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Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools

Q&A with Ben Clarke Ph.D and Paul Riccomini, Ph.D

March 22, 2013

This event focused on effective strategies for screening, instruction, and differentiation of instruction as part of math RtI implementation. This Q&A addressed the questions participants had for Dr. Clarke and Dr. Riccomini following the event. Dr. Clarke's *and* Dr. Riccomini's *PowerPoint presentations are also available.*

How do schools fit an RtI program in during the day? How many days a week do they do it?

Dr. Riccomini responds: There's no easy answer to this question. Time is at a premium, and it's a fixed variable. When planning and discussing ways to implement an RtI program, it's important to keep in mind that one of its main purposes is to provide struggling students with the additional instructional supports that they need to be successful. It shouldn't be viewed as "trying to fit it in" as much as making it *blend* with the current school days. In most cases, time is taken from other subject areas. As far as how many days a week, the best arrangement is five days a week, but if that's not possible, it should be the highest number of days possible. Expecting students to make progress with a one- or two-day-a-week Tier 2 is not realistic. On a side note, every school that I've worked with on this process was able to design a schedule that allowed for RtI.

How do districts schedule a math RtI time if they also have a language arts RtI time?

Dr. Riccomini responds: Again, there's no easy solution, but it's an important problem to solve. It's further complicated by the fact that many of the students who need additional assistance in reading likely need additional assistance in mathematics. There is not an absolute solution to scheduling both reading and math time, and it depends on each school's resources, personnel, current schedule, and length of school day.

Where can I find information on the best resources and instructional programs for math intervention at all levels? What are any approved outside sources/resources we can use for instruction?

Dr. Clarke responds: The best place to start is the three IES practice guides *Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools*; *Improving Mathematical Problem Solving in Grades 4 Through 8*; and *Developing Effective Fractions Instruction for Kindergarten Through 8th Grade*. In addition, the National Center on Response to Intervention has a number of quality resources (www.rti4success.org).

How does the discrepancy method differ from the RtI model?

Dr. Clarke responds: The discrepancy method requires a discrepancy between a student's ability and achievement in order to qualify for special education services under a category of learning disabled. In simpler terms, a student needs to have average ability (typically as measured by an intelligence test) and below average achievement in a particular academic area (typically reading or mathematics, as measured by a standardized achievement test). How different locales define a discrepancy varies, but a common discrepancy is that achievement must be one standard deviation below ability.

In contrast, RtI models for identifying students as learning disabled and eligible for special education services do not require any measure of ability or a discrepancy between ability and achievement. Instead, RtI defines eligibility as any student who has not responded to research- based instruction. Typically research-based instruction includes multiple tiers of increasing intensity, and only students who have not responded to the most intensive tier are potentially eligible for special education services. A brief introduction to RtI is provided in the overview section of the IES practice guide *Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools*.

Why can't we use the "summary" assessment data from the end of the previous year as screening data for our summer program and the start of next school year?

Dr. Clarke responds: Under Recommendation 1 ("Screen all students") in the *Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools* practice guide, Suggestion 3 discusses the process of using state testing data from the previous year as part of a screening process that may or may not include additional screening in the fall. In essence, the state test from the previous year would serve as the first screener, and any student below a certain threshold would be screened a second time in the fall to determine risk status. The benefit to this approach is a more efficient screening process in the fall since fewer students are being screened. The drawback is that by not including all students in the screening process, schools lose the ability to examine group outcomes, as in Suggestion 4, "Use the same screening tool across a district to enable analyzing results across schools."

In Dr. Clarke's presentation, he showed a slide that was a quick evaluation for pre-algebra skills. I teach pre-algebra and co-teach special education students. I can find short ways to evaluate the special education students, but I can never find short, one-minute, pre-algebra skills checks. Can you point me in the direction of any assessment that would be good?

Dr. Clarke responds: The measure shown on my slide 27 is a 5-minute, timed pre-algebra measure developed by Anne Foegen, one of the authors of our practice guide. This measure was reviewed in the process of developing the guide. In our work on the practice guide, we didn't find any shorter duration measures assessing pre-algebra or algebra skills. The National Center on Response to Intervention (www.rti4success.org) continues to review new measures each year and is the most likely source to have up-to-date-information on newly developed measures that may fit your criteria.

We have learned many lessons from our reading RTI model and realize we are at the very beginning stages of developing a quality math model. One of our first needs is a common assessment piece K–6. Can you suggest some assessments that are research-based and have been shown to be a good foundation for a quality support system? Ideally we are looking for a product that can assess, provide skill-based, direct instructional support, and monitor progress.

Dr. Clarke responds: The National Center on Response to Intervention has a number of quality resources (www.rti4success.org) that may fit your needs, including an overview of assessments that span grades K–6 and are suitable for use as a screener and as a progress-monitoring tool.

I am very interested in the presenters' discussion of "teaching underlying problem structure." Are you aware of any professional development opportunities on the subject offered to classroom teachers? The key to our success will be good instruction. Seems like we have many choices of opportunities in the area of reading but few in the areas of math.

Dr. Riccomini responds: Professional development (PD) opportunities are difficult to monitor because of the numerous organizations and agencies doing work in this area. I am not aware of any specific PD opportunities currently scheduled specifically targeting this area. I would encourage you to communicate this PD need to your district PD coordinator. Specific to Pennsylvania, the Pennsylvania Training and Technical Assistance Network (PaTTAN) offers many PD opportunities, so I would monitor the PaTTAN website for upcoming events: http://www.pattan.net/. I am presenting at the PaTTAN annual RtI Conference on June 24–26 in Hershey, PA. Here is the link to the conference:

http://www.pattan.net/category/Training/Calendar/event/event.html?id=8dedd671-c002-41c5-a7c4-34b7834ab542