

## Reference Desk Response No. 377: Specially Designed Instruction

### Question:

What is “specially designed instruction,” and also with regard to RTI models? Is there research showing differential results depending on how it is interpreted and carried out?

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### **Report:**

Following an established REL-NEI Reference Desk research protocol, we conducted a search for research reports as well as descriptive and policy-oriented briefs and articles in this area. The sources included federally funded organizations, additional research institutions, several educational research databases, and a general Internet search using Google and other search engines. We also searched for appropriate organizations that may act as resources on this issue. We have not done an evaluation of these organizations or the resources themselves, but offer this list to you for your information only.

Our reference desk researchers were unable to locate rigorous research that specifically addresses whether models based on different definitions of specially designed instruction had varying (or any) results. However, there are several resources explaining specially designed instruction and how it fits within Individualized Education Plans (IEP) and Response to Intervention (RTI). With respect to an IEP, one resource states that “The Specially Designed Instruction section of the Individualized Education Plan (IEP) is one of the most important parts of this important document...SDI’s fall into two categories: accommodation and modifications” (Webster, 2009; see resource below). Several resources focused on RTI have placed specially designed instruction as a fourth tier. (Sawyer, 2008; Navarro, 2009; Georgia Department of Education; see resources below).

We focused on identifying resources that specifically addressed specially designed instruction. To supplement the research findings that directly address the questions, we have also included a selection of articles reviewing Response to Intervention.

### Question:

#### **1. What is specially designed instruction, and also with regard to RTI models? Is there research showing differential results depending on how it is interpreted and carried out?**

##### **1.1. Specially Designed Instruction: Where the Rubber Meets the Road.** *Webster, J.; 2009; About.com Guide.*

Source: General Internet Search using Google

(<http://specialed.about.com/od/iep/a/SDIs.htm>)

This resource states: “**The Specially Designed Instruction (SDIs)** section of the Individual Education Plan (IEP) is one of the most important parts of this important document. The special education teacher, with the IEP Team determines what accommodations and modifications the student will be receiving...SDI’s fall into two categories: accommodations and modifications. Some people use the terms interchangeably, but legally they are not the same. Children with [504 plans](#) will have accommodations but not modifications in their plans. Children with IEP’s can have both.” Additional resources on the IEP plan can be found at:

[http://specialed.about.com/od/iep/Individual\\_Education\\_Plan.htm](http://specialed.about.com/od/iep/Individual_Education_Plan.htm).

**1.2. State Policies and Procedures and Selected Local Implementation Practices In Response to Intervention in the Six Southeast Region States.** Sawyer, R., Holland, D., & Detgen, A.;

2008; Institute for Education Sciences; IES Issues and Answers Report, No. 063, 55 pages.

Source: Institute for Education Sciences

([http://ies.ed.gov/ncee/edlabs/regions/southeast/pdf/REL\\_2008063.pdf](http://ies.ed.gov/ncee/edlabs/regions/southeast/pdf/REL_2008063.pdf))

This report describes how six state education agencies and three local education agencies are adopting and implementing Response to Intervention. One of the state agencies, Georgia, has instituted a fourth tier of RTI, which includes specially designed instruction for special education and general education: "Tier 4: specially designed instruction and learning. Developed specifically for students who meet eligibility criteria for special program placement. This can include adapted content, methodology, or instructional delivery, such as the Gifted Education Program and English language learner programs." (p.46)

**1.3. Using Response to Intervention for Washington Students.** Burgeson, T, Heuschel, M.A., Harmon, B., Gill, D.H., Alig, P., & Middling, T.; 2006; Office of State Superintendent of Public Instruction.

Source: General Internet Search using Google

(<http://www.k12.wa.us/specialed/pubdocs/RTI/RTI.pdf>)

This paper provides an explanation of the various tiers of RTI, specifically for Washington State; including several references to specially designed instruction (SDI). One reference is found in the frequently asked questions section:

**Question:** How might specially designed instruction (SDI), differ from the Tier III interventions a student may have been receiving prior to qualifying for special education services?

**Answer:** Interventions and services a student receives once determined eligible for special education services will vary with each individual student. If a student has been unsuccessful with two attempts of Tier III interventions, the student's SDI may look similar to those Tier III interventions except the instruction will be more intense, provided with an increased frequency and duration, and adapted to meet the student's unique needs. School districts are required to ensure that the SDI identified for each eligible student is developed and provided in accordance with WAC 392-172-045(4)." (p.24)

**1.4. Response to Intervention.** Georgia Department of Education.

Source: General Internet Search Using Google

([http://www.doe.k12.ga.us/ci\\_services.aspx?PageReq=CIServRTI](http://www.doe.k12.ga.us/ci_services.aspx?PageReq=CIServRTI))

This resource provides information about Response to Intervention in the state of Georgia.

Chapter seven focuses on specially designed learning;

(<http://www.doe.k12.ga.us/DMGetDocument.aspx/Chapter%207%20Tier%204%20Specially%20Designed%20Learning.pdf?p=6CC6799F8C1371F67F05186F69217813878017F00D936A5E68A6003308396992&Type=D>)

Specially designed learning is considered tier 4 which "is developed for students who need additional supports and meet eligibility criteria for special program placement including gifted education and special education. With three effective tiers in place prior to specialized services, more struggling students will be successful and will not require this degree of intervention. Tier 4 does not represent a location for services, but indicates a layer of interventions that may be provided in the general education class or in a separate setting." (p.1)

**1.5. A Problem Solving Model Ensuring Success for All Students.** Navarro, G.; 2009; Paulding County School District.

Source: General Internet Search using Google

(<http://www.paulding.k12.ga.us/student-services/rti.php>)

This article presents an overview of RTI, and includes a section on Tier 4: Specially Designed Instruction: "Students who do not achieve the desired level of progress in response to these targeted interventions in Tier 2 and 3 are then referred for a comprehensive evaluation and considered for eligibility for special education services under the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA 2004). The data collected during Tiers 1, 2, and 3 are included and used to make the eligibility decision. It should be noted that at any point in an RTI process, IDEIA 2004 allows parents to request a formal evaluation to determine eligibility for special education. An RTI process cannot be used to deny or delay a formal evaluation for special education." (website)

## Additional Organizations to Consult

- **National Center For Learning Disabilities**

(<http://www.ncld.org/>)

According to the website “The National Center for Learning Disabilities (NCLD) works to ensure that the nation’s 15 million children, adolescents, and adults with learning disabilities have every opportunity to succeed in school, work, and life.” The terms to know page includes a definition of “specially designed instruction.” (<http://www.ncld.org/resources1/glossaries/idea-terms-to-know/>).

- **RTI Action Network**

([http://rtinetwork.org/?gclid=CJaOxf\\_PkZoCFSRPagodOg-1-w](http://rtinetwork.org/?gclid=CJaOxf_PkZoCFSRPagodOg-1-w))

According to the website “The RTI Action Network is dedicated to the effective implementation of Response to Intervention (RTI) in school districts nationwide. Our 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.”

## Resources on RTI in General

- **Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools.** Gersten, R., Beckmann, S., Clarke, B., Foegen, A., Marsh, L., Star, J. R., & Witzel, B.; 2009; *IES Practice Guide NCEE 2009-4060*; 104 pages.

Source: IES National Center for Education Evaluation and Regional Assistance

([http://ies.ed.gov/ncee/wwc/pdf/practiceguides/rti\\_math\\_pg\\_042109.pdf](http://ies.ed.gov/ncee/wwc/pdf/practiceguides/rti_math_pg_042109.pdf))

“Students struggling with mathematics may benefit from early interventions aimed at improving their mathematics ability and ultimately preventing subsequent failure. This guide provides eight specific recommendations intended to help teachers, principals, and school administrator’s use Response to Intervention (RtI) to identify students who need assistance in mathematics and to address the needs of these students through focused interventions. The guide provides suggestions on how to carry out each recommendation and explains how educators can overcome potential roadblocks to implementing the recommendations.” (p.1)

- **Assisting Students Struggling with Reading: Response to Intervention (RtI) and Multi-Tier Intervention in the Primary Grades.** Gersten, R., Compton, D., Connor, C.M., Dimino, J., Linan-Thompson, S., & Tilly, W.D.; 2009; *IES Practice Guide NCEE 2009-4045*; 60 pages.

Source: IES National Center for Education Evaluation and Regional Assistance

([http://ies.ed.gov/ncee/wwc/pdf/practiceguides/rti\\_reading\\_pg\\_021809.pdf](http://ies.ed.gov/ncee/wwc/pdf/practiceguides/rti_reading_pg_021809.pdf))

“In the primary grades students with reading difficulties may need intervention to prevent future reading failure. This guide offers specific recommendations to help educators identify students in need of intervention and implement evidence-based interventions to promote their reading achievement. It also describes how to carry out each recommendation, including how to address potential roadblocks in implementing them” (p.1)

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### Key words and search strings used in the search:

Specially Designed Instruction OR Designed Instruction AND Response to Intervention. Individualized Education Plan AND Designed Instruction OR Response to Intervention.

### Search databases and websites:

Institute for Education Science Sources: Regional Educational Laboratory Program (REL); What Works Clearinghouse (WWC); Doing What Works (DWW); National Center for Education Statistics (NCES); Institute for Education Sciences (IES); IES Practice Guides.

Other Federally Funded Sites: The Assessment and Accountability Comprehensive Center; The National High School Center; The Center on Innovation and Improvement; The Center on Instruction; The National Comprehensive Center for Teacher Quality; National Center for Education Statistics (NCES) Datasets: K

– 12; National Assessment of Educational Progress (NAEP); National Assessments of Adult Literacy (NAAL); Early Childhood Longitudinal Study (ECLS); National Household Education Survey (NHES); Career/Technical Education Statistics (CTES); Common Core of Data (CCD); Crime and Safety Data; Education Finance Statistics Center (EFSC/EDFIN); Education Longitudinal Study of 2002 (ELS); National Longitudinal Studies (NLS-72, HS&B, NELS:88); Private School Universe Survey (PSS); School Survey on Crime and Safety (SSOCS); Schools and Staffing Survey (SASS); NAEP Data Explorer (NDE); Data Analysis System (DAS); School District Demographics System (SDDS); Center for Data-Driven Reform in Education (CDDRE); National Center for Research on Early Childhood Education; National Center for Research on Evaluation, Standards, and Student Testing; National Center for Performance Incentives; National Research Center on the Gifted and Talented; National Research Center on Rural Education Support; National Research and Development Center for English Language Learners.

*Additional Data Resources:* The Campbell Collaboration; Data Quality Campaign; Education Development Center; WestEd; American Institutes for Research; Just for Kids; Great Schools; PSK12; Kids Count; School Data Direct; The Education Trust; SRI International; ERIC; EBSCO Databases; Education Index Retrospective; FirstSearch (OCLC); ProQuest; Educator's Reference Complete; HeinOnline; Education Daily; Government Executive; <http://www.google.com>; general internet search.

### **Criteria for inclusion:**

When Reference Desk Researchers review resources, they consider, among other things, four factors:

1. **Date of the publication:** The most current information is included unless in the case of nationally known seminal resources
2. **Source and funder of the report/study/brief/article:** Priority is given to IES, nationally funded, and certain other vetted sources known for strict attention to research protocols);
3. **Methodology:** i.e. Random control trial studies, surveys, self-assessments, literature reviews, policy briefs, etc. Priority for inclusion is given generally to random control trial study findings; however, the reader should note at least the following factors when basing decisions on these resources: Numbers of participants (just a few? Thousands?); Selection (did the participants volunteer in the study, or were they chosen?); Representation (were findings generalized from a homogeneous or a diverse pool of participants? Was the study sample representative of the population as a whole?)
4. **Existing knowledge base:** Although we strive to include vetted resources, there are times when the research base is slim or non-existent. In these cases we have included the best resources we could find, which may include newspaper articles, interviews with content specialists, organization websites, etc.

### ***REL Northeast and Islands***

*The Regional Educational Laboratory (REL) Reference Desk is a service provided by a collaborative of the REL program, funded by the U.S. Department of Education's Institute of Education Sciences (IES). This response was prepared under a contract with IES, Contract ED-06-CO-0025, by REL Northeast and Islands administered by Education Development Center, Inc. The content of the response does not necessarily reflect the views or policies of IES or the U.S. Department of Education nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.*

**Reference Desk Response No. 325:  
Mathematics Assessments for Tier 2 Response to Intervention**

Question:

What are some research-based mathematics assessments for Tier 2 Response to Intervention?

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**Report:**

Following an established REL-NEI Reference Desk research protocol, we conducted a search for research reports as well as descriptive and policy-oriented briefs and articles in this area. The sources included federally funded organizations, additional research institutions, several educational research databases, and a general Internet search using Google and other search engines. We also searched for appropriate organizations that may act as resources on this issue. We have not done an evaluation of these organizations or the resources themselves, but offer this list to you for your information only.

Response to Intervention (RtI), as defined by the RTI Action Network (<http://www.rtinetwork.org>), “is a multi-tier approach to the early identification and support of students with learning and behavior needs. The RTI process begins with high-quality instruction and universal screening of all children in the general education classroom. Struggling learners are provided with interventions at increasing levels of intensity to accelerate their rate of learning...Progress is closely monitored to assess both the learning rate and level of performance of individual students. Educational decisions about the intensity and duration of interventions are based on individual student response to instruction. RTI is designed for use when making decisions in both general education and special education, creating a well-integrated system of instruction and intervention guided by child outcome data.” In Tier 2 of this multi-tier approach, “students not making adequate progress in the core curriculum are provided with increasingly intensive instruction matched to their needs on the basis of levels of performance and rates of progress.”

Research through the Institute for Education Sciences concluded that, “very little research evidence specifically addresses the use of mathematics progress monitoring data within the context of RtI...Most research on mathematics progress monitoring measures falls into two categories. One group of studies examines the technical adequacy of the measures, including their reliability, validity, and sensitivity to growth. The second investigates teacher use of the measures to modify instruction for individual students in order to enhance achievement; the bulk of this second body of research has been conducted primarily in special education settings and therefore is less relevant to the RtI focus of this practice guide.” (IES, 2009; see resource below)

We focused on identifying resources that specifically identified research-based mathematics assessments for Tier 2 Response to Intervention and included a selection of resources reviewing the role of progress monitoring and Curriculum-Based Measurement.

Question:

**2. What are some research-based mathematics assessments for Tier 2 Response to Intervention?**

**2.1. Progress Monitoring Within a Multi-Level Prevention System.** *Fuchs, L., Vanderbilt University*

Source: Education Development Center

(<http://www.rtinetwork.org/Essential/Assessment/Progress/ar/MultilevelPrevention>)

“In this article, we provide a quick overview of progress monitoring and describe how progress monitoring is used within a multi-level prevention system...With progress monitoring, teachers

collect student performance data on a frequent basis: usually every week, but at least every month. The teacher graphs each student's scores against days on the calendar and draws a line of best fit through the scores. This trend line, which represents weekly rate of improvement, is the rate at which the student is making progress toward achieving competence in the grade-level curriculum."

"Within a multilevel prevention system, a second purpose for progress monitoring occurs within secondary prevention, as tutoring is implemented. When a validated or research-based approach to reading intervention is conducted in small groups within secondary prevention, the assumption is that the vast majority of students should respond well. If a child's response to a tutoring program, which has been shown to benefit most students, is inadequate, then the RTI process has eliminated instructional quality as a viable explanation for poor academic growth and, instead, provides evidence of a learning disability. The purpose of progress monitoring at secondary prevention is to determine whether a student's learning in response to the validated small-group tutoring is adequate. Students who fare well (i.e., who respond) are returned to primary prevention, where progress monitoring continues to assess whether the student's progress remains adequate once secondary prevention tutoring ends or whether the student instead requires another round of secondary prevention tutoring. To distinguish whether the intervention provided is meeting the child's needs and helping accelerate his or her rate of learning sufficiently, cut-points based on the progress-monitoring system are required."

## **2.2. Validated Forms of Progress Monitoring in Reading and Mathematics.** *Fuchs, L., Vanderbilt University*

Source: Education Development Center

<http://www.rtinetwork.org/Essential/Assessment/Progress/ar/ValidatedForms>)

This article discusses Curriculum-Based Measurement (CBM), "the approach to progress monitoring for which the vast majority of research has been conducted. That is, CBM has been validated with many studies and many different researchers have conducted those studies. CBM differs from most approaches to classroom assessment in two important ways (Fuchs & Deno, 1991). First, CBM is standardized so that the behaviors to be measured and the procedures for measuring those behaviors are prescribed and have been shown to be reliable and valid. Second, with CBM, each weekly test is of equivalent difficulty and represents what the teacher wants the student to be able to do well at the end of the year."

"With CBM, a teacher indexes a student's competence with the grade-level curriculum. A key challenge in the development of CBM has been to identify measurement tasks that simultaneously integrate the various skills required for competent year-end performance. Two approaches have been used. One involves identifying a task that correlates robustly (and better than potentially competing tasks) with the various component skills constituting the academic domain...There is, however, a second approach to designing CBM tasks. This second approach involves systematic sampling of the skills constituting the annual curriculum to ensure that each weekly CBM represents the curriculum equivalently...the most widely known and used curricular-sampling approach is the math CBM systems developed in the 1980s by Fuchs and colleagues (e.g., Fuchs, Hamlett, & Fuchs, 1990). With these math computation and math concepts/applications CBM systems, each weekly test incorporates the same problem types in the same proportion...In either system, the total test score, which is the indicator of overall math competence in the annual curriculum, is graphed to depict slope (i.e., rate of learning). This second approach to identifying a CBM task also produces strong correlations with valued criterion measures. It offers the added benefit of informing instruction by providing descriptions of individual skill mastery, because each skill in the annual curriculum is systematically assessed on every weekly test (e.g., Fuchs, Fuchs, Hamlett, & Allinder, 1991; Fuchs, Fuchs, Hamlett, & Stecker, 1990)."

Bibliography includes:

Fuchs, L.S., Hamlett, C.L., & Fuchs, D. (1990). *Curriculum-based measurement in math*. For information, contact L.S. Fuchs, 228 Peabody, Vanderbilt University, Nashville, TN 37203.

Fuchs, L.S., Fuchs, D., Hamlett, C.L., & Stecker, P.M. (1990). The role of skills analysis in curriculum-based measurement in math. *School Psychology Review*, 19, 6-22.

**2.3. Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools.** Gersten, R., Beckmann, S., Clarke, B., Foegen, A., Marsh, L., Star, J. R., & Witzel, B.; 2009; NCEE 2009-4060. Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Source: IES

([http://ies.ed.gov/ncee/wwc/pdf/practiceguides/rti\\_math\\_pg\\_042109.pdf](http://ies.ed.gov/ncee/wwc/pdf/practiceguides/rti_math_pg_042109.pdf))

“This practice guide offers eight recommendations for identifying and supporting students struggling in mathematics. The recommendations are intended to be implemented within an RtI framework (typically three-tiered).”

Despite a low level of evidence, the panel’s Recommendation 7 states, “Monitor the progress of students receiving supplemental instruction and other students who are at risk. Assess the progress of tier 2 and tier 3 students regularly with general outcome measures and curriculum embedded measures. Also monitor regularly the progress of tier 1 students who perform just above the cutoff score for general outcome measures so they can be moved to tier 2 if they begin to fall behind. In addition, use progress monitoring data to determine when instructional changes are needed. This includes regrouping students who need continuing instructional support within tier 2 or tier 3, or moving students who have met benchmarks out of intervention groups and back to tier 1. Information about specific progress monitoring measures is available in Appendix D. A list of online resources is in the text...”

From page 42, the panel recommends doing the following:

1) Monitor the progress of tier 2, tier 3, and borderline tier 1 students at least once a month using grade-appropriate general outcome measures. “...Choose progress monitoring measures with evidence supporting their reliability, validity, and ability to identify growth. This will require input from individuals with expertise in these areas, typically school psychologists or members of district research departments. Consider whether the measure produces consistent results (reliability) and provides information that correlates with other measures of mathematics achievement (criterion validity)... Resources that teachers can turn to for identifying appropriate measures include the National Center on Student Progress Monitoring’s review of available tools (<http://www.studentprogress.org/>) and the Research Institute on Progress Monitoring (<http://www.progressmonitoring.org/>).”

2. Use curriculum-embedded assessments in interventions to determine whether students are learning from the intervention. These measures can be used as often as every day or as infrequently as once every other week. “Students struggling with mathematics may benefit from early interventions aimed at improving their mathematics ability and ultimately preventing subsequent failure. This guide provides eight specific recommendations intended to help teachers, principals, and school administrators use Response to Intervention (RtI) to identify students who need assistance in mathematics and to address the needs of these students through focused interventions...We also examined studies of the technical adequacy of batteries of screening and progress monitoring measures for recommendations relating to assessment.”

From page 85, “*Progress monitoring in the elementary grades*. Two types of measures have been investigated for monitoring the mathematics learning of students in the elementary grades. The bulk of the research, conducted by a research group led by Dr. Lynn Fuchs, investigates the characteristics of general outcome measures that represent grade-level mathematics curricula in computation and in mathematics concepts and applications. These measures were developed in the late 1980s and early 1990s, reflecting the Tennessee state elementary mathematics curriculum of that time. The measures continue to be widely used and are recommended by the National Center for Student Progress Monitoring. Teachers should carefully examine the content of the measures to ensure that they are representative of the existing mathematics curricula in their states and districts.”

**2.4. Models of Response to Intervention in the Northwest Region States.** Stepanek, J. & Peixotto, K.; 2009; U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest; 64 pages.

Source: IES

([http://ies.ed.gov/ncee/edlabs/regions/northwest/pdf/REL\\_2009079.pdf](http://ies.ed.gov/ncee/edlabs/regions/northwest/pdf/REL_2009079.pdf))

From page i, “This report describes state-level efforts to support implementation of response to intervention (RTI) in the Northwest Region states—Alaska, Idaho, Montana, Oregon, and Washington. RTI, an approach to improving education outcomes, focuses on monitoring academic progress and using assessment data to identify struggling students, modify instruction, and provide interventions matched to students’ needs on a tiered, gradually intensifying basis (Batsche et al. 2005). The tiered RTI framework requires a research-based core program of curriculum and instruction that meets the needs of most students...All five states provided guidance on research-based curriculum and instruction, collection and analysis of assessment data, research-based interventions, fidelity, and teaming.”

From pages 9-10, “*Assessment*. The state education agencies played a variety of roles in guiding and supporting the use of assessments for RTI. Some states provided access to tools, while others focused on helping districts select appropriate assessments. All five states had training or information to support data analysis. Three states—Alaska, Idaho, and Montana—provided assessment tools for districts and schools. Alaska is the only state that has developed its own assessment tools, the Alaska Computerized Formative Assessments (ACFA), an online assessment tool designed to monitor students’ progress against the statewide assessment. The tests are available for math and reading for grades 3–8. Idaho provided access to AIMSweb (Shinn and Garman 2006) to districts throughout the state. Montana provided access to both AIMSweb and Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good and Kaminski 2005) for schools that participated in the RTI initiative. Oregon and Washington did not provide assessment tools.”

Selected resources from the Washington State Department of Education include:

- Description of the “core principal” of assessment (<http://www.k12.wa.us/RTI/default.aspx>)
- Description of different types of assessments in RTI framework and links to outside resources that includes standardized assessments for mathematics (<http://www.k12.wa.us/RTI/CorePrinciples/Assessment.aspx>)

### Additional Organizations to Consult

- **RTI Action Network**

(<http://www.rtinetwork.org/>)

The RTI Action Network is dedicated to the effective implementation of Response to Intervention (RTI) in school districts nationwide. Our 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.

Although mathematics preventative tutoring at the Tier 2 level has received less attention than in reading, several validated protocols do exist in the primary grades. Further information can be obtained by contacting Flora Murray at Vanderbilt University ([flora.murray@vanderbilt.edu](mailto:flora.murray@vanderbilt.edu)).

- **National Center on Student Progress Monitoring**

(<http://www.studentprogress.org/weblibrary.asp#rti>)

To meet the challenges of implementing effective progress monitoring, the Office of Special Education Programs (OSEP) has funded *the National Center on Student Progress Monitoring*. Housed at the American Institutes for Research, and working in conjunction with researchers from Vanderbilt University, a national technical assistance and dissemination center dedicated to the implementation of scientifically based student progress monitoring. The site includes a library of resources addressing the role of progress monitoring in a Response-to-Intervention framework

- **The Research Institute on Progress Monitoring**

(<http://www.progressmonitoring.org/probes/earlynumeracy.html>)

This organization has produced reports and measures on early numeracy. The measures include both screening (fall/winter/spring) versions to evaluate the proficiency of all students and progress monitoring versions that can be used to monitor the effectiveness of interventions for students who are struggling. Resources can identify and validate progress monitoring strategies in reading, writing, math and science using Curriculum Based Measurement (CBM).

- **What Works Clearinghouse**

(<http://ies.ed.gov/ncee/wwc/reports/>)

The WWC offers a range of publications that evaluate elementary school math interventions and instructional strategies for students in grades K-5, which are designed to increase student outcomes related to mathematics achievement.

For Elementary School Math, 72 interventions were reviewed and 9 interventions have reports. For Middle School Math, 49 interventions were reviewed and 13 interventions have reports.

- **Intervention Central**

([http://www.interventioncentral.org/wright\\_workshops.php](http://www.interventioncentral.org/wright_workshops.php))

Intervention Central is committed to the goal of making quality Response-to-Intervention resources available to educators at no cost--*especially* in these times of tight school budgets. The site was created by a school psychologist and school administrator from Central New York. This site offers a workshop titled, "RTI: Best Practices in Elementary Math Interventions" "Schools often find it challenging to locate effective research-based math intervention ideas feasible for use in classrooms. This full-day workshop presents a series of specific individualized interventions to support at-risk students in grades K-6 who need targeted interventions in the development of 'number sense' and math computation, as well as strategies to solve word problems and correctly employ higher-level math operations. Workshop interventions are tied to the three-tier 'Response to Intervention' (RTI) framework now being widely adopted in schools across the nation. Workshop participants learn about the key foundation skills and concepts required for success in mathematics and practice using a math-skills checklist to assist them in identifying individual students' barriers to success in math. The workshop also provides efficient and effective methods for monitoring students' in various math subskills, including 'number sense', math computation, and higher-level problem-solving skills. Participants also review a range of helpful Internet resources for school-based math assessment and intervention."

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### Key words and search strings used in the search:

Response to Intervention (RTI) OR mathematics OR assessment OR tier 2 OR Curriculum Based Measurement (CBM)

### Search databases and websites:

Institute for Education Science Sites: Regional Educational Laboratory Program (REL); What Works Clearinghouse (WWC); Doing What Works (DWW); National Center for Education Statistics (NCES); Institute for Education Sciences (IES); IES Practice Guides

Other Federally Funded Sites: National Center for Research on Evaluation, Standards, and Student Testing; Access Center for Improving Outcomes for All Students K-8;

Additional Data Resources: Education Development Center; ERIC; EBSCO Databases; ProQuest; <http://www.google.com>; <http://www.google.com>; general internet search

### Criteria for inclusion:

When Reference Desk Researchers review resources, they consider, among other things, four factors:

5. **Date of the publication:** The most current information is included unless in the case of nationally known seminal resources
6. **Source and funder of the report/study/brief/article:** Priority is given to IES, nationally funded, and certain other vetted sources known for strict attention to research protocols;
7. **Methodology:** i.e. Random control trial studies, surveys, self-assessments, literature reviews, policy briefs, etc. Priority for inclusion is given generally to random control trial study findings; however, the reader should note at least the following factors when basing decisions on these resources: Numbers of participants (just a few? Thousands?); Selection (did the participants volunteer in the study, or were they chosen?); Representation (were findings generalized from a homogeneous or a diverse pool of participants? Was the study sample representative of the population as a whole?)
8. **Existing knowledge base:** Although we strive to include vetted resources, there are times when the research base is slim or non-existent. In these cases we have included the best resources we could find, which may include newspaper articles, interviews with content specialists, organization websites, etc.

**REL Northeast and Islands**

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**Reference Desk Response No. 392:  
Response to Intervention at the Secondary Level**

Questions:

1. Are there models of Response to Intervention (RTI) at the Secondary Level?
2. Are there RTI screening tools for use at the secondary level?
3. How have districts approached issues of parent notification in regards to RTI?

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**Report:**

Following an established REL-NEI Reference Desk research protocol, we conducted a search for research reports as well as descriptive and policy-oriented briefs and articles in this area. The sources included federally funded organizations, additional research institutions, several educational research databases, and a general Internet search using Google and other search engines. We also searched for appropriate organizations that may act as resources on this issue. We have not done an evaluation of these organizations or the resources themselves, but offer this list to you for your information only.

Our researchers have found that several states provide general guidelines for Response to Intervention (RTI) at the secondary school level and that there are models articulated for both literacy and mathematics curriculum. Specific differences between elementary and secondary literacy interventions include: the number of teachers of instruction, narrative vs. expository writing, and the focus of reading skills (Hughes & Deschler, 2007). Screening tools specific to secondary school applications were scarce but we found one resource that articulates tools for literacy interventions (Pennsylvania DOE, 2008). More general applications for both academic and behavioral screening methods are described. We could not locate examples of parental notification specific to the secondary level, but provide examples of state and district guidelines on parental notification for RTI in general.

Questions:

**3. Are there models of Response to Intervention (RTI) at the secondary level?**

**3.1. The Secondary Literacy Instruction and Intervention Guide.** McPeak, L., Trygg, L., Minadakis, A., & Diana, P.; 2007; Stupski Foundation Report; 76 pages.

Source: General Internet search using Google

([http://www.rti4success.org/images/stories/topPicks/secondary\\_literacy\\_instruction\\_intervention\\_guide.pdf](http://www.rti4success.org/images/stories/topPicks/secondary_literacy_instruction_intervention_guide.pdf))

The model presented in this guide is based on the Content Literacy Continuum (CLC) developed by the University of Kansas Center for Research on Learning (CRL). (<http://clc.kucri.org/>)

From Page 1, "This model offers a comprehensive literacy system to address districts' need for research-based, robust content literacy application. The nationally recognized solution set is very limited, and the CLC is one of very few nationally-recognized comprehensive secondary literacy models in the country. With over 25 years of research and proven classroom and school-wide results, the work of the CRL is to determine and validate academic system-wide interventions and supports for adolescent readers, writers and learners. The focus is on ways to close the large "achievement gap" and reduce the escalating drop-out rate for struggling adolescent learners while providing powerful delivery and learning strategies for teachers and students in core academic subjects.

The model's framework is centered on CLC's five distinct levels that comprise a continuum of literacy instruction and differentiated services. These five levels closely correlate with the Three Tiered Intervention Model commonly used throughout the nation as well as with the nationally recognized Response to Intervention (RTI) tiers."

**3.2. RTI in Middle and High School: How Will the Game Play Out?** *Hughes, C. & Deschler, D.; 2007; Center for Research on Learning – Council for Exceptional Children.*

Source: General Internet search using Google.

(<http://www.maine.gov/education/rti/secondarypresentation.pdf>)

This PowerPoint presentation outlines the differences between RTI in Elementary and Secondary school applications of literacy instruction. The presentation provides an example of a tiered delivery system for secondary schools. A sample framework handout is provided at:

[http://www.kucrl.org/cec2007/CLC-Stupski\\_Gates.pdf](http://www.kucrl.org/cec2007/CLC-Stupski_Gates.pdf)

**3.3. Meeting the Needs of Significantly Struggling Learners in High School: A Look at Approaches to Tiered Intervention.** *Duffy, H.; 2007; ND; American Institutes for Research; 14 pages.*

Source: Northwest Regional Comprehensive Center (NRCC)

([http://www.betterhighschools.org/docs/NHSC\\_RTIBrief\\_08-02-07.pdf](http://www.betterhighschools.org/docs/NHSC_RTIBrief_08-02-07.pdf))

From Page 3, "This brief first defines the RTI model, drawing from various examples established in K–8 settings (Fuchs & Fuchs, 2005; Fuchs et al., 2003). The brief then explores implications of applying RTI to the high school level and provides resources appropriate for this application. In particular, this brief points to the promise that RTI constructs hold for monitoring instruction and learning for all students at the high school level and specifically for monitoring the success of targeted interventions focused on transitions and dropout prevention."

This brief was presented in 2007 during an interactive webinar sponsored by NRCC. Additional resources that were presented can be found at:

<http://nwrcc.educationnorthwest.org/event/432/resources>

**3.4. Resources for Response to Intervention: State Models.** *Freeman, R.; undated; Listing of Resources by State.*

Source: General Internet search using Google.

([http://www.rtiitools.com/Response\\_To\\_Intervention/State\\_Models/](http://www.rtiitools.com/Response_To_Intervention/State_Models/))

This resource provides links to existing state models. It houses "resources for teachers, school psychologists, speech pathologists, school interventionists, parents in their efforts to implement response to intervention"

## 2. Are there RTI screening tools at the secondary level?

**2.1. Response to Intervention (Rti) Framework for Secondary Schools, Guidelines and Recommendations.** *Pennsylvania Department of Education, Bureau of Special Education; November 2008; 28 pages.*

Source: General Internet search using Google.

(<http://www.pattan.net/files/rti/rti-secondary.pdf>)

This document describes the various components in Pennsylvania's model including screening tools.

From page 9, "Universal Screening at the Secondary Level:

- Brief and efficient screening measures used
- All students' literacy performance is profiled Examples of what might be included:
  - PSSA Reading and Writing proficiency levels
  - Word and Passage Reading Fluency
  - Word Analysis Skills
  - Comprehension 3.

Data Based Decision Making: Guiding Principles:

- Assessment decisions implemented school-wide
- Assessments are defined and understood: i.e., screening, diagnostic, benchmark, formative, and summative assessment.
- Teachers collaborate in well-designed teams
- Lines of inquiry, decision-making and problem-solving models established

- Culture and practices shift from a deficiency model to one of providing instruction that meets the needs of **all** students. The staff recognizes the complexities of student achievement. There is system-wide focus on literacy success as a foundational priority.
  - There is tight alignment of curriculum, assessment, and instruction.
  - The professional staff interprets student achievement and growth data and uses it to identify and implement interventions that support student progress in a multi-tiered system.
  - Multiple data points are used to make decisions about students.
  - Exit criteria are established at Tiers 2 and 3.
- Formative (formal and informal) and summative assessment practices are in place including:
- universal screening, (ex: DIBELS, Aimsweb, attendance, grades, PVAAS projections, PSSA)
  - progress monitoring (Aimsweb, DIBELS)
  - benchmark assessments (district writing assessments, 4Sight)
  - outcome assessment (PSSA)
  - writing samples”

**2.2. Universal Screening Within a Response-to-Intervention Model.** *Hughes, C. & Dexter, D.; undated; RTI Action Network Resource.*

Source: General Internet search using Google.

<http://www.rtinetwork.org/Learn-About-RTI/Research-Support-for-RTI/Universal-Screening-Within-a-Response-to-Intervention-Model>

From the Introduction, “The purpose of this article is to discuss the component of universal screening within a Response-to-Intervention (RTI) model. The goal of this article is to assist the reader in making informed decisions about the nature of universal screening measures. To that end, the article is divided into the following sections:

1. What is universal screening?
2. What are the elements of effective universal screening measures?
3. What are some common universal screening measures?
4. What types of performance are measured?
5. What universal screening measures were used in the RTI models in our research review for the RTI Action Network?
6. How is at risk status defined?
7. When does Tier 2 begin?
8. Conclusions and directions for future research”

**2.3. Frequently Asked Questions About Response to Intervention (RTI).** *State of Illinois; undated.*

Source: General Internet search using Google.

[http://www.isbe.state.il.us/rti\\_plan/rti\\_faq.pdf](http://www.isbe.state.il.us/rti_plan/rti_faq.pdf)

This resource contains information regarding a variety of implementation issues including screening guidelines.

From Page 1, “A student would not be ‘referred’ to Rtl the same as a student would be referred for a special education evaluation. These are two different processes. A student is identified for Rtl through the data collection and analysis by a building level team. A special education request for evaluation can be ‘made by a parent of a child or by an employee of a State educational agency, another State agency, a local educational agency, or a community service agency’ (23 IAC 226.110(b)). ‘Each school district shall develop and make known to all concerned persons procedures by which an evaluation may be requested’ (23 IAC 226.110(a)).

In a three-tier model, a school district should administer a universal screening tool in core academic areas at the beginning of each year to identify a student’s strengths and weaknesses and to examine the effectiveness of the core curriculum and instruction. The team would then discuss which students would benefit from supplemental interventions in addition to the core curriculum.

Initially, a building level team consists of building staff members; however, once a student is identified by the team as a student who may need interventions, the parents of the child would become members of the team in order to develop an intervention plan.”

### 3. How have districts approached issues of parental notifications in regards to RTI?

#### 3.1. Ethical and Legal Issues Associated with Using Response-to-Intervention to Assess Learning Disabilities. Burns, M., Jacob, S. & Wagner, A.; 2007; *Journal of School Psychology*, Vol. 46, No. 3; pages 263-279.

Source: General Internet search using Google.

Full article Available for purchase from Science Direct: ([doi:10.1016/j.jsp.2007.06.001](https://doi.org/10.1016/j.jsp.2007.06.001))

From the abstract, "The Individuals with Disabilities Education Improvement Act of 2004 allows schools to use a child's response to research-based intervention (RTI) as a part of procedures to identify students with learning disabilities. This paper considers whether RTI-based assessment models meet ethical and legal standards for acceptable assessment practices. Based on a review of available research, it was concluded that RTI-based assessment practices, when carefully crafted and implemented, have the potential to be multifaceted, fair, valid, and useful. Threats to acceptable RTI-based assessment practices include: the lack of research-based interventions appropriate for diverse academic domains, ethnic groups, grades K-12, and students with limited English proficiency; uncertainty regarding how to determine when nonresponse to intervention warrants formal referral for evaluation of special education eligibility; difficulty translating scientifically sound RTI practices to the local school level; and inadequate staff training and poor treatment fidelity. Suggested directions for future research are included."

From Page 3, "Although IDEA does not require parental consent for the school psychologist to review student records, participate in student screening, or provide consultation to the teacher or problem solving team, ethically practitioners have an obligation to advise parents if on-going involvement with their child is anticipated (NASP-PPE, III,C,#2). Parental consent should be obtained if the psychologist's activities involve an intrusion on student or family privacy beyond what might be expected during ordinary classroom activities ([Corrao & Melton, 1988](#)). Although there are specific recommended practices for including parents in RTI ([Reschly, Coolong-Chaffin, Christenson, & Gutkin, in press](#)), research is needed to identify the ways in which parent involvement can improve intervention outcomes for the child and reduce the likelihood of school-parent conflicts.

Tier III involves more intensive interventions delivered by specialists with a small student-to-teacher ratio ([Marston, 2003](#)). If, at any point during the RTI process a student is suspected of having a disability and needs special education services to be successful, then the school is required to conduct an individual evaluation in accordance with IDEA procedures and timelines (60 calendar days or the timelines established by the state). If parents request a special education eligibility evaluation during the RTI process and the school decides not to evaluate the child, the school must provide parents written notice of the refusal to evaluate."

#### 3.2. Indiana Department of Education – RTI Frequently Asked Questions. *Indiana State Department of Education*.

Source: General Internet search using Google.

(<http://www.doe.in.gov/indiana-rti/faq.html>)

This resource provides guidance regarding the implementation of RTI and aspects of parental notification.

Near the bottom of the page:

"If a strategy is required in RTI, must educators notify the parent of the intervention and what form should notification take?

- The parent of a student who participates in a process that assesses the student's response to scientific, research-based interventions must be provided with written notification when a student requires an intervention that is not provided to all students in the general education classroom. The notification must include:
  - Data to be collected and services provided
  - Evidence-based strategies to be used
  - The parent's right to request an evaluation for eligibility for special education services
  - Steps the public agency will take if the student fails
  - The parent's right to request an evaluation for eligibility for special education services

- Steps the public agency will take if the student fails to respond to intervention [511 IAC 7-40-2(f)]”

### 3.3. Kenai Peninsula Borough School District. *Alaska Public School District; undated.*

Source: General Internet search using Google.

(<http://www.kpbsd.k12.ak.us/departments.aspx?id=12006>)

This resource provides guidance regarding the implementation of RTI and aspects of parental notification. Access exists to several forms including Notification of Meeting and Parental Permission.

## Additional Organizations to Consult

- **National Center on Response to Intervention**

(<http://www.rti4success.org/>)

From the website: “The Center’s mission is to provide technical assistance to states and districts and building the capacity of states to assist districts in implementing proven models for RTI/EIS.” Included on the front page is an Ask the Expert Video entitled: What role do parents play in the RTI process, including when do they become involved, are they on the decision making team, and where can the learn more about RTI?

There is a section that specifically addresses secondary school issues at:

[http://www.rti4success.org/index.php?option=com\\_content&task=blogcategory&id=8&Itemid=110](http://www.rti4success.org/index.php?option=com_content&task=blogcategory&id=8&Itemid=110)

A Screening Tools Chart can be found at the following link:

<http://www.rti4success.org/chart/screeningTools/screeningtoolschart.html>

- **RTI Action Network**

(<http://www.rtinetwork.org/>)

From the website: “The RTI Action Network is dedicated to the effective implementation of Response to Intervention (RTI) in school districts nationwide. Our 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.”

- **National Center on Student Progress Monitoring**

(<http://www.studentprogress.org/>)

From the website: “To meet the challenges of implementing effective progress monitoring, the Office of Special Education Programs (OSEP) has funded *the National Center on Student Progress Monitoring*. Housed at the American Institutes for Research, and working in conjunction with researchers from Vanderbilt University, a national technical assistance and dissemination center dedicated to the implementation of scientifically based student progress monitoring.” The site includes a library of resources addressing the role of progress monitoring in a Response-to-Intervention framework

- **The Research Institute on Progress Monitoring**

(<http://www.progressmonitoring.org/index.html>)

From the website: “The Office of Special Education Programs (OSEP) has funded the Research Institute on Progress Monitoring to develop a system of progress monitoring to evaluate effects of individualized instruction on access to and progress within the general education curriculum.”

## Key words and search strings used in the search:

“Response to intervention” OR RTI AND secondary OR “high school” additional words appended to this base search string were: models OR guidelines OR reading OR literacy OR mathematics; AND “screening tools” OR screening OR “progress monitoring”; AND “parent notification” OR “legal issues”

## Search databases and websites:

*Institute for Education Science Sites*: Regional Educational Laboratory Program (REL); What Works Clearinghouse (WWC); Doing What Works (DWW); Institute for Education Sciences (IES); IES Practice Guides

Other Federally Funded Sites: The Assessment and Accountability Comprehensive Center; The National High School Center; The Center on Innovation and Improvement; The Center on Instruction; National Center for Research on Evaluation, Standards, and Student Testing; National Center for Performance Incentives Research Center on Rural Education Support; National Research and Development Center for English Language Learners; National Dissemination Center for Children with Disabilities; Access Center for Improving Outcomes for All Students K-8; National Dropout Prevention Center/Network; National Dropout Prevention Center for Students with Disabilities; Center for Comprehensive School Reform and Improvement; National Partnership for Quality Afterschool Learning; Small Learning Communities Centers; Special Education Technical Assistance for Charter Schools Project; Education Commission of the States; Regional Comprehensive Centers; Equity Centers; Regional Resource Centers

Additional Data Resources: The Campbell Collaboration; Data Quality Campaign; Education Development Center; WestEd; American Institutes for Research; The Education Trust; SRI International; ERIC; EBSCO Databases; FirstSearch (OCLC); ProQuest; <http://www.google.com>; <http://www.goglescholar.com>; general internet search

### **Criteria for inclusion:**

When Reference Desk Researchers review resources, they consider, among other things, four factors:

9. **Date of the publication:** The most current information is included unless in the case of nationally known seminal resources
10. **Source and funder of the report/study/brief/article:** Priority is given to IES, nationally funded, and certain other vetted sources known for strict attention to research protocols;
11. **Methodology:** i.e. Random control trial studies, surveys, self-assessments, literature reviews, policy briefs, etc. Priority for inclusion is given generally to random control trial study findings; however, the reader should note at least the following factors when basing decisions on these resources: Numbers of participants (just a few? Thousands?); Selection (did the participants volunteer in the study, or were they chosen?); Representation (were findings generalized from a homogeneous or a diverse pool of participants? Was the study sample representative of the population as a whole?)
12. **Existing knowledge base:** Although we strive to include vetted resources, there are times when the research base is slim or non-existent. In these cases we have included the best resources we could find, which may include newspaper articles, interviews with content specialists, organization websites, etc.

### **REL Northeast and Islands**

*The Regional Educational Laboratory (REL) Reference Desk is a service provided by a collaborative of the REL program, funded by the U.S. Department of Education's Institute of Education Sciences (IES). This response was prepared under a contract with IES, Contract ED-06-CO-0025, by REL Northeast and Islands administered by Education Development Center, Inc. The content of the response does not necessarily reflect the views or policies of IES or the U.S. Department of Education nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.*