REGIONAL *EDUCATIONAL* LABORATORY
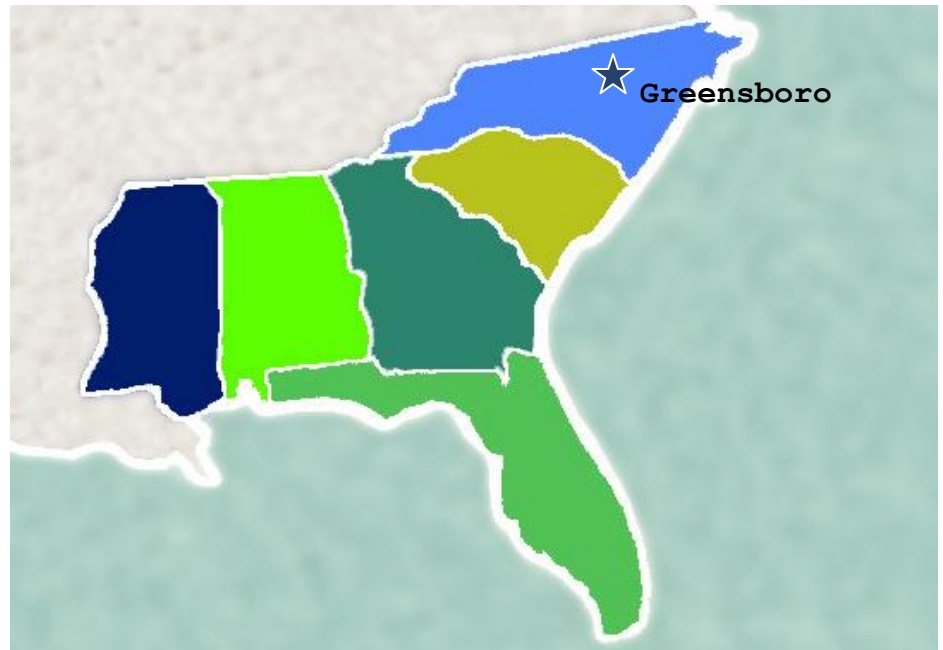## SOUTHEAST ~ SERVECenter

EVIDENCE BASED EDUCATION REQUEST DESK

OUR GOAL

To assist educators and policymakers in their efforts to apply the evidence base to decisions about policies, programs, and practices they encounter.

Greensboro

REQUEST:

Annotated bibliography of articles and resources concerning Response to Intervention, with a focus on 1) RtI monitoring tools; and 2) RtI in the upper grades. Information on RtI state activity also requested.

RESPONSE

The following articles were obtained through searches on EBSCO Host and Google Scholar using the terms, "response to intervention," "tiered intervention," and "responsiveness to intervention" in conjunction with "monitoring tools, "tools," "high school, "middle school," "upper grades," "older students," and "secondary school." The abstracts listed below are those provided by the articles.

Articles concerning Response to Intervention and Monitoring Tools

Ardoin, S.P. (2006). The response in Response to Intervention: Evaluating the utility of assessing maintenance of intervention effects. *Psychology in the Schools, 43*(6).

Curriculum-Based Measurement in reading (R-CBM) is used for progress-monitoring purposes; however, most studies have evaluated R-CBM from a traditional psychometric perspective, which allows for variability that is not a function of increased skills (i.e., measurement error) to be ignored. Although measurement error can be ignored when the level of interest is at the group level, it is difficult to ignore at the

individual-child level when evaluating intervention effectiveness. To account for measurement error, it is recommended that R-CBM data be collected twice weekly for 10 weeks before making decisions regarding intervention effectiveness. However, waiting 10 weeks to learn that an intervention is ineffective is troublesome. The current study explores maintenance of intervention effects as a supplemental procedure to R-CBM progress-monitoring procedures. Data from four students suggest that maintenance data might be valuable in the early termination of ineffective interventions.

Compton, D.L., Fuchs, D., Fuchs, L.S. & Bryant, J.D. (2006). Selecting at-risk readers in first grade for early intervention: A two-year longitudinal study of decision rules and procedures. *Journal of Educational Psychology*, *98*(2), 394-409.

Response to intervention (*RTI*) models for identifying learning disabilities rely on the accurate identification of children who, without Tier 2 tutoring, would develop reading disability (RD). This study examined two questions concerning the use of 1st-grade data to predict future RD: (a) Does adding initial word identification fluency (WIF) and 5 weeks of WIF progress-monitoring data (WIF-Level and WIF-Slope) to a typical 1st-grade prediction battery improve RD prediction? and (b) Can classification tree analysis improve the prediction accuracy compared to logistic regression? Four classification models based on 206 1st-grade children followed through the end of 2nd grade were evaluated. A combination of initial WIF, WIF-Level, and WIF-Slope and classification tree analysis improved prediction sufficiently to recommend their use with *RTI*.

Dykeman, B. F. (2006). Alternative strategies in assessing special education needs. *Education, 127*(2), 265-273.

The conventional use of standardized testing within a discrepancy analysis model is reviewed. The Response-to-Intervention (RTI) process is explained, along with descriptions of assessment procedures within RTI: functional assessment, authentic assessment, curriculum-based measurement, and play-based assessment. Psychometric issues relevant to RTI and standardized testing are discussed.

Henley, N. & Furlong, M. (2006). Using curriculum-derived progress monitoring data as part of a Response-to-Intervention strategy: A case study. *The California School Psychologist, 11*, 85-99.

The revised *Individuals with Disabilities Education Improvement Act* (2004) and subsequent federal regulations promote the use of an alternative process of identifying students with specific learning disabilities based on how well a student responds to researched-based interventions. A central element of all RtI approaches is the universal monitoring of students' academic progress. As part of a general effort to implement a data-driven system, multiple sources of information may be used. This article contributes to these efforts by presenting a case study demonstrating how a school psychologist took the first steps to implement a low-cost, continuous progress

monitoring procedure in one urban school. This was accomplished by using data readily available at the school site (reading probes included with the district reading curriculum) to develop a systematic way to monitor progress by creating local school norms and using existing reading benchmarks.

Johnson, E., Mellard, D.F., Fuchs, D., & McKnight, M.A. (2006). *Responsiveness to intervention (RtI): How to do it. [RtI Manual].* **Washington, DC: National Research Center on Learning Disabilities.**

The National Research Center on Learning Disabilities prepared this manual as a tool for implementing Responsiveness to Intervention (RTI)*.* The manual can help schools understand, design, and evaluate the RtI features that they will implement. This RtI Manual is based on current research regarding the features of RtI**.** While striving to present comprehensive coverage of the critical features of RtI**,** it also includes numerous resources for pursuing further information. RtI is defined as an assessment and intervention process for systematically monitoring student progress and making decisions about the need for instructional modifications or increasingly intensified services using progress monitoring data. The following is the fundamental question of RtI procedures: Under what conditions will a student successfully demonstrate a response to the curriculum? The goal of this manual is to help schools think about implementing RtI in terms of manageable concrete steps. The RtI Manual includes the following sections: (1) School-Wide Screening; (2) Progress Monitoring; (3) Tiered Service Delivery; (4) Fidelity of Implementation; and (5) School Examples, Student Case Studies, and Research Examples. The first four sections of the RtI Manual follow a consistent format for presenting information and tools to implement RtI**.** They first present overviews, definitions, and features of the relevant RtI components to orient the reader to each RtI component and develop an understanding of its critical features and role within the larger system of RtI**.** Included in each component section is an evaluation tool outlining the features that currently define best practice. Next, a planning tool is provided that schools can use to determine specifics about implementing the essential tasks for each RtI component. Finally, the last section of this manual, "School Examples, Student Case Studies, and Research Examples," presents descriptions of how model sites identified through an NRCLD research study have implemented specific components of RtI, the resources required, and the challenges they faced. The section also describes longitudinal data from individual students who have received services under an RtI delivery model. It concludes with descriptions of research studies in which RtI models have been implemented.

Ofiesh, N. (2006). Response to Intervention and the identification of specific learning disabilities: Why we need comprehensive evaluations as part of the process. *Psychology in the Schools**, 43**(8), 883-888.*

The purpose of this article is to underscore why we need to maintain the presence of comprehensive evaluations in the identification of students with specific learning

disabilities (SLDs). Response to Intervention (RTI) models are aimed at improving early instruction and reducing the overrepresentation of students in special education who are minorities or who are culturally and linguistically diverse; however, new regulations under the Individuals with Disabilities Education Improvement Act of 2004 (IDEA, 2004) allow for the identification of individuals with SLDs based on an individual's response to instruction. The regulations provide states the option to include standardized testing as part of the RTI model. This approach was proposed as a solution to the widely criticized aptitude–achievement discrepancy formula; however, the unfortunate result could be to simultaneously remove the comprehensive evaluation, an important part of SLD identification. Eliminating the aptitude–achievement discrepancy formula from the identification of SLDs should not be construed as negating the necessity of a comprehensive evaluation (i.e., the need to identify problems in one or more basic psychological processes). Response to Intervention models without a comprehensive evaluation cannot provide the evidence needed to identify students with SLDs or to provide protections to appropriately transition students with SLDs from high school to postsecondary services.

Riley-Tillman, T.C., Kalberer, S.M. & Chafouleas, S.M. (2005). Selecting the right tool for the job: A review of behavior monitoring tools used to assess student Response-to-Intervention. *The California School Psychologist*, *10*, 81-91.

The educational accountability movement has demanded that educators implement and also monitor students' responses to positive behavioral accommodations in schools as well as communicate this information to others. This new responsibility has left many educators struggling with ways to monitor students effectively. This article provides a brief overview of how to choose a behavioral monitoring strategy effectively. Four options for behavioral monitoring are reviewed: (a) permanent products; (b) behavior rating scales; (c) systematic direct observation; and (d) behavior report cards. In addition, the strengths and weaknesses of each method are discussed along six areas of consideration: (a) goodness of fit; (b) directness; (c) generalization; (d) feasibility; (e) training; and (f) intrusiveness. Finally, the methods are considered in relation to each stage of the intervention process. This article provides a brief guide for school-based professionals focusing on behavior problems – one that provides multiple options for assessment and monitoring procedures and outlines considerations for selecting among these options.

RTI can't be sole means to identify LD. (2006). *Special Education Report* (LRP Publications), *32*(9), 1-6.
http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=22447685&site=ehost-live

The article reports that the Individuals with Disabilities Education Act Part B stipulates a variety of assessments tools and strategies should be included for identifying a learning

disability, as opposed to solely using intelligence quotient discrepancy models or response to intervention as an evaluation tool. The new regulation, which took effect on October 13, 2006, specifically states that one cannot rely on any single procedure as the sole criterion.

Stecker, Pamela M. (2007). **Tertiary** **intervention.** *Teaching Exceptional Children,* *30(5), 50-57.*
      http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=25204853&site=ehost-live

The article focuses on the highest level of intervention in the three-tier response to intervention (RTI) model in use in certain U.S. schools, as of May 2007. The author explains that RTI is a method of identifying and providing instructional services to students who struggle academically or with specific learning disabilities (SLD), with tertiary intervention being the most intense and including the provision of special education. She briefly explains tiers one and two then explains how tertiary interventions differ from these. She uses a hypothetical student case study to illustrate progress through the tiers, identification of SLD, use of progress monitoring and interventions, and development of an individualized education program (IEP).

Articles concerning Response to Intervention and Upper Grades

Canter, A. (2004). A problem-solving model for improving student achievement. *Principal Leadership: High School Edition*, *5*(4), 11-16.
Discusses the implications of the No Child Left Behind Act (NCLB) on high school graduation rates in the United States. Includes discussion of: accountability of public schools for student performance under NCLB; measures of student achievement for NCLB; aim of NCLB to raise overall performance levels and close gaps between high- and low-performing groups; impact of transfer, retention and undercounting dropouts on the accuracy of graduation rates.

Ferraro, J., Klund, S., Hexum-Platzer, S. & Vortman-Smith, J. (2006). *A model secondary (6-12) plan for reading intervention and development: A response to requests from Minnesota schools and districts to provide guidance in developing reading intervention programs for secondary students.* **The Quality Teaching Network: Reading.**
The Model Secondary (6-12) Plan for Reading Intervention and Development has been designed to meet the cognitive needs of middle school through high school students whose reading performance ranges from those significantly below expectation through those reading at or above grade level. The reading needs of the population of students in need of intervention are so significant that additional support above and beyond reading in language arts and other content areas is necessary. Students reading at or

above grade level will also benefit from explicit reading instruction at a developmental level. Reading intervention instruction requires delivery by a licensed reading professional during a specified daily reading class period. Class size is also of importance and depends upon the program of intervention being delivered. Developmental reading instruction may be delivered through content area courses. This document is designed to assist schools and districts in beginning the process of constructing a reading program.

Fletcher, J. (2006, Winter). The need for Response to Instruction models of learning disabilities. *Perspectives*. The International Dyslexia Association.

This paper addresses the conceptual underpinnings of Response to Instruction (RTI) models for identification, assessment, and treatment of people with learning disabilities (LDs). The author explains why RTI models are essential for improving outcomes of students with LDs and addresses three specific issues that emerge when schools consider implementing RTI models in relation to provisions of the Individuals with Disabilities in Education Act (IDEA), including concerns about due process and timelines, the nature of a comprehensive evaluation, and the implementation of RTI models in middle and high school.

Kroeger, S.D. & Kouche, B. (2006). Using peer-assisted learning strategies to increase Response to Intervention in inclusive middle math settings. *Teaching Exceptional Children, 38*(5), 6-13.

The article presents information on using peer-assisted learning strategies (PALS) to increase response to mathematics learning among middle school students. It reflects on the multiple influences of PALS on the teachers and students in a middle school mathematics class. The strategies along with many other methods of instruction positively influenced student attitudes about mathematics. It enabled the teachers to address a challenging mathematics curriculum along with the promotion of a diversity of math skills in the classroom. PALS attracted support from all students for an extensive engagement and participation on the team with the facilitation of the practice of co-teaching. PALS also supported the use of appropriate social skills in a natural setting. The article comments that strategies like PALS are helpful in such a condition, where educators are challenged to teach mathematical thinking and mathematical sense in a complex classroom with students of diverse mathematical abilities. The article presents certain case studies, which highlight the successful use of such flexible instructional strategies.

Moore-Brown, B.J., Montgomery, J. Bielinski, J., & Shubin, J. (2005). Responsiveness to intervention: teaching before testing helps avoid labeling. *Topics in Language Disorders, 25*(2), 148-167.

Pre-referral intervention is a modification of instruction before referral to accommodate underachieving students and reduce the number of inappropriate special education

placements. This article reports on evaluation of a Tier 3 responsiveness to intervention (RTI) program in an urban school district with 96% minority (mostly Hispanic) students. Conducted by speech-language pathologists and resource teachers, the 45-hour intensive instructional program was based on the National Reading Panel's five building blocks of reading. Using a paired t-test, investigators found that 123 students made significant reading progress (p = .01), with moderate effect sizes of 0.60 (Year 1) and 0.40 (Year 2), The majority of students also demonstrated improvement on the statewide assessment, which was used as an external measure of RTI effectiveness. Only eight of the original 123 students required special education service two years later.

Scott, V.G. & Weishaar, M.K. (2003). Curriculum-Based Measurement for reading progress. *Intervention in School & Clinic, 38*(3), 153-160.

This article contains a set of detailed steps that will assist middle and high school special education teachers in the construction and implementation of curriculum-based measurement (CBM) to track reading progress. CBM involves teachers, students, and parents in progress monitoring. The steps include information on how to construct and organize a CBM, how to administer and score a CBM, how to use the information for instructional changes, and how to use the data collected from a CBM to inform parents about their child's progress.

Other Related Articles:

The following articles concern the implementation of Positive Behavior Support programs in upper grades and may contain relevant information about tiered interventions in secondary schools.

Bohanon, H., Fenning, P., Eber, L. & Flannery, B. (2007). Identifying a roadmap of support for secondary students in school-wide Positive Behavior Support applications. *International Journal of Special Education, 22*(1).

The article examines the application of a three-tiered positive behavior support (PBS) approach in high school settings in the U.S. It discusses the definitions of PBS, the underlying principles of support, the application of PBS, and its impact on schools. The PBS approach consists of viable treatment solutions for students whose behavior impedes their learning. It includes three levels of supports, including the primary or universal, secondary or group level, and tertiary or individualized supports. The primary school-wide supports are provided to the entire student population, while secondary supports are given to a smaller segment of the school population and the tertiary supports are characterized by the most intense level of training for staff.

Duchnowski, A.J., Kutash, K., Sheffield, S. & Vaughn, B. (2006). Increasing the use of evidence-based strategies by special education teachers: A collaborative approach. *Teaching & Teacher Education*, *22*(7), 838-847.

This article describes a process developed to increase the use of evidence-based instructional strategies by teachers of students in special education programs in a middle school and high school. The project developed a working partnership between university researchers and parents, teachers and administrators of students in special education programs. The partnership produced manuals for the teachers that outlined effective strategies for teaching reading, encouraging family involvement, providing academic feedback, and engaging in positive behavior support in the classroom. The results of assessing implementation fidelity, implications of the study, and future research issues are presented.

Freeman, R.L., Smith, C.L., & Tieghi-Benet, M. (2003). Promoting implementation success through the use of continuous systems-level assessment strategies. *Journal of Positive Behavior Interventions*, *5*(2), 66-70.

Successful implementation of school-wide positive behavior support requires a continuous evaluation of program data. It also requires an ongoing review of how those data relate to organizational strengths, needs, professional development concerns, and the larger community. Accomplishing these tasks can be a formidable undertaking, particularly when school staff members have limited training in data-based decision making. This article will describe how a continuous systems-level assessment process is being implemented in one urban middle school to address behavioral and academic objectives.

RtI State Links and Other Resources:

National Association of School Psychologists: List of State and District RTI Initiatives, Models, and Resources
http://www.nasponline.org/advocacy/rtistatedistrict.pdf

Learning Point Associates/Great Lakes West Comprehensive Assistance Center RTI Resource Guide (includes list of various state RtI websites)
http://www.learningpt.org/greatlakeswest/rti/rtiresourceguide.pdf

RtI Wire: List of RtI Resources on the Internet (from Intervention Central, created by Jim Wright, a NY school psychologist and school administrator)
http://www.jimwrightonline.com/php/rti/rti_wire.php

AutoSkill Response to Intervention Resource Center
http://www.autoskill.com/intervention/rti.php

Assessment-related websites:

www.progressmonitoring.net

www.edcheckup.com

www.aimsweb.com

www.studentprogress.org

http://dibels.uoregon.edu

Southeastern State Information:

The following links were found as a result of searching for information online (e.g., state departments of education websites, ERIC, Google) concerning RtI or tiered interventions. These links do not represent all that is occurring within the states but simply what was obtained online.

Alabama:

Description of 2004 Voyager program Summer Reading intensive

http://www.voyagerlearning.com/results/independent/programarealist.do?requestId=13

Florida:

Florida Problem Solving/Response to Intervention Project Description

http://floridarti.usf.edu/floridaproject/projectinformation.html

USF/Florida Department of Education RtI presentations

http://sss.usf.edu/Resources/Presentations/index_by_subject.html

Georgia:

Georgia Student Achievement Pyramid of Intervention

http://public.doe.k12.ga.us/DMGetDocument.aspx/02_06_PyramidArticleWEBx.pdf?p=39EF345AE192D900F620BFDE9C014CE65F48E7E4CC653240504EB3D2B367434F67EC4756D61498C8&Type=D

Powerpoint presentation on the Pyramid of Intervention

http://public.doe.k12.ga.us/DMGetDocument.aspx/Presentation%20for%20Model%20Schools%20Conference%20web.pdf?p=39EF345AE192D900F620BFDE9C014CE65F48E7E4CC653240D303AB51F38ED5FF1B37D892B8220630&Type=D

Mississippi:

Three Tier Model Presentation -MIS Summer Data Conference 2006
Three Tier Model MSIS Screen Presentation -MIS Summer Data Conference 2006

Teacher Support Teams Manual
http://www.mde.k12.ms.us/acad1/programs/tst/TSTrework6.doc

North Carolina:

Problem Solving Model description:

http://www.ncpublicschools.org/docs/ec/development/learning/intervention/problemsolvingmodel.pdf

Problem Solving Model related documents

http://www.ncpublicschools.org/ec/development/learning/intervention/psmgraphics

North Carolina State Improvement Project II Evidence-based Instruction info & links

http://www.ncsip.org/instruction/index.html

South Carolina:

South Carolina Powerpoint presentation on State Improvement Grant

http://www.myscschools.com/offices/ec/sig/documents/overviewjanuary_000.ppt

South Carolina Department of Education website links to Progress Monitoring/Data-based Decision making resources

http://ed.sc.gov/agency/offices/ec/sig/page1382.html

We provide research based information on educational initiatives happening nationally and regionally. The EBE Request Desk is currently taking requests for:

- **Research on a particular topic**
- **Information on the evidence base for curriculum interventions or professional development programs**
- **Information on large, sponsored research projects**
- **Information on southeastern state policies and programs**

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