. The school for which the root cause is transportation will very likely not see an increase in student attendance. Further, the resources and effort required to implement intervention designed to improve adult-student relationship (which are largely already intact) would be wasted and unavailable to address the actual root causes of the school's attendance issue. With that said, I urge your team to engage in thorough problem analysis (including student, parent, and teacher input) before exploring intervention options.

Once your team is confident that the root causes of the identified problems have been revealed, there are several high quality resources that outline effective intervention strategies, supports, and programs. The key is finding the interventions that are designed to address your school's specific barriers. Some of my favorite resources for information on research-based interventions include:

Visible Learning by John Hattie—a meta-analysis of 800 meta-analyses which outlines virtually every intervention strategy and support of which you can think. Although the book is extremely comprehensive, it is also very accessible and easy to read. Hattie also has a teacher version which is even more accessible. The book reviews intervention strategies and supports one by one and provides an easily interpreted visual representation of the expected impact of each (from potentially harmful to very positive). Additionally, Hattie briefly describes the conditions under which intervention approaches achieved positive results. My team and I have found this resource very helpful when selecting and designing intervention programs.

[*Engaging Schools*](#) by National Research Council—this excellent resource, provided to us by the National Research Council, can be purchased or accessed free online at the [National Academies Press](#). The authors of the book researched schools serving extremely high risk populations of students who were much more successful than most schools serving similar populations of students. The book outlines what the schools did to achieve their results and includes chapters on addressing barriers to student engagement and achievement and meeting students' academic and non-academic needs, and engaging families and the community.

[*Doing What Works*](#) is an excellent resource provided through the US Department of Education is filled with resources for providing effective instruction and intervention in the areas of reading, math, science, English-fluency.

The [Greater Good Center](#) is an excellent resource packed full with strategies and resources for addressing students' social-emotional needs, improving school climate, and building resilient students and staff.

The [Everyone Graduates Center](#) is one of my team's all-time favorite resource sites for secondary

A school leaders, particularly those serving school high risk, high poverty school populations. Robert Balfanz and his colleagues are research-practitioners and provide practical guidance on strategies for meeting the needs of our most at-risk students and school in order to ensure all students graduate college and career ready.

Q **Beverly Downey**

What universal screeners are available for secondary grades in reading and math skills that align with the Common core?

A **Rebecca Sarlo, Ph.D.**

I appreciate this question because like you, my team and I have been searching high and low for the best universal screeners for reading and math for identifying students who may be in need of intervention to achieve the more rigorous CCSS. In our research, we have come across an excellent resource for mathematics that I would encourage you to investigate further. Special thanks to my good friend at University of Missouri, Dr. Barbara Dougherty, for her mini-tutorial, ongoing guidance and permission to share this exciting information about this incredibly important topic (I hope I can do it justice ?). For the last three years Drs. Anne Foegen (Iowa State University), Jeannette Olson (Iowa State University), Barbara Dougherty (University of Missouri) have worked to create universal screeners and progress monitoring assessments that measure students' conceptual understanding and problem solving skills required for Algebra 1. This project is funded through an IES grant and will be funded for one additional year.

Through this work, the team has developed assessments that are aligned with important outcomes for Algebra 1 and that measure the foundational knowledge and skills needed for Algebra 1 success. The assessments are designed to identify the specific conceptual understanding and misconceptions as well as procedural knowledge and skill gaps that unless addressed will impede student mastery of Algebra 1 standards and their continued success in later mathematics courses. Two types of assessments have been developed, a procedural type and a conceptual type. Procedural assessments, the more traditional of the two types, measure algebra basic skills (items that focus on basic skills students bring into Algebra I), algebra foundations, and algebra content analysis. The procedural assessments include problems that are both skill-based and application problem solving. The conceptual assessments have three domains including 1) concept of variable, 2) proportional reasoning, and 3) translations, functions, and graphing?three areas that are key to student success. The assessments are not focused on algorithms or procedures but rather on identifying the depth of student understanding. To this end, the items are constructed so that students can logically reason through them in order to reveal the level of their thinking. Conceptual understanding assessments include both multiple choice and open-response items which emphasize the foundational ideas that students should develop as they learn algebraic concepts and skills. An example of two items focused on the concept of variable is provided below:

1. Carl simplified $9h + h$. He said an equivalent expression was $8h$. Do you agree with Carl?
A. Yes, because the distributive property can be applied to $9h$ and h to simplify it.

- A** B. No, because h is a common factor in both so $h \div h$ is 0, that leaves 9.
C. It is not possible to determine if Carl is correct because you do not know the value of h .
D. Carl is only correct if h is a positive number.

Answer _____

2. Bart said, " $2t + 3$ is less than $5 + t$." Circle one:

Always true

Sometimes true

Never true

Explain your answer.

For additional information, and a much more thorough description of the tools and intervention work, I encourage you to contact either Dr. Anne Foegen (afoegen@iastate.edu) or Barb Dougherty (doughertyb@missouri.edu)

Q **Emma Bene**

How do you schedule RTI into the day for middle school? How do you allow for the flexible movement between tiers if RTI becomes a "class" in the schedule?

A **Rebecca Sarlo, Ph.D.**

The most effective way to schedule multi-tier interventions into the school day is to build-in an Intervention/Enrichment (I/E) Block within which all students receive enrichment, re-teach/review, or intervention depending on their needs. Providing a variety (i.e., focus of intervention) and range (i.e., intervention intensity) of intervention options during the I/E Block will help to facilitate student movement between interventions (and hopefully from intervention to re-teach/review to enrichment) as their needs change. Flexible movement between interventions is much more difficult to achieve (I have yet to see it be completely successful) in the absence of a specific time (or sometimes time by grade-level) scheduled into the school day for intervention, re-teaching/review, and enrichment. In the absence of this infrastructure, the most successful schools re-design their master schedule utilizing student data quarterly or every semester at a minimum. This approach is much more cumbersome and takes on the flavor of fire-fighting rather than strategic planning, but is more successful than requiring students to remain within an intervention program that no longer meets their needs.

Q **Mike Vallier**

One of our attempts at Tier 2 interventions is to run weekly adjusted schedules, giving a team of teachers an extra 30 minutes to work with a high, medium, or low homogeneous group. This works well, but my teachers are finding it to be a lot of prep work. We need to streamline the planning and preparation process for teachers to avoid burning out and giving up on the process. Do you have any suggestions?

A *Rebecca Sarlo, Ph.D.*

One suggestion that may help is to structure your program to provide enrichment, re-teaching/review, and intervention and have some teachers focus on enrichment, some on re-teaching/review, and others on intervention. Some of our schools have had success with involving additional personnel in the enrichment groups. For instance, one of our schools had their fine and performing arts teachers facilitating the reading enrichment groups within which students had the opportunity to engage in activities ranging from in-depth novel study, Socratic seminars, and theatrical performances. The enrichment groups can be large. Students who are performing on-grade level but would benefit from additional exposure to core content can receive this additional instruction from teachers designated for re-teaching, utilizing content area topics and materials. For instance, these students may need additional practice with applying a recently taught reading comprehension or vocabulary acquisition strategy. Typically, re-teaching does not require an exorbitant amount of prep-work because it is focused on re-teaching and reviewing previously taught content and can often utilize grade-level content area materials. Although not as large as enrichment groups, re-teach/review groups can be fairly large in size (e.g., 10-12 students). When determining your intervention groups, remember to group students by underlying need instead of by achievement level. Make sure these groups are small enough to provide sufficient opportunities for productive practice and prevent students from practicing errors (e.g. 3-6 students depending on the intensity of student needs). Ensure that your strongest teachers are working with your intervention groups. It is often helpful for teachers providing intervention to specialize in addressing a particular high probability barrier to student achievement. With this approach, teachers increase their expertise related to one particular area and only need to prepare materials for only one particular area. In this scenario, students move from intervention group (and hopefully to re-teach/review and on to enrichment) as their needs change. We have found that this approach significantly reduces teacher load, increases implementation fidelity, and is sustainable long term.

Q *Jill Larkins*

How can this be done in such a fashion that the students are not missing out on core curriculum and they do not feel as though they are being singled out?

A *Rebecca Sarlo, Ph.D.*

Ensuring students do not miss out on core instruction to receive intervention is critical. Anytime, students are removed from core instruction to receive interventions we are virtually guaranteeing these students acquire new knowledge and skill gaps. For instance, pulling a student out of science core instruction to address foundational reading skills may improve these skills but will likely result in new gaps related to science vocabulary and background knowledge. And, gaps related to vocabulary and background knowledge more complex, difficult to remediate, and strongly related to reading comprehension issues, particularly for English Language Learners and Low SES students. With this in mind, the effort and resources it takes to prevent pull-out intervention programs are worth it. We have found that the most effective way to provide students with interventions that do not supplant core instruction is building in an Intervention/Enrichment (I/E) Block into the school

A day within which all students receive enrichment, re-teach/review, or intervention depending on their needs. Providing a variety (i.e., focus of intervention) and range (i.e., intervention intensity) of intervention and enrichment options during the I/E Block will help to provide instruction matched to student needs while protecting core instructional time. Because students are able to move from intervention to intervention, from intervention to re-teach/review, or from re-teach/review/intervention to enrichment as their needs change and all students are receiving something during the I/E period, students are far less likely to feel singled out. One of the strongest examples of the effective implementation of an I/E period at the high school level can be found at the [Wissahickon School District website](#).

Q **Mitchell Curci**
As part of a multi-tiered approach, how will secondary schools engage parents, community members, and agencies to support marginalized and racialized students?

A **Rebecca Sarlo, Ph.D.**
One of the most important strategies for engaging parents, community members, and agencies to support marginalized and racialized students is to build systems and processes that ensure these stakeholders have a voice in the identification of barriers and the development of intervention plans. Conducting surveys and focus groups at school and community events that have high levels of stakeholder participation is one approach with which we have found success. Providing parent meetings and family-centered interventions within the community where students live as opposed to at the school has resulted in higher levels of participation, particularly when we have worked to meet families' basic needs such as food and childcare. One example in particular comes to mind. One of our high schools was having difficulty communicating with parents regarding graduation requirements and their child's progression toward graduation. Attempts to meet with parents during the school day were ineffective and attempts to meet with parents in the evening were only minimally more effective. The school leadership team held a focus group with a small group of select parents in order to identify barriers to meeting with parents and to brainstorm strategies for increasing parent-school collaboration around student graduation. The group hypothesized that transportation issues and perhaps a "general mistrust of the school system" prevented many parents from attending meetings at the school. To address these barriers, meetings to discuss graduation requirements were scheduled within the community in which the families lived (e.g., community center, YMCA). Several locations were provided with an attempt to provide options within walking distance of most families' homes. Public transportation routes were also considered when selecting meeting locations and families were offered stipends for purchasing bus fare if they were unable to pay on their own. This approach more than doubled the number of families attending graduation seminars and student graduation data chats. The bottom line is what schools do matters when it comes to parent and community engagement. For instance research conducted by Epstein (2001a, p. 45) concluded: "Teachers' practices to involve families are as or more important than family background variables such as race or ethnicity, social class, marital status, or mother's work status for determining whether and how parents become involved in their children's education." Although it is often assumed that parent concern and interest in their

A child's education declines starting in middle school and that specific groups of parents (e.g., low SES, minority) have less concern or interest in their children's education than others (e.g., high SES) parents, the evidence does not support these conclusions. It is important to recognize that lower participation rates are not the result of lack of interest or care but rather likely the result of high probability barriers to engagement such as language differences, work schedules, babysitting needs, transportation, and neighborhood safety. Working to systematically remove or lessen the impact of these variables will result in increased parent and community engagement. Excellent resources for involving parents and community can be found at the [Everyone Graduates Center](#) (e.g., *Improving Student Attendance with a School-Wide Approach to School-Family-Community Partnerships* by S.B. Sheldon).

Q **Dina**
We have many small schools (under 100 students in 9th-12th). How do you coordinate for both remediation and enrichment for a diverse population with only a few teachers?

A **Rebecca Sarlo, Ph.D.**
Building an Intervention/Enrichment period into the school day to provide enrichment, re-teaching/review, and intervention with some teachers focus on enrichment, some on re-teaching/review, and others on intervention will help you to stretch your resources. Providing the majority of interventions during a common time has several benefits. One of the most important benefits for small schools is the option of utilizing all personnel to provide enrichment, re-teaching/review, and intervention. For instance, some of our most successful schools have enlisted elective teachers, media specialists, and other personnel to provide enrichment during the I/E block. This approach allows the teachers and intervention specialists to work with smaller groups of students than would be possible without the additional personnel. Also, the involvement of these additional personnel far expands the range of enrichment opportunities that can be offered, motivating students (particularly in the re-teach/review group) to achieve at a level that would allow them to access the enrichment opportunities. Because the re-teach/review and intervention groups are smaller, they are typically more successful. Over time, students require less intensive support (e.g., from intervention to re-teach/review) and because of the I/E block can readily move to the intervention, reteach/review, enrichment groups that best meets their changing needs.

Related Reading from RTINetwork.org:

- [Early Warning Systems: Moving From Reaction to Prevention](#) by Rebecca Sarlo, Ph.D.
- [Problem Analysis Within an RTI Framework at a Secondary School](#) by Matthew K. Burns, Ph.D., Rebecca Sarlo, Ph.D., Hollie Pettersson, Ph.D
- [Response to Intervention for Literacy in Secondary Schools](#) by Matthew K. Burns, Ph.D., University of Minnesota; Rebecca Sarlo, Ph.D., Florida PS/RTI Implementation Project; Hollie Pettersson, Ph.D., Canyons School District, Colorado
- [Screening for Reading Problems in Grades 4 Through 12](#) by Evelyn S. Johnson, Ed.D., and Juli L. Pool, Ph.D.

- [Response to Intervention in Secondary Schools: Is It on Your Radar Screen?](#) by Barbara J. Ehren, Ed.D.

Additional Resources:

- [National Center on Response to Intervention](#)
- [National High School Center](#)